

IKURE TECHSOFT PVT. LTD. | A GLOBAL HEALTH POLICY PUBLICATION

# International Workshop on the Future of Healthcare

*Strengthening Health Systems Through Innovation, Collaboration, and Strategic Dialogue*



**INTERNATIONAL  
WORKSHOP 2026**  
SYSTEMS | TECHNOLOGY | CAPITAL | CARE

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Touching Millions of lives...



**Date**  
March 5–6, 2026

**Location:**  
Taj Vivanta, Kolkata, India

**Organised by:**  
iKure Techsoft Pvt. Ltd.

VISUAL INSIGHTS SUMMARY

# Critical Challenges & Transformative Opportunities

A synthesised snapshot of the core health system challenges and strategic opportunities identified at the 2026 International Workshop on the Future of Healthcare, Kolkata.

**MAJOR GLOBAL HEALTH CHALLENGE**

**Rising NCD Burden**

Non-communicable diseases now account for 74% of global deaths. Systems designed for acute, episodic intervention are structurally ill-equipped to manage conditions requiring continuous, lifelong care pathways.

**INNOVATION CHALLENGE**

**MedTech Adoption Barriers**

Many promising healthcare technologies fail to scale due to workflow disruption, procurement barriers, training gaps, and lack of integration with real-world healthcare systems.

**INVENTORY CHALLENGE**

**Supply Chain Inefficiencies**

Medicine stockouts, procurement delays, and fragmented logistics systems undermine patient trust and limit reliable healthcare delivery.

**FINANCING GAPS**

**Impact Without Financial Sustainability**

Many health innovations generate strong social impact but struggle to achieve financial sustainability in market-based healthcare systems.

**GOVERNANCE CHALLENGE**

**Outpatient Care Underfunded**

Preventive and outpatient services remain the "missing middle" of healthcare financing, as most insurance and public spending focuses on hospitalization.

**SYSTEM TRANSFORMATION NEEDED**

**Prevention-First Healthcare**

Shifting health systems toward prevention, early detection, and long-term disease management can significantly reduce costs and improve population health outcomes.

**SYSTEM TRANSFORMATION NEEDED**

**Demand-Driven Supply Chains**

Future healthcare supply chains should move from warehousing and procurement models to demand-driven systems using real-time data, predictive analytics, and innovative last-mile delivery solutions.

**SYSTEM TRANSFORMATION NEEDED**

**Financing Impact at Scale**

Designing financially sustainable health models that balance impact and commercial viability can attract long-term investment and enable scale.

**74%**  
of global deaths attributable to non-communicable diseases

**17 Years**  
is required for Evidence to Change into Practice on average.

**100**  
Million still pushed into extreme poverty because of health expenses

**US\$371**  
Billion annual financing gap for SDG 3 health targets.

## FOREWORD

## A System at a Crossroads

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When we convened this workshop in Kolkata, the intent was neither to celebrate what healthcare has achieved nor to catalogue its failures. The intent was to ask a harder question: are we building systems for the health challenges of the next decade, or still repairing the architecture of the last one?

The epidemiological reality is unambiguous. Non-communicable diseases are the defining health burden of our era — yet our systems remain configured for episodic intervention rather than continuous care. People living with hypertension or diabetes do not need a hospital once; they need a system that accompanies them through life. That requires a fundamental shift: from sick-care to health-care, from access to continuity, from treatment to prevention.

Equally urgent is the question of who pays — and how. The "missing middle" of outpatient and preventive financing is not a gap at the margins. It is the structural wound at the heart of healthcare for billions of people. Closing it requires financing innovation as bold as any clinical or technological breakthrough. And undergirding all of it must be a commitment to data governance that communities can trust — not because they are told to, but because the systems have earned that trust.

This report captures the collective intelligence of the voices gathered in Kolkata. It is offered not as a final word, but as a beginning — a blueprint that we hope policymakers, clinicians, innovators, and funders will carry forward into action.

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**Sujay Santra**

Founder & Chief Executive Officer ·  
iKure Techsoft Pvt. Ltd. ·

## SECTION 1.0

# Introduction

*"We are not building a better hospital. We are building a different system — one that meets people where they live, not where they fall ill."*

— WORKSHOP OPENING DIALOGUE, KOLKATA, MARCH 2026

Global health systems stand at a profound and consequential crossroads. The epidemiological transition — from the infectious disease burdens that shaped twentieth-century public health responses, to the chronic, non-communicable conditions now responsible for the overwhelming majority of premature mortality worldwide — has exposed structural inadequacies that incremental reform cannot address. Systems built around the logic of acute intervention — the emergency department, the inpatient ward, the specialist clinic, are demonstrably unfit for the long-term, continuous management that NCDs demand.

In low-income and middle-income countries, the challenge is compounded by fragmented infrastructure, severe resource constraints, inequitable geographic distribution of health services, and the accelerating financial toxicity that drives millions of households into poverty through out-of-pocket healthcare expenditures. For a person living with type 2 diabetes in a rural district, the health system is not a continuum of care. It is, too often, a series of unconnected transactions — each requiring transport, lost wages, and expenditures that erode household resilience.

It was against this backdrop that the *International Workshop on the Future of Healthcare* was convened in Kolkata, India, in March 2026. The workshop represented a deliberate effort to move the discourse beyond the familiar rhetoric of "access" — a necessary but insufficient framing — toward the deeper and more demanding question of systemic transformation. What would it mean, practically and architecturally, to build a health system designed for continuity rather than episodic encounter? What financing instruments, governance frameworks, technology platforms, and supply chain architectures would such a system require? And who must lead, fund, and sustain those investments?

Over two intensive days of structured dialogue, policymakers, clinicians, technologists, social impact investors, global health architects, and frontline practitioners engaged across six thematic panels. The discussions were analytical and evidence-informed. They were also frank about the distance between the aspirations of global health strategy and the lived experience of communities in under-resourced settings.

This report does not merely summarise those conversations. It seeks to synthesise them into a coherent policy narrative — one that can serve as a practical reference for stakeholders working to strengthen

health systems through prevention, financing innovation, supply chain resilience, and data governance grounded in community trust. The challenges are systemic. The solutions, as this report argues, must be equally systemic.

### 1.1 Purpose and Scope of This Report

This publication serves as the official summary report of the International Workshop on the Future of Healthcare, Kolkata, 2026. It is intended for a policy and practitioner audience that includes health ministries, development finance institutions, global health funders, MedTech innovators, primary care providers, and academic institutions engaged in health systems research.

The report provides expanded analytical coverage of the six thematic panels convened during the Workshop, situates the discussions within the broader global health literature, and draws out the strategic and policy implications of the collective findings. It includes key data visualisations, conceptual frameworks, stakeholder recommendations, and a synthesis of the workshop's most significant cross-cutting insights.

### 1.2 Structure of This Report

Following this introduction, the report presents an Executive Summary followed by a dedicated Key Messages section (Section 3.0) articulating the workshop's three structural conclusions. A Workshop Thematic Framework and Workshop Overview precede the six substantive Panel Reports. Sections on Key Data Visualisations, Cross-Cutting Themes, Strategic Outlook for Healthcare 2030, Ecosystem Integration, Stakeholder Recommendations, and From Dialogue to Action follow.



SECTION 2.0

## Executive Summary

### Context

Held on 5–6 March 2026 at the Taj Vivanta, Kolkata, the *International Workshop on the Future of Healthcare* served as a high-level strategic forum to interrogate the structural failures of contemporary health systems and prototype solutions for the decade ahead. Against the backdrop of a post-pandemic world still grappling with systemic inequities, the convening operated from the premise that incremental reform is no longer equal to the challenge. A radical architectural shift — from hospital-centric acute care to community-anchored, prevention-first, continuously delivered health services — is required to deliver health with dignity, continuity, and equity.

### Key Themes

Discussions across two days converged around six deeply interconnected themes, each representing both a systemic challenge and a structural opportunity:

SIX WORKSHOP THEMES
<ul style="list-style-type: none"> <li>▶ <b>NCD 2030:</b> The urgency of pivoting from acute response infrastructure to chronic disease management systems capable of delivering continuous care at scale.</li> </ul>
<ul style="list-style-type: none"> <li>▶ <b>Healthcare Financing:</b> The structural need to fund the "missing middle" of outpatient and preventive care through innovative payment and insurance models.</li> </ul>
<ul style="list-style-type: none"> <li>▶ <b>Blended &amp; Catalytic Financing:</b> Leveraging philanthropic and concessional capital to de-risk commercial investment in primary care and community health infrastructure.</li> </ul>
<ul style="list-style-type: none"> <li>▶ <b>MedTech Adoption:</b> Solving the persistent "last mile" gap between laboratory innovation and field deployment in resource-constrained settings.</li> </ul>
<ul style="list-style-type: none"> <li>▶ <b>Supply Chain Resilience:</b> Reconceptualising logistics not as a back-office function, but as a primary determinant of clinical outcome and patient trust.</li> </ul>
<ul style="list-style-type: none"> <li>▶ <b>Data Governance:</b> Building the social licence, institutional accountability, and technical standards necessary for health data systems to serve as public goods.</li> </ul>

### Major Insights

A defining insight of the workshop was the overwhelming economic and ethical rationale for prevention. Equally significant was the workshop's engagement with the "Impossible Trinity" of data governance: the structural tension between data security, institutional accountability, and social legitimacy. Participants noted that technology can enable each of these separately, but that achieving all three simultaneously requires not only technical architecture but also community trust — something that must be earned rather than assumed.

The workshop also surfaced a critical supply chain truth: medicine stockouts are not merely logistical failures. The erosion of trust failures. When communities health worker lacks essential medicines, the entire health system loses credibility in the eyes of the patients it is meant to serve.

### Strategic Implications

The strategic consensus emerging from Kolkata points to a health system of the future that is decentralised in delivery, integrated in architecture, and blended in financing. The hospital of 2030 is not an institution — it is an ecosystem, with the patient's home at its centre. For stakeholders, this implies a fundamental reorientation: funding systems rather than silos; measuring continuity rather than coverage; building trust infrastructure alongside clinical infrastructure. The path forward requires unified, cross-sectoral commitment to building health systems that flow around the patient — continuous, and governed by equity.



## SECTION 3.0

## Key Messages from the Workshop

The two-day deliberations in Kolkata, spanning six thematic panels and drawing on the perspectives of over 45 delegates from government, philanthropy, clinical practice, and private investment, converged on three overarching messages. These are not simply summary findings; they are structural conclusions that carry direct implications for how resources are allocated, how systems are designed, and how progress is measured in the decade ahead.

*"The question is no longer whether the health system needs to change. The question is whether we have the collective will to build the infrastructure — financial, technological, social — that change requires."*

— SYNTHESIS FROM WORKSHOP PLENARY DELIBERATIONS, KOLKATA, MARCH 2026

### Challenges Identified

- Healthcare systems remain treatment-oriented rather than prevention-focused, limiting effective management of non-communicable diseases (NCDs).
- Low public awareness and sensitisation about lifestyle-related diseases contributes to delayed diagnosis and poor disease management.
- Underfunding of primary and outpatient care (OPD) despite being the most common point of interaction with the health system.
- Many healthcare innovations fail to scale beyond pilot stages due to weak alignment between stakeholders, financing gaps, and lack of real-world testing.
- Fragmented digital health ecosystems and data silos reduce efficiency and continuity of care across providers.
- Implementation barriers for new technologies, including misalignment between buyers, users, and payers within healthcare systems.
- Healthcare supply chains are largely logistics-driven, fragmented, and poorly aligned with real patient demand, with procurement delays and weak last-mile delivery systems.
- Many innovations and pilots fail to scale due to lack of frontline user involvement, unrealistic service expectations, and limited financial sustainability.

## Way Forward

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- Shift towards integrated care models that combine prevention, early detection, treatment, and long-term follow-up for chronic diseases.

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- Strengthen primary healthcare systems and community-level engagement to improve early diagnosis and treatment adherence.

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- Reorient healthcare financing to support preventive services, diagnostics, and OPD care rather than focusing primarily on hospital-based treatment.

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- Develop blended and catalytic financing models to help innovations move from pilot projects to scalable healthcare solutions.

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- Promote interoperable digital health platforms and data integration to support coordinated care and better decision-making.

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- Encourage multisector collaboration and real-world testing environments, such as living labs, to accelerate adoption of healthcare innovations.

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- Develop demand-driven supply chains using digital tracking, predictive analytics, and real-time data while involving frontline health workers in system design.

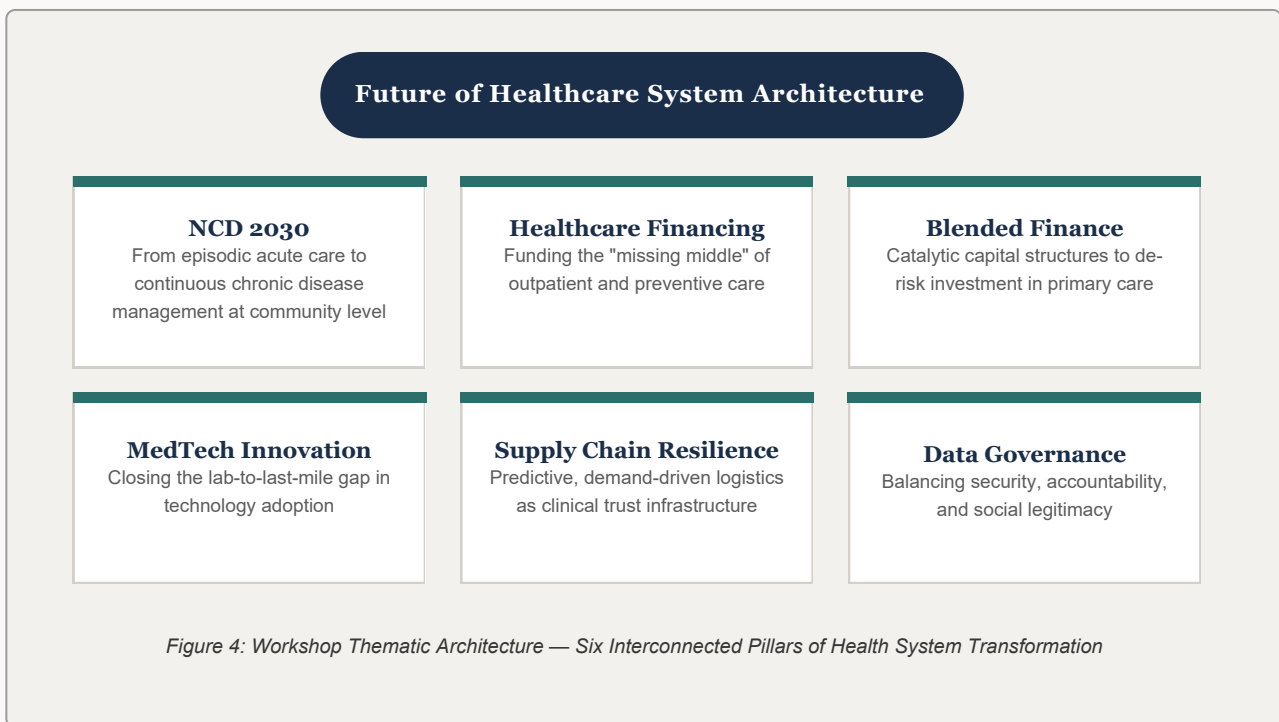
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- Strengthen last-mile delivery through flexible financing models and innovative distribution mechanisms such as drones, e-pharmacies, and automated drug dispensing systems.

SECTION 4.0

# Workshop Thematic Framework

The workshop was structured around six thematic pillars, each addressing a distinct but deeply interconnected dimension of health system transformation. Together, they constitute an integrated architecture for the future of healthcare — one in which no single pillar can succeed in isolation. NCD management fails without adequate financing; financing models are undermined by supply chain fragility; supply chains are ineffective without data governance; data governance is meaningless without community trust; and technology adoption requires co-design, not just clinical evidence.



The interconnected nature of these six themes was by design. Conversations were structured to move between pillars — surfacing the ways in which advances in one domain create enabling conditions for others, and how failures in one dimension compound failures across the system. The result was a cross-cutting, systems-level dialogue rather than a series of discrete technical discussions.

## SECTION 5.0

## Workshop Overview



Opening Session: Experience Before Framework

### 5.1 Purpose and Convening Logic

The *International Workshop on the Future of Healthcare* was conceived as a strategic convening rather than a conventional conference. Its design logic was deliberate: to bring together actors from across the health ecosystem — policymakers, clinicians, technology entrepreneurs, social impact investors, supply chain specialists, and data governance experts — in a structured dialogue aimed not at producing consensus for its own sake, but at identifying the most tractable levers for systemic change.

The organising principle was that health system transformation requires simultaneous, coordinated action across multiple domains. No single innovation — whether clinical, technological, financial, or governance-related — is sufficient on its own. The workshop was therefore structured to force cross-domain thinking: to ensure that the conversation about NCD management was informed by the realities of financing; that the discussion about MedTech adoption was grounded in supply chain and data governance constraints; and that the financing dialogue was anchored by evidence from the field.

### 5.2 Participants and Perspectives

The workshop brought together a diverse and senior cohort of participants from across the global health ecosystem. Representation spanned government health ministries, bilateral and multilateral development agencies, impact investment firms, MedTech companies, academic research institutions, non-governmental organisations, and frontline healthcare delivery networks. Geographic diversity was an explicit design criterion, ensuring that perspectives from South Asia, East Africa, Southeast Asia, and high-income health system contexts were represented in the dialogue.

The structure of the workshop was designed to move from macro to micro. Plenary panels set the strategic and analytical context, exploring the systemic drivers of health system failure and the structural requirements for transformation. These were complemented by roundtable discussions that addressed execution challenges in specific domains: the design of blended finance instruments, the procurement pathways for MedTech at the last mile, and the technical architecture of federated health data systems.

### 5.3 Setting the Agenda

The Kolkata convening was shaped by a recognition that previous health policy dialogues — however well-intentioned — had too often remained at the level of aspiration. The workshop was designed to be different: grounded in evidence, focused on implementation, and explicit about the structural barriers that previous initiatives had failed to address. The six thematic panels were selected not because they represent the full universe of health system challenges, but because they represent the domains in which systemic change is most urgent and most feasible within the planning horizon of the next five years.



## Panel Reports

## NCD 2030: Can Health Systems Keep Up?



Panel 1 – NCD 2030: Can Health Systems Keep Up?

### Context: A Silent Epidemic Rewriting the Rules

The global burden of non-communicable diseases represents one of the most consequential epidemiological shifts in modern public health history. Cardiovascular disease, type 2 diabetes, chronic respiratory conditions, and cancer now account for approximately 74% of global mortality annually — a staggering proportion that masks an even more troubling reality: the majority of NCD deaths are preventable, and a growing share occur in low- and middle-income countries whose health systems remain architecturally configured for infectious disease management and acute care delivery.

In South Asia, the epidemiological transition has been particularly rapid and particularly inequitable. India, for example, is home to the world's largest population of people living with diabetes — an estimated 77 million as of 2025, with projections suggesting this number will approach 134 million by 2045. Yet the health system infrastructure available to most of these individuals reflects the clinical priorities of a generation ago: hospital-based specialist care, episodic outpatient visits, and a dispensing logic that assumes patients will return when they feel ill rather than before they deteriorate. The result is a system that consistently encounters patients at the point of advanced complication rather than at the moment when intervention is most cost-effective.

The implications for health system financing are severe. Managing a patient at the early stage of NCD progression costs a fraction of managing the downstream complications. Yet incentive structures across the system — from insurance product design to provider reimbursement frameworks to government budget allocations — remain predominantly aligned with high-cost, late-stage intervention. Changing this requires not merely clinical advocacy but structural reform of the economic logic that governs how health systems are funded, delivered, and evaluated.

### SESSION OBJECTIVE

*To analyse the readiness of current health systems to address the rising tide of non-communicable diseases, and to identify the structural pivots required to transition from acute-care-oriented delivery to continuous, community-anchored chronic disease management at scale.*

## Key Discussion Themes

- The scale of undiagnosed hypertension and diabetes in rural and peri-urban settings, and the inadequacy of periodic "health camps" as a screening and management strategy.
- The structural mismatch between disease burden (chronic, continuous) and care delivery design (episodic, facility-based).
- The role of digital tools and AI in risk stratification, early screening, and proactive case identification. Task-shifting to Community Health Workers as a strategy for extending specialist capacity without proportional cost increases.
- The measurement challenge: transitioning from inputs-based metrics (patients seen, consultations delivered) to outcomes-based measures (health years preserved, complication rates, medication adherence).

## Expanded Key Insights

### INSIGHT BOX • PREVENTION VS TREATMENT ECONOMICS

#### **Prevention Is Not a Clinical Preference — It Is an Economic Imperative**

Early-stage type 2 diabetes management, including lifestyle counselling, oral medication, and routine monitoring, costs between \$2,000 and \$3,000 per patient per year. End-stage diabetic nephropathy requiring dialysis costs upward of \$33,000 per year — a more than tenfold difference — while delivering substantially inferior quality of life and placing immense financial strain on patients and health systems. This is not a marginal difference. It is a systemic indictment of the investment logic that governs healthcare spending in most countries.

The economic case for prevention is beyond dispute. The systemic failure to act on it reflects not a lack of evidence but a misalignment of incentives, planning horizons, and political economy — one that policy reform and blended financing must address.

### **1. Continuity Is the New Access**

The healthcare discourse of the past two decades has been dominated by the concept of access — expanding coverage, reducing geographic barriers, improving facility availability. For acute, infectious conditions, access is indeed the core challenge. For NCDs, it is necessary but insufficient. A patient who can reach a facility but receives no follow-up, whose medication runs out between visits, or whose care records are not portable between providers is not meaningfully integrated into the health system. The workshop reached a clear consensus: continuity of care — the capacity of a health system to accompany a patient through a longitudinal care journey — is the defining metric of NCD management quality. Systems that cannot deliver continuity cannot manage NCDs.

### **2. Task-Shifting Is a Structural Necessity, Not a Compromise**

The specialist workforce required to manage the projected NCD burden in low- and middle-income countries through conventional physician-led models does not exist and cannot be trained at pace. Task-shifting — the systematic delegation of defined clinical responsibilities to trained, supervised Community Health Workers — is not a compromise on quality. It is the only structurally viable model for extending chronic disease management at the scale the burden demands. Digital tools, portable diagnostics, and structured clinical protocols create the infrastructure through which task-shifting can be implemented safely and effectively.

The workshop heard evidence that CHWs operating within well-designed digital health platforms can manage 70–80% of routine NCD monitoring and medication management without compromising clinical outcomes.

### **3. Data-Driven Triage Transforms Resource Allocation**

In resource-constrained environments, the ability to direct scarce clinical expertise toward the patients who most need it is a fundamental competency. AI-enabled risk stratification models — trained on community health data — can identify individuals at elevated risk of NCD progression or acute complications before symptoms appear, enabling proactive, targeted intervention. The workshop noted that these tools are not futuristic aspirations: they are deployable now, provided the underlying data infrastructure is in place. The critical investment, therefore, is not in the predictive algorithm itself, but in the interoperable patient record system that feeds it.

## 4. Health Camps Are Not a Health Strategy

Periodic health camps — one-time screening events deployed as a primary community health intervention — were critically examined during this session. While they generate visibility and occasionally identify previously undiagnosed conditions, they are structurally incapable of delivering the follow-up, medication adherence support, and longitudinal monitoring that NCD management requires. The panel emphasised that health camps, in the absence of a care pathway to receive patients once identified, can actually be counterproductive: creating demand that the follow-on system cannot absorb, thereby eroding confidence in the health system among communities that receive a diagnosis without a care plan.

### Policy Implications

The policy implications of this session are far-reaching. First, national health strategies must formally reorient their planning frameworks from a disease-burden model (organised around conditions and their clinical management) to a care-continuum model (organised around the patient's journey and the system's capacity to sustain engagement over time). This requires changes to primary care accreditation standards, CHW training curricula, health information system architecture, and — critically — the metrics by which health system performance is evaluated and funded.

Second, governments must create policy and regulatory frameworks that enable task-shifting at scale. This includes defining the scope of practice for trained community health workers, establishing liability frameworks that protect both CHWs and their supervisors, and creating incentive structures that reward outcomes at the community level rather than procedures at the facility level. Third, health information systems must be designed for portability and interoperability from the outset — not as a future upgrade but as a foundational requirement. A patient who moves between facilities, districts, or providers must carry their clinical history with them.

### Strategic Implications

Health systems must reorient around a hub-and-spoke architecture in which community health workers, equipped with digital tools and portable diagnostics, form the primary point of patient engagement. Specialist facilities serve as referral nodes, not first points of contact. This model, which places the home at the centre of the care ecosystem, requires substantial investment in CHW training and supervision, digital infrastructure, and the redesign of clinical protocols for community delivery. It also requires a political commitment to measuring health system success differently — by the number of patients whose conditions are managed with dignity and continuity, not merely by the number of clinical encounters recorded.

*"Managing NCDs requires us to be present in people's lives — not just available when they are sick. The system that wins the NCD challenge will be the one that never loses touch with its patients."*

— PANEL 1 DISCUSSION, WORKSHOP PROCEEDINGS

# Paying for Care, Not Just Illness: Healthcare Financing, OPD Access & Affordability



Panel 2 — Paying for Care, Not Just Illness — Healthcare Financing, OPD Access & Affordability

## Context: The Structural Bankruptcy of Sick-Care Economics

Healthcare financing represents one of the most complex and politically contested domains in global health policy. Yet beneath the technical debate about insurance mechanisms, reimbursement models, and capitation rates lies a deceptively simple systemic failure: health financing systems, almost universally, are designed to pay for illness rather than health. Insurance products cover hospitalisation, not prevention. Government budgets fund tertiary hospitals, not community health workers. Payment mechanisms reward clinical procedures, not patient outcomes. The result is a financing architecture that structurally incentivises the escalation of disease rather than its prevention.

The consequences of this misalignment fall disproportionately on the poorest and most vulnerable. Across South Asia and sub-Saharan Africa, out-of-pocket healthcare expenditure remains the primary financing mechanism for a majority of households — meaning that the financial burden of illness is borne directly by those least able to absorb it. Health-related financial catastrophe, defined as healthcare spending that exceeds 10% of household income, affects hundreds of millions of people annually, functioning as one of the most powerful engines of poverty and inequality in the developing world. Families that experience a serious illness do not merely face a health crisis; they face an economic one — frequently one from which full recovery is impossible.

Addressing this requires more than insurance expansion. It requires a fundamental redesign of what healthcare financing is intended to achieve: not merely protecting individuals from catastrophic expenditure, but proactively funding the prevention, monitoring, and continuous management that keeps people out of hospital in the first place. This is not a utopian aspiration. It is a demonstrated model in several high-performing health systems—and the challenge is to understand how its core principles can be adapted and scaled in low-resource, high-burden environments.

### SESSION OBJECTIVE

*To examine sustainable financing models for outpatient and preventive care, with particular focus on reducing financial toxicity for low-income households, funding the "missing middle" of primary care, and designing payment mechanisms that reward health outcomes rather than clinical procedures.*

## Key Discussion Themes

- The "missing middle" of healthcare financing: the structural gap in coverage for outpatient, diagnostic, and preventive services that affects the majority of patient interactions.
- The financial toxicity of chronic care: direct costs, indirect costs (transport, lost wages), and the cumulative economic burden on low-income households over a multi-year NCD care trajectory.
- Subscription and pre-payment models for primary care: evidence from existing programmes and the design principles for adaptation at scale.
- Value-based care models: shifting provider incentives from volume (procedures delivered) to value (patient health outcomes achieved).
- The role of digital platforms in reducing transaction costs and enabling new payment architectures for community-level care.

## Expanded Key Insights

### 1. The "Missing Middle" Is the Core Structural Problem

The majority of healthcare interactions — for NCDs in particular — occur in the outpatient setting: primary care consultations, diagnostic tests, medication refills, and preventive monitoring. Yet outpatient care remains the domain least protected by existing insurance and financing mechanisms. Most public health insurance schemes in low- and middle-income countries were designed around catastrophic expenditure protection for inpatient care. Outpatient services, including the consultations and medications that constitute the daily reality of NCD management, remain largely uncovered. The result is that the most frequent and, over time, most costly healthcare interactions — those in which prevention and early intervention are most impactful — are paid for out of pocket by the patients who can least afford them.

### 2. The True Cost of Care Includes Indirect Costs

For low-income patients, the cost of a healthcare visit extends far beyond the consultation fee or medication cost. Transport to a district hospital may require several hours of travel. Time spent waiting at a facility represents lost wages. Follow-up visits multiply these costs across the year. For seasonal agricultural workers or daily-wage labourers — populations that represent a significant share of the NCD burden in rural South Asia — the opportunity cost of seeking care may exceed its direct financial cost. Financing solutions that ignore these indirect costs will systematically fail to reach the populations with the highest disease burden. Effective models must minimise the total burden of care-seeking through decentralised service delivery, pre-payment mechanisms, and digital tools that reduce the need for facility visits for routine monitoring.

### 3. Pre-Payment and Subscription Models Show Structural Promise

Subscription-based primary care models — in which households pre-pay a fixed periodic fee in exchange for defined bundles of preventive and outpatient services — are not new. But their application in low-income, high-burden settings remains underdeveloped relative to their potential. The workshop examined evidence from several operating models that bundle consultations, diagnostics, and essential medicines into an affordable monthly subscription, with community health workers as the primary delivery mechanism. Early results suggest meaningful improvements in care utilisation, medication adherence, and patient satisfaction — alongside reductions in downstream hospital admissions. The key design challenge is calibrating the bundle and the price point to achieve financial sustainability for the provider while remaining genuinely affordable for low-income households.

### 4. Fee-for-Value Must Replace Fee-for-Service

The fee-for-service reimbursement model — under which providers are paid for each clinical procedure or consultation delivered — creates structural incentives for over-treatment and against prevention. It rewards complexity and volume over simplicity and outcome. A provider paid per consultation has no financial incentive to keep a patient well enough to require fewer consultations; a provider paid per procedure has no incentive to deploy a simpler, cheaper intervention that achieves the same clinical outcome. Value-based care models, which link reimbursement to measurable patient health outcomes, represent the necessary structural counterpoint — but require robust measurement infrastructure, agreed outcome frameworks, and sufficient risk-sharing between providers and payers to be implemented effectively.

## Policy Implications

Governments must urgently redesign their health financing architectures to extend coverage to outpatient and preventive services. This requires either the expansion of existing national health insurance schemes to include defined outpatient benefit packages, or the creation of new, purpose-built financing mechanisms for primary and preventive care. Either approach requires a deliberate political choice to shift budget allocations from the tertiary sector toward the community level — a choice that will face significant institutional resistance from well-organised hospital constituencies.

Regulators must also enable new payment models, including subscription-based primary care and outcome-linked reimbursement, by creating the legal and regulatory frameworks within which these can operate. Digital identity and digital payment infrastructure — critical enablers of subscription models at scale — require coordinated investment from health ministries and digital economy agencies working in partnership.

## Strategic Implications

The long-term strategic imperative is to redesign the financial architecture of healthcare from the patient's perspective rather than the institution's. A person living with a chronic condition should encounter a financing system that makes it easier, cheaper, and more logical to maintain health than to allow deterioration. Achieving this requires multi-stakeholder collaboration — between governments, insurers, providers, technology platforms, and development finance institutions — to build the product design, data infrastructure, and policy frameworks that a genuinely preventive financing model requires.

*"We cannot continue to build insurance products that only cover patients once they are sick enough to be hospitalised. The entire economic logic of that system works against prevention. We need products that pay for health, not just illness."*

— PANEL 2 DISCUSSION, WORKSHOP PROCEEDINGS



Panel 3 – Blended and Catalytic Financing For Healthcare Scale

### Context: The Capital Stack Problem in Global Health

The global health financing ecosystem faces a structural paradox: there is, in aggregate, sufficient capital available to address the most pressing health system challenges — yet this capital remains largely inaccessible to the organisations and models that need it most. Commercial capital avoids early-stage, high-risk health interventions in low-resource settings because return timelines are long, markets are thin and exit pathways are uncertain. Philanthropic capital, which tolerates risk but has limited volume, funds individual projects rather than system-building. The result is a persistent "valley of death" in the health innovation lifecycle — a gap between proof-of-concept and commercial viability that destroys a disproportionate share of the most promising health innovations.

Blended finance — the strategic deployment of concessional or philanthropic capital to de-risk investment in ways that attract commercial funding—has emerged as the most promising structural solution to this gap. Its systematic application to primary healthcare and community health delivery, however, remains underdeveloped. This session inverted the conventional financing conversation: rather than beginning with philanthropic capital and hoping commercial investors will follow, participants began with the requirements of scale funders—private capital and government procurement—and worked backwards to design the evidence, structures, and sequencing needed to meet those requirements.

#### SESSION OBJECTIVE

*To examine how blended finance structures can systematically de-risk healthcare investments, attract private capital to high-impact primary care innovations, and establish the institutional infrastructure necessary for a functioning catalytic capital market — organised around four themes: Scale Readiness, Catalytic Capital, Bridging the Pilot-to-Scale Gap, and Aligning Public Systems.*

## Key Discussion Themes

- **Theme 1 — Scale Readiness:** Designing innovations backwards from the requirements of scale funders, asking first what evidence private capital and government procurement require before investing.
- **Theme 2 — Catalytic Capital:** The role of patient, risk-tolerant philanthropic capital in absorbing early innovation risk and supporting experimentation before commercial viability is established.
- **Theme 3 — Bridging the Pilot-to-Scale Gap:** Addressing the "missing middle" between validated pilots and commercial investment readiness — the period most destructive to promising health innovations.
- **Theme 4 — Aligning Public Systems, Markets, and Impact:** Ensuring that innovations are designed to match government procurement pathways and public health priorities, not just investor requirements.

## Expanded Key Insights

### 1. Start With the End in Mind: Designing Backwards from Scale

The session opened by inverting the conventional funding sequence. Typically, a health innovation begins with a pilot funded by catalytic or philanthropic capital, then seeks growth capital, and eventually hopes to attract commercial investment at scale. This sequencing, the panel argued, is fundamentally flawed — because it defers the most critical questions (What does government need to see before procuring this at scale? What does a commercial investor need to see before committing capital?) until late in the process, by which time the innovation may be difficult to redesign. The session instead began by bringing the scale funders — private capital and government — to the table first, and asking them directly what evidence and design criteria they require. The resulting insights were used to shape pilot design from the outset, ensuring that early-stage investments build toward the specific proof points that commercial capital and government procurement require.

A critical practical insight from this theme was the importance of unit economics. Private capital evaluates scale readiness primarily through the lens of unit cost sustainability: at what volume does the cost per beneficiary reach a level that makes the model commercially viable? Designing a health innovation without modelling this from day one is, in the panel's view, a common and costly error — because the variables that drive unit cost (fixed versus variable cost ratios, geographical density, workforce leverage, digital substitution) are embedded in the model's architecture, and are difficult to change retroactively.

### 2. Catalytic Capital: Risk Absorber, Not Charity

Catalytic capital — patient, flexible, high-risk-tolerant funding typically from philanthropic sources — serves a fundamentally different function in the capital stack from commercial investment. Its purpose is not to generate financial returns, but to absorb the risk of early-stage innovation so that solutions can prove themselves in real-world conditions before commercial capital arrives. The session examined the key criteria that determine where catalytic capital should be deployed: strength of the evidence base, Technology Readiness Level (TRL), team capability and founder quality, regulatory environment, and the existence of a credible pathway to commercial viability.

The session also addressed a common misunderstanding: that catalytic capital and government funding are alternatives or competitors. In a well-structured blended finance system, catalytic philanthropy de-risks innovations to the point where governments can procure them with confidence, and provide governments the volume and longevity of revenue that makes commercial investment viable.

The two are complementary, not competing — and blended finance is the architectural approach that makes their complementarity legible and actionable.

### **3. Pilots Rarely Fail — But They Also Rarely Scale**

One of the session's most provocative insights concerned the misleading success rate of health innovation pilots. Pilots in controlled environments almost universally demonstrate positive outcomes — because the pilot conditions (highly motivated teams, extra resources, intensive monitoring, simplified logistics) are systematically better than real-world operating conditions. The real test is not whether a solution works in a pilot; it is whether it works in the messy, under-resourced, politically complex environments that characterise real-world health system delivery. Bridge funding — the specific capital needed to test a model in these real-world conditions, after the pilot but before commercial viability — is the scarcest and most critical resource in the innovation pipeline, and the period most poorly served by existing financing instruments.

### **4. Sustainability Must Be Designed In, Not Bolted On**

A recurring theme across all four discussion groups was the tendency to treat financial sustainability as a question to be addressed at the scale phase — after a model has been validated and is ready for growth capital. The session argued forcefully that this sequencing is counterproductive. A model that has not been designed for sustainability from its earliest stage will face fundamental redesign challenges at the scale phase that may prove insurmountable. Sustainability considerations — revenue model, cost structure, government alignment, market positioning, and exit readiness — must be built into the model's architecture from day one, not introduced as an afterthought when the philanthropic funding runs out.

### **5. Government Alignment: The Non-Negotiable Condition for Scale**

Perhaps the most practically grounded insight from this session concerned the relationship between health innovations and government procurement systems. No health innovation in a low- or middle-income country context achieves meaningful scale without some form of government engagement — whether through direct procurement, regulatory approval, public-private partnership, or policy endorsement. Yet health innovators consistently underinvest in government engagement, typically initiating conversations with relevant government bodies only when they are already seeking procurement contracts, by which point it is too late to shape the policy environment that determines whether procurement is possible. The session advocated for early, sustained, proactive engagement with government — ideally beginning three to five years before a product or model is ready for procurement — to build the relationships, evidence base, and regulatory familiarity that government procurement requires.

## INSIGHT BOX · BLENDED FINANCE VS. CATALYTIC CAPITAL

**Two Tools, One Goal — Understanding the Distinction**

**Blended finance** is a structuring approach that combines different types of capital — philanthropic, concessional, and commercial — in a single vehicle, specifically designed to crowd in private capital by reducing its effective risk. Government capital can also participate in blended structures.

**Catalytic capital** is patient, flexible, high-risk capital — typically philanthropic — used to support early-stage innovations, high-risk pilots, and startups that are not yet ready for commercial investment. It does not seek financial returns; its return is the evidence base it creates.

The two are complementary: catalytic capital prepares innovations for commercial readiness; blended finance provides the structural vehicle through which commercial capital enters once that readiness is established.

**Policy Implications**

Governments and development finance institutions should establish dedicated blended finance facilities for primary healthcare, with explicit mandates to provide first-loss capital for community health innovations in low-resource settings. These facilities should operate with standardised impact measurement frameworks, transparent investment criteria, and co-investment requirements designed to crowd in commercial capital. Regulatory frameworks for social impact bonds and development impact bonds — existing but underutilised instruments — should be simplified and expanded to enable their wider application.

Equally important is the establishment of government procurement pathways that are accessible to early-stage social enterprises — including graduated procurement mechanisms that allow governments to support a startup's unit economics in its early years, transitioning to standard procurement terms as the enterprise achieves scale. Without such mechanisms, the final step in the blended finance journey — from commercial readiness to government adoption — remains broken.

**Strategic Implications**

The long-term strategic goal is a functioning, efficient market for primary healthcare investment in low- and middle-income settings — one in which commercial capital flows to proven models at scale, catalytic capital targets the innovation frontier, and development finance institutions bridge the gap between them. Building this market requires deliberate institutional investment in the enabling infrastructure: standardised impact metrics, legal frameworks for blended vehicles, co-investment platforms, and a pipeline of investable health organisations capable of absorbing capital effectively. It also requires a generation of health entrepreneurs who understand capital markets, and a generation of investors who understand health systems — a talent and knowledge gap that is itself a strategic priority for the field.

*"Often we start with pilots and hope they will scale. The better approach is to start with the end in mind — what would make a solution scalable — and design backwards."*

— PANEL 3 DISCUSSION, WORKSHOP PROCEEDINGS

*"Catalytic capital is not just about funding innovation — it is about absorbing risk so that solutions can prove themselves before commercial capital arrives."*

— PANEL 3 DISCUSSION, WORKSHOP PROCEEDINGS

*"Pilots rarely fail because they operate in carefully controlled environments — the real test is whether the model works in the real world."*

— PANEL 3 DISCUSSION, WORKSHOP PROCEEDINGS

*"Think about sustainability from day one — it should not become an afterthought when we start talking about scale."*

— PANEL 3 DISCUSSION, WORKSHOP PROCEEDINGS

# When Innovation Meets Reality: Why 'MedTech' Adoption Fails?



Panel 4: When Innovation Meets Reality — Why MedTech Adoption Fails?

## Context: The Innovation Valley of Death

The global MedTech sector generates a remarkable volume of innovation: new diagnostic devices, digital health platforms, AI-enabled clinical decision support tools, and portable therapeutic instruments are developed, tested, and funded at an accelerating pace. Yet for all this activity, the proportion of health technology innovations that achieve meaningful scale in low-resource, real-world settings remains strikingly small. Only 7–8% of funded health technology pilots successfully scale beyond the initial deployment context — a failure rate that represents not merely a commercial disappointment, but a profound missed opportunity for the populations these technologies are designed to serve.

The causes of this failure rate are well-documented but imperfectly addressed. Technologies are often developed in laboratory or high-resource clinical settings without meaningful input from the frontline workers who will ultimately use them. Regulatory and procurement pathways in low- and middle-income countries are complex, slow, and inadequately resourced. Clinical workflow integration — the degree to which a new technology fits naturally into existing care delivery processes — is frequently an afterthought rather than a design principle. And the financing models that sustain a technology through from pilot to scale remain underdeveloped.

The workshop examined these barriers in-depth, drawing on the experience of practitioners who have navigated the "lab to last mile" journey — including the development team behind the METORI diagnostic device, which was formally launched at the Kolkata workshop as an example of field-responsive MedTech design.

*To identify the systemic barriers preventing MedTech innovations from achieving real-world adoption at scale in low-resource settings, and to define the design, procurement, regulatory, and financing changes required to significantly improve adoption rates for health technologies in community and primary care contexts.*

## Key Discussion Themes

- The "7–8% problem": why the overwhelming majority ... of MedTech pilots fail to scale, and what structural rather than technical changes are required to improve this ratio.
- Co-design as a non-negotiable: the evidence for involving end-users — nurses, ASHAs, community health workers — from the earliest stages of technology development.
- Workflow integration: how the friction or fluency of a technology within existing clinical processes determines its adoption trajectory independently of its clinical utility.
- Regulatory and procurement pathways: the specific institutional barriers in low- and middle-income country contexts that delay or prevent technology adoption.
- Living Labs as validation infrastructure: the role of real-world testing environments in generating the evidence and deployment experience required for scale.

## Expanded Key Insights

### 1. Most MedTech Failures Are Non-Technical

The analysis of MedTech adoption failures consistently reveals that the technology itself is rarely the primary cause of failure. Clinical efficacy, diagnostic accuracy, and device reliability are typically established in the pilot phase. What breaks down in the transition to scale is the surrounding ecosystem: the procurement relationships, the training infrastructure, the supply chain for consumables, the integration with existing patient record systems, and — above all — the workflow compatibility with the realities of clinical practice in resource-constrained settings. Addressing non-technical failure requires a fundamental reorientation of how MedTech development programmes are designed and evaluated: from a technology readiness framework to a deployment readiness framework that treats implementation as a first-class research and design objective.

### 2. Co-Design Is Not a Stakeholder Engagement Exercise — It Is a Clinical Design Imperative

Technologies co-designed with the nurses, ASHAs, community health workers, and primary care physicians who will use them in the field consistently outperform those developed without meaningful end-user input on every relevant adoption metric: adoption rates, sustained utilisation, user satisfaction, and ultimately clinical impact. This is not surprising from an engineering perspective — iterative design with feedback from the actual operating environment produces superior design outcomes. What is surprising is how consistently MedTech development programmes are structured to treat user engagement as a late-stage validation step rather than a core design activity. The METORI device development process, described during the panel, was cited as a model of how co-design can be embedded as an operating principle from conception through to deployment.

## CASE STUDY · METORI PORTABLE DIAGNOSTIC DEVICE

**From Field Insight to Functional Innovation: The METORI Story**

The METORI device — a portable, high-quality diagnostic instrument designed specifically for deployment in community and primary care settings — was formally launched at the Kolkata workshop. Its development trajectory exemplifies the field-first design philosophy that the panel identified as critical to MedTech adoption success. Unlike devices designed for hospital settings and subsequently "adapted" for community use, METORI was designed from the outset for the operational realities of low-resource environments: power-independence, durability under field conditions, simplified user interface for CHW-level operation, and a cost structure compatible with community health financing models.

The strategic partnership announced at the workshop for METORI deployment across the iKure network represents an early and significant test of the field-responsive design hypothesis — with outcomes data to be incorporated into the Living Lab evidence base.

**3. Workflow Friction Is Adoption's Invisible Killer**

A technology that adds even three minutes to a clinical encounter in a setting where each consultation is allotted eight minutes will not be adopted, regardless of its clinical utility. The workshop heard consistently that workflow friction — the degree to which a technology increases the complexity, time, or cognitive burden of a clinical task — is one of the most powerful predictors of adoption failure. Technologies that streamline existing workflows, reduce documentation burden, or provide decision support without requiring additional steps are adopted at dramatically higher rates. This insight has profound implications for how MedTech products are evaluated: clinical utility, measured in isolation from workflow context, is an insufficient adoption predictor. Workflow integration scores should be a mandatory component of procurement and adoption assessments.

**4. Living Labs Are the Missing Validation Infrastructure**

The concept of a Living Lab — a real-world community health setting in which new technologies are deployed, evaluated, and iteratively refined in conditions of operational authenticity — addresses a fundamental gap in the MedTech innovation pipeline. Conventional clinical trials are designed to measure efficacy under controlled conditions; they are poor predictors of real-world adoption. Living Labs generate a different kind of evidence: deployment experience, operational learning, implementation cost data, and community trust indicators that are invisible in controlled settings but decisive in practice. The workshop heard from the iKure Atlas Health Works Living Lab — established in Alibag, Maharashtra — as an example of how this infrastructure can be built and sustained at a community scale.

## Policy Implications

Regulatory agencies in low- and middle-income countries must develop streamlined, proportionate approval pathways for community-level diagnostic and monitoring devices, distinguishing them from the high-risk clinical devices that require extended evaluation. Procurement systems — both public and private — should incorporate deployment readiness assessments alongside clinical performance criteria, explicitly evaluating workflow compatibility, training requirements, and total cost of ownership. Technology development grants and investment instruments should include co-design and Living Lab validation as funded and evaluated activities, not optional extras.

## Strategic Implications

The innovation pipeline must be restructured to prioritise deployment readiness from the earliest stages of development. This requires a cultural shift in how success is defined and measured — away from clinical performance metrics and toward real-world impact metrics that capture adoption, sustained utilisation, and community health outcomes. The Living Lab model provides the institutional infrastructure to generate these metrics; the challenge is to build a sufficient network of such infrastructure to create the validation environment that the sector needs.

*"If a technology doesn't work in the hands of the health worker it was built for, in the conditions it was built to operate in, then the clinical data is irrelevant. The question is not 'does it work?' — it is 'does it work here?'"*

— PANEL 4 DISCUSSION, WORKSHOP PROCEEDINGS

# Supply Chain that Sustains Care: The Backbone of Reliable and Equitable Care Delivery



Panel 5 – Supply Chain that Sustains Care: The Backbone of Reliable and Equitable Care Delivery

## Context: Logistics as a Clinical Determinant

Healthcare supply chain management occupies an unusual position in health system discourse: it is universally acknowledged as essential, yet persistently underinvested in relative to other domains. The reasons for this are partly structural — supply chain is invisible when it works and only noticed when it fails — and partly cultural, reflecting a bias in health system planning toward clinical and technological interventions over the operational infrastructure that enables them. The consequence of this underinvestment is a pattern of supply chain failures that undermine clinical effectiveness across the health system, erode patient trust, and ultimately defeat the objectives of even well-designed clinical and preventive programmes.

The "feast or famine" inventory cycle familiar to practitioners in public health facilities across the developing world — periods of surplus followed by severe stockouts, driven by push-based distribution models disconnected from actual demand — is not merely an operational inefficiency. It is a patient experience failure with direct clinical consequences. A patient who is told that their blood pressure medication is out of stock does not merely leave the pharmacy without their medicine; they leave with a diminished confidence in the health system's capacity to support them, and a reduced likelihood of returning for their next scheduled visit. Repeated stock-outs create a ratchet effect of disengagement that is extremely difficult to reverse.

INSIGHT BOX · SUPPLY CHAIN AS TRUST INFRASTRUCTURE

**Medicine Availability Is Not a Logistics Metric — It Is a Trust Metric**

When a patient seeks care and finds that the prescribed medication is unavailable, the experience communicates something fundamental about the health system: that it cannot be relied upon. This perception is not easily reversed by a subsequent visit in which medicines are available. Research consistently shows that stockout experiences have a disproportionately large and persistent negative effect on patient trust and care-seeking behaviour relative to the positive effect of individual successful interactions.

The strategic implication is significant: supply chain reliability is not merely an operational objective — it is a trust-building imperative. Investing in supply chain resilience is, in effect, investing in patient confidence in the health system as a whole.

**SESSION OBJECTIVE**

*To reconceptualise the medical supply chain as a primary component of clinical care quality — one that builds or destroys patient trust through its reliability — and to examine the specific data, technology, and institutional reforms required to transition from push-based distribution to predictive, demand-driven supply chain management.*

**Key Discussion Themes**

- The "feast or famine" inventory cycle: causes, consequences, and structural solutions.
- Demand-driven versus push-based supply chain models: the evidence for and barriers to transition.
- Digital inventory management at the last mile: technology requirements, implementation challenges, and the critical importance of data quality.
- Cold chain management for vaccines and temperature-sensitive medications: a specific and urgent sub-challenge within supply chain resilience.
- The trust dimension of supply chain performance: how medicine availability shapes patient behaviour and system credibility.

**Expanded Key Insights**

**1. Push Models Are Structurally Unsited to Variable Demand**

The predominant model for medicine distribution in public health systems — in which central warehouses push predetermined quantities of medicines to peripheral facilities on fixed schedules — was designed for predictable, stable demand patterns. NCD medication demand, while relatively stable at the individual level, is highly variable in aggregate across facilities and geographies, driven by seasonal disease patterns, local demographic shifts, programme expansions, and the variable success of community outreach. Push models, which allocate quantities based on historical averages and central planning assumptions, consistently produce surpluses in some facilities and stockouts in others. The structural solution is a demand-driven pull model in which facilities place orders based on real-time inventory levels and forward demand projections — a model that requires digital inventory tracking infrastructure as its foundational enabler.

## **2. Digitising the Last Mile Is Both Urgent and Achievable**

Digital inventory management at the community health worker and primary care facility level — tracking stock levels in real time, triggering automatic reorder alerts, and generating forward demand forecasts — is no longer a technical aspiration. It is an operational reality in several health systems, implemented through mobile applications on low-cost smartphones that community health workers already carry. The barriers to wider adoption are not technological; they are institutional: procurement systems that have not incorporated digital tools, training programmes that have not been updated, and data governance frameworks that have not been designed for supply chain integration. Addressing these institutional barriers is the primary policy challenge — and it requires sustained leadership from health ministries, supported by development partners willing to fund institutional change, not just technology deployment.

## **3. Predictive Analytics Can Anticipate Demand Spikes**

Supply chain analytics — drawing on historical consumption data, disease surveillance signals, weather patterns, and demographic information — can anticipate demand spikes for specific medicines weeks or months in advance. Seasonal flu increases demand for antipyretics and antivirals; monsoon season in South Asia correlates with respiratory and vector-borne disease increases; mass NCD screening campaigns generate predictable demand surges for antihypertensives and oral hypoglycaemics. Integrating these predictive signals into supply chain planning reduces reactive stockouts and the associated trust erosion. The enabling infrastructure — longitudinal, interoperable electronic health records at the community level — is the same data architecture that NCD management requires, creating a powerful argument for integrated investment in health information systems.

## **4. Supply Chain Resilience Requires Institutional Trust as Well as Technical Systems**

Technical supply chain improvements are necessary but not sufficient. The panel noted that supply chain failures in public health systems are frequently not technical failures — they are governance failures. Medicines are diverted or misappropriated. Procurement processes are manipulated. Inventory data is falsified to avoid reprimand for stockouts or to secure excess allocations. Addressing these governance challenges requires not just better data systems but also accountability frameworks, independent auditing, and the cultural and institutional changes that enable frontline staff to report problems without fear of retribution. Technical supply chain systems embedded in weak governance environments will systematically underperform.

## Policy Implications

Health ministries must make digital inventory management at the community facility level a mandatory component of primary care infrastructure, with accompanying funding commitments and implementation support. Procurement systems should be redesigned to enable continuous replenishment based on real-time demand signals, replacing fixed-schedule push distribution with demand-responsive pull logistics. Supply chain performance — specifically stock availability rates for essential NCD medicines — should be incorporated as a key performance indicator in national health system evaluations, creating accountability for supply chain outcomes at the ministerial level.

## Strategic Implications

The strategic framing of supply chain investment must change. It is not a back-office efficiency initiative — it is a patient trust investment. In a health system context where community trust is the most fragile and most valuable asset, the consistent availability of essential medicines is one of the most powerful trust-building signals a system can deliver. Leaders who make this investment will see returns not only in clinical outcomes but in care-seeking behaviour, programme participation rates, and the social legitimacy of the health system as a whole.

*"When the medicine is not there, the patient doesn't just go home without treatment. They go home with a story — a story that they will tell their neighbours and their family about the health system that let them down. Supply chain failures are public health communication failures."*

— PANEL 5 DISCUSSION, WORKSHOP PROCEEDINGS





Panel 6 – Data Security and Governance as the Backbone of Digital Healthcare

### Context: The Data Governance Imperative

The digitalisation of healthcare — from electronic health records and mobile health applications to AI-driven diagnostics and population health surveillance — generates immense quantities of health data. This data, properly governed, represents one of the most valuable resources available to public health systems: it enables early disease detection, population risk stratification, supply chain optimisation, and the continuous learning that drives clinical quality improvement. Improperly governed, the same data becomes a liability: a source of privacy violation, discriminatory use, commercial exploitation, and the erosion of community trust that — once lost — is extraordinarily difficult to recover.

The governance of health data therefore sits at the intersection of two competing imperatives that are both essential and in structural tension: the imperative to use data for the collective health benefit of populations, and the imperative to protect the privacy, autonomy, and dignity of the individuals whose data is collected. No governance framework can maximise both objectives simultaneously. Every governance design involves trade-offs — and the quality of governance depends not on finding a perfect solution, but on making those trade-offs explicitly, transparently, and in a way that reflects the values and interests of the communities whose data is at stake.

In low- and middle-income country contexts, this challenge is compounded by additional structural factors: limited regulatory capacity, weak data protection enforcement, low levels of digital literacy among data subjects, a history of extractive research relationships between high-income institutions and low-income communities, and the particular vulnerability of marginalised populations — indigenous communities, migrants, people living in poverty — to data-driven discrimination and exclusion.

**SESSION OBJECTIVE**

*To examine the frameworks for health data governance that protect individual privacy while enabling the population-level data use that health systems require, with particular attention to the structural trade-offs between security, institutional accountability, and social legitimacy — and to identify governance design principles applicable to community health settings in low-resource environments.*

**Key Discussion Themes**

- The Impossible Trinity: the structural tension between data security, institutional accountability, and social legitimacy — and the design choices required to navigate it.
- Social licence for digital health: how communities grant, maintain, and withdraw consent for data-driven interventions, and what governance practices build or erode this licence.
- Consent frameworks: the inadequacy of broad, blanket consent models and the potential of dynamic, granular, and community-level consent architectures.
- Interoperability and vendor lock-in: the governance implications of proprietary data systems and the case for open standards as a public good.
- Data quality at the frontline: the "garbage in, garbage out" challenge and the design of data entry systems that frontline workers can use accurately and efficiently.

**Expanded Key Insights**

INSIGHT BOX · THE IMPOSSIBLE TRINITY OF DATA GOVERNANCE

**Three Objectives, One Irresolvable Tension**

Health data governance must simultaneously pursue three objectives — each of which is individually essential and collectively in structural tension with the others:

**Security**

Protecting data from unauthorised access, breach, misuse, and exploitation — through technical and institutional safeguards.

**Accountability**

Ensuring that institutions handling health data are held responsible for how it is collected, stored, used, and shared.

**Social Legitimacy**

Building the community trust and social consent that enables people to willingly participate in health data systems.

Governance frameworks that prioritise security above all can inadvertently undermine social legitimacy by creating opaque, inaccessible systems that communities distrust. Those that prioritise utility can erode both security and accountability. The challenge is not to maximise any single dimension, but to navigate the trade-offs with transparency, community engagement, and institutional integrity.

**1. Trust Is the Currency of Digital Health**

The adoption of digital health systems — electronic health records, mobile health applications, population health surveillance platforms — depends not merely on technical availability but on community willingness to engage. Communities that have experienced data extraction without reciprocal benefit, whose health

information has been used in ways they did not understand or consent to, or who have been subject to data-driven discrimination, will not voluntarily participate in digital health systems, regardless of the clinical benefits on offer. The corollary is equally important: communities that have experienced transparent, accountable, and genuinely beneficial uses of their health data can become active advocates for digital health initiatives. Trust, once built, is a platform for health system transformation.

## **2. Consent Must Be Dynamic, Not Episodic**

The standard model of health data consent — a one-time, blanket agreement signed at the point of registration, typically in language that is neither accessible nor meaningfully understood by the signatory — is structurally inadequate for the governance challenge that longitudinal health data systems present. The panel argued for a shift to dynamic consent architectures: models in which individuals can view, modify, and withdraw consent for specific uses of their health data at any point, through accessible interfaces in their preferred language, with clear explanations of the implications of each consent choice. This requires investment in consent infrastructure — both technical (data governance platforms with consumer-facing interfaces) and human (community health workers trained to explain consent in accessible terms).

## **3. Interoperability Is a Governance Issue, Not Just a Technical One**

Proprietary health data systems that store patient information in formats accessible only through that vendor's platform create structural governance risks that extend far beyond the technical domain. They create vendor lock-in that limits health system negotiating power and drives up long-term costs. They fragment the patient data landscape, preventing the longitudinal, comprehensive patient records that NCD management requires. And they create data security vulnerabilities through concentration: when a health system's entire data infrastructure depends on a single commercial vendor, a security breach or commercial failure becomes a health system crisis. Open standards for health data — interoperable, platform-agnostic, and governed as public goods — are not merely a technical preference. They are a governance imperative.

## **4. Data Quality Is a Frontline Worker Challenge**

The most sophisticated health data governance framework in the world cannot compensate for poor quality data at the point of entry. Community health workers operating in field conditions — on mobile devices, in limited connectivity environments, often while simultaneously managing patient interactions — face real barriers to accurate, complete data capture. Digital health system design too often optimises for data richness (capturing every potentially relevant variable) at the expense of data entry usability (making it fast, simple, and low-error for frontline users). The result is systematic underreporting, data entry errors, and the selective omission of fields that workers find difficult to complete — all of which corrupt the data assets that population health analytics depend on.

## Policy Implications

Governments must enact comprehensive data protection legislation with specific provisions for sensitive health data, establishing clear rights for data subjects and corresponding obligations for data controllers — including public health institutions and government health agencies. Health data systems procured with public funds should be required to use open standards and interoperable architectures as a condition of procurement. Community consent frameworks should be co-designed with the communities whose data is at stake, with independent oversight to ensure ongoing accountability.

## Strategic Implications

The strategic framing of data governance must shift from a compliance orientation (meeting minimum regulatory requirements) to a trust-building orientation (actively building the community relationships that make data-driven health improvements possible). This requires investment in governance capacity — regulatory bodies, civil society advocates, community engagement infrastructure — as well as technical standards. In the long run, the health systems that invest most seriously in data governance will also be those with the richest, most accurate, and most actionable health data — because communities will be willing to share it.

*"Data is not just a resource that health systems extract from communities. It is a relationship. And like all relationships, it only works when both parties trust each other. Build that trust, and the data follows."*

— PANEL 6 DISCUSSION, WORKSHOP PROCEEDINGS

INSIGHT BOX · CONTINUITY IS THE NEW ACCESS

### **Beyond Coverage: The Case for Continuity as the Central Metric of Health System Performance**

The global health community has spent the past two decades working to improve healthcare access — reducing geographic barriers, expanding coverage, and bringing services closer to underserved communities. This work has been necessary and valuable. But for non-communicable diseases, access is not sufficient. A person with diabetes who can reach a clinic but receives no follow-up care, whose medication is discontinued when they move or change facilities, or whose clinical history is lost between providers, is not receiving adequate care — regardless of how accessible the system is in the conventional sense.

Continuity of care — the system's capacity to maintain an ongoing, personalised, longitudinal relationship with a patient across time, geography, and care settings — is the metric that matters for NCD management. Digital health records, portable patient identifiers, community health worker relationships, and subscription care models are all tools for building continuity. But building continuity requires a deliberate architectural commitment that goes beyond expanding access to facilities.

SECTION 7.0

# Key Data Visualisations

The following figures present the core quantitative evidence that framed the workshop discussions. They are designed to be directly incorporated into policy presentations and institutional reports.

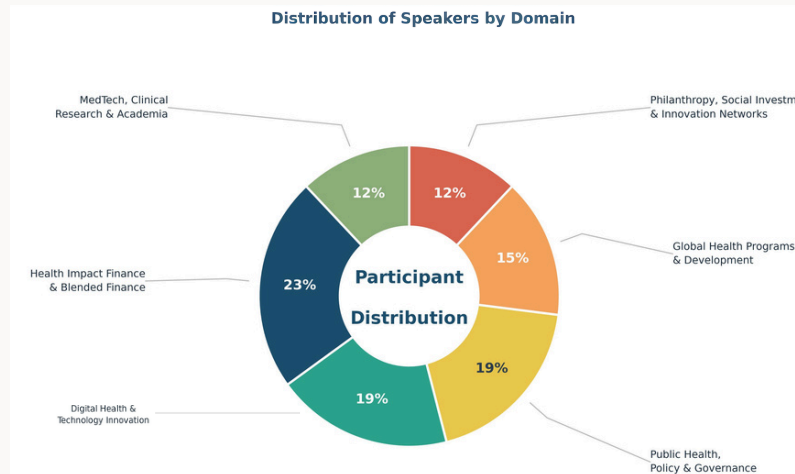


Figure 1 — Distribution of Workshop Speakers by Domain and Sector

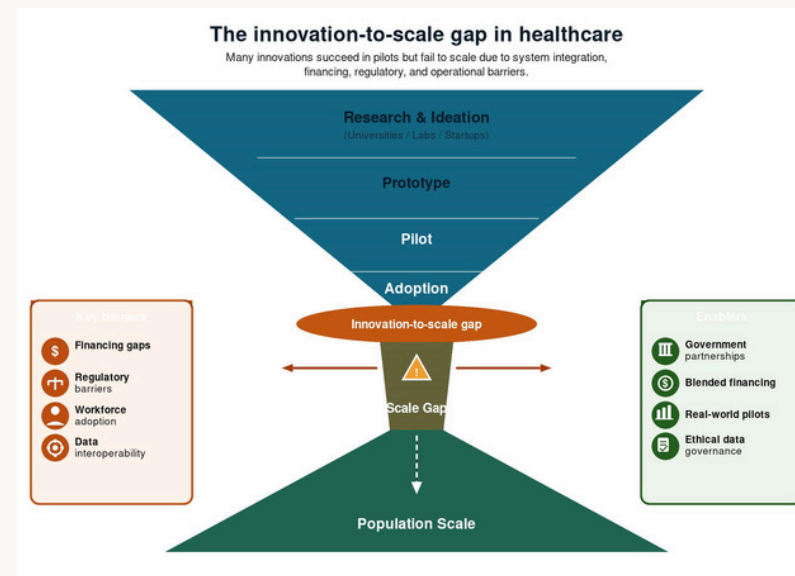


Figure 2 — Key Themes Emerging from the Workshop: Innovation to Scale-Up Gap

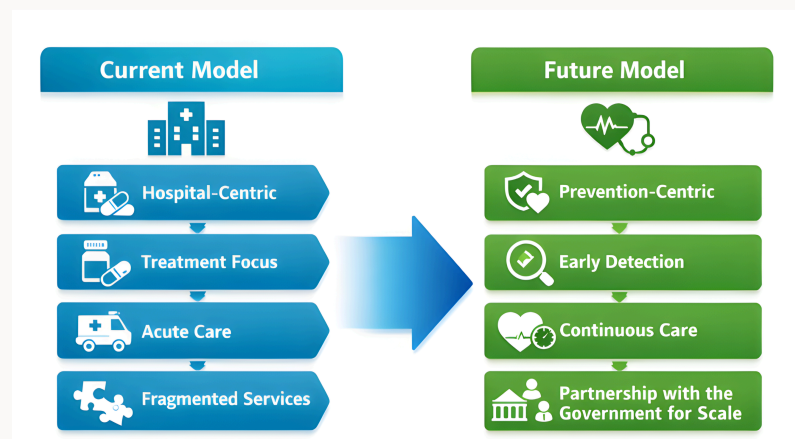


Figure 3 — Future Healthcare Delivery Architecture and Care Pathway Model

## SECTION 8.0

## Cross-Cutting Themes Emerging from the Workshop

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Discussions across the panels and sessions of the workshop revealed several recurring themes that cut across different domains of healthcare systems, including service delivery, financing, innovation, and data governance. While each session addressed specific challenges, common insights emerged on the structural changes required to build more resilient, prevention-oriented, and scalable health systems. The following cross-cutting themes synthesise the key ideas that consistently surfaced throughout the workshop and highlight priority areas for action.

1

### Shift from Treatment to Prevention

A recurring theme across sessions was the need to transition from hospital-centric treatment models to prevention-focused healthcare systems that prioritise early detection, continuous care, and long-term management of non-communicable diseases.

2

### Community-Centred Care Delivery

Strengthening primary care systems and empowering community health workers emerged as essential for expanding access to care, improving early diagnosis, and ensuring continuity of care at the community level.

3

### Bridging Innovation and Implementation

Participants highlighted the persistent gap between healthcare innovation and real-world deployment. Platforms such as Living Labs were identified as critical mechanisms for testing, validating, and scaling innovations within actual health system environments.

4

### Financing Models that Support Prevention and Scale

Discussions emphasised the need to realign healthcare financing toward prevention, outpatient care, and long-term disease management, while leveraging blended and catalytic financing models to enable scalable health innovations.

5

### Integration of Digital Health and Data Systems

Digital health platforms, interoperable data systems, and responsible data governance frameworks were recognised as key enablers for coordinated care delivery, evidence-based decision-making, and system efficiency.

6

### Cross-Sector Collaboration

A consistent message throughout the workshop was that healthcare system transformation requires coordinated action across governments, healthcare providers, technology innovators, investors, and research institutions.

7

### Strengthening Demand-Driven Supply Chains

Discussions highlighted that healthcare supply chains often operate in “feast and famine” cycles, where periods of oversupply are followed by critical shortages due to uniform procurement and distribution models that fail to account for local demand variations. Participants emphasised the need for demand-driven supply chains supported by real-time data, predictive analytics, and flexible distribution systems to ensure reliable availability of medicines, diagnostics, and devices, particularly at the last mile.

## SECTION 9.0

## Strategic Outlook: Healthcare 2030

*"The ideal health system will flow like a river — continuous, adapting to the needs of the patient, navigating obstacles without losing direction, always moving forward."*

The workshop's collective vision for healthcare in 2030 is not a marginal improvement on today's systems. It is a structural transformation — one that requires fundamental changes to the architecture of care delivery, the economics of health financing, the governance of health data, and the political incentives that shape health system investment. The following pillars define this vision, as articulated across the six panels and synthesised from the workshop's most consistent and compelling insights.



### **The Home as the Primary Site of Care**

By 2030, the dominant site of routine healthcare delivery will be the home — not because hospitals have been abandoned, but because the health system has been architected to meet people where they live. Community health workers, equipped with portable diagnostics, digital monitoring tools, and AI-assisted clinical decision support, will manage the majority of routine NCD monitoring, medication management, and preventive interventions at the household level. Hospitals will be reserved for conditions that genuinely require their specialised capabilities.



### **Proactive, Predictive, Personalised Healthcare**

The health system of 2030 will anticipate illness before it manifests as symptoms. Population-level health data, analysed through AI-enabled risk stratification models, will identify individuals at elevated risk of NCD progression, enabling proactive intervention — lifestyle modification support, early pharmacological treatment, targeted monitoring — before complications develop. This shift from reactive to proactive care is not a technological aspiration; it is the necessary clinical response to the economics of late-stage NCD intervention.



### **Integrated Ecosystems, Not Institutional Silos**

The 2030 healthcare system will function as an integrated ecosystem in which governments, healthcare providers, technology companies, supply chain operators, financial institutions, and community organisations share data, resources, and accountability for health outcomes. The silos that currently define health system architecture — between primary and secondary care, between public and private sectors, between clinical and logistical functions — will dissolve in favour of integrated platforms governed by shared standards and mutual accountability.



**Living Labs as the Standard Validation Infrastructure**

The "Living Lab" model — in which new technologies, care models, and financing instruments are deployed and evaluated in real-world community settings, generating operational evidence that controlled clinical trials cannot provide — will become the standard pathway for health system innovation validation. Rather than isolated pilots that demonstrate proof of concept in ideal conditions, Living Labs will produce the deployment experience, implementation cost data, and community trust indicators required to support scale-up decisions with confidence.



**Success Measured in Health Years Preserved**

The metric that defines health system success in 2030 will be "health years preserved" — the number of additional years of healthy, productive life that the system generates through prevention, early intervention, and continuous management — rather than the procedure volumes, consultation counts, and coverage rates that dominate current performance frameworks. This shift requires new measurement infrastructure, new accountability mechanisms, and a political willingness to invest in outcomes that are difficult to attribute to specific interventions and emerge over multi-year timescales.



SECTION 10.0

# Integrated Future Healthcare Ecosystem

The workshop reached a clear architectural conclusion: the future of healthcare is not a better hospital, a better app, or a better insurance product in isolation. It is an integrated ecosystem in which each component — the patient, the community health worker, the digital platform, the supply chain, the financing mechanism, and the governance framework — functions as part of a coherent, patient-centred whole. The following diagram conceptualises this ecosystem, with the patient at the centre of a web of interconnected enabling systems.

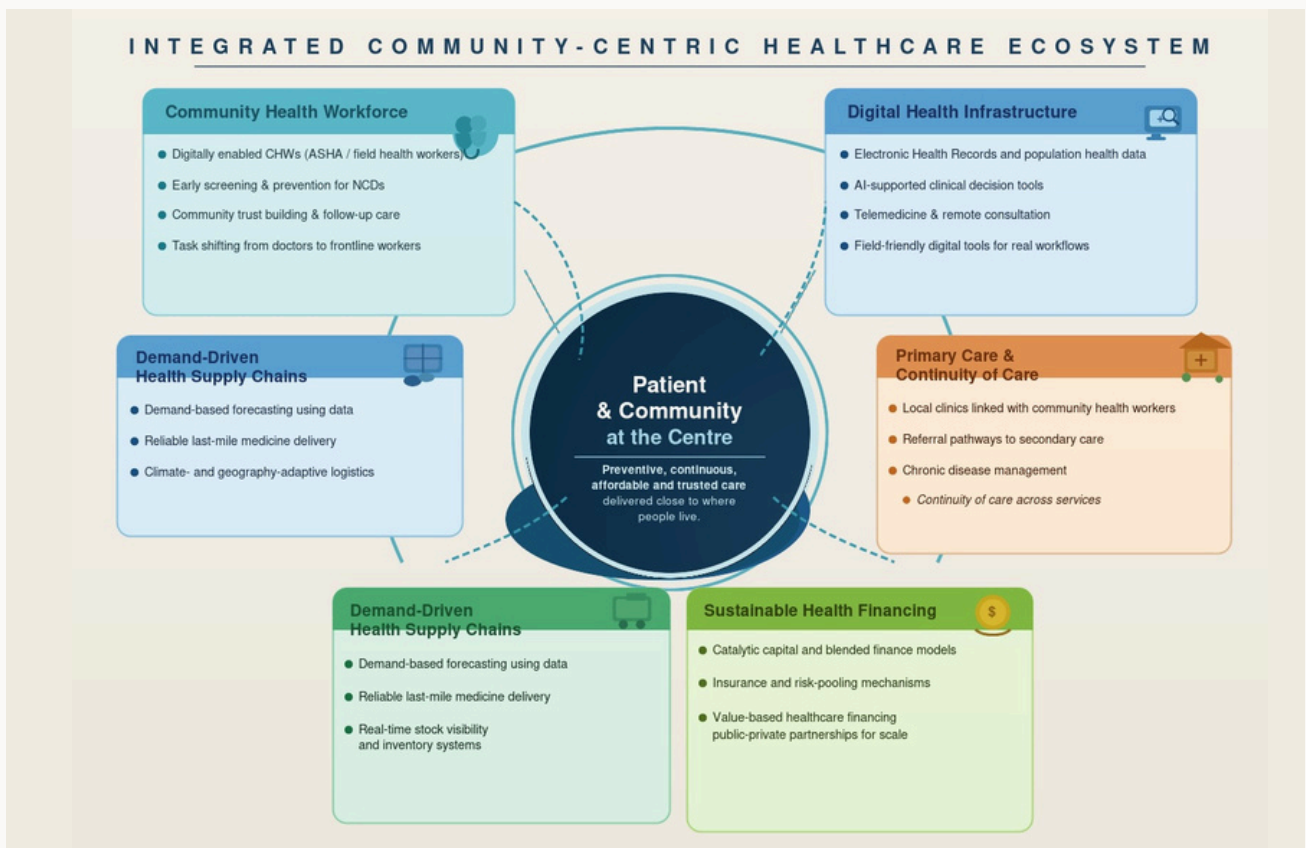


Figure 5 — Integrated Future Healthcare Ecosystem: Patient-Centred Architecture

Each of the six enabling domains in this ecosystem is necessary; none is sufficient on its own. Community health workers without reliable supply chains cannot deliver effective care. Digital platforms without data governance create liability rather than value. Financing systems without measurement infrastructure cannot demonstrate impact. The ecosystem only functions when its components are simultaneously invested in, architecturally integrated, and governed by shared standards and accountability frameworks. This is the design challenge — and the design opportunity — of the next decade.

SECTION 11.0

# Recommendations for Stakeholders

The following recommendations emerge directly from the six panel discussions and the cross-cutting synthesis of the workshop. They are addressed to four stakeholder groups whose coordinated action is necessary for health system transformation: governments and policymakers; healthcare providers; technology innovators; and global health funders and investors. They are presented as a practical action framework rather than an aspirational declaration.

Priority Area	Governments & Policymakers	Healthcare Providers	Technology Innovators	Funders & Investors
<b>NCD &amp; Prevention</b>	<ul style="list-style-type: none"> <li>Shift budget to primary care and prevention.</li> <li>Mandate NCD care continuity protocols.</li> <li>Fund CHW upskilling at national scale.</li> </ul>	<ul style="list-style-type: none"> <li>Adopt longitudinal patient records</li> <li>Train staff in chronic disease management</li> <li>Establish community outreach programmes</li> </ul>	<ul style="list-style-type: none"> <li>Design for CHW-level usability</li> <li>Integrate AI-driven risk stratification</li> <li>Prioritise offline functionality. Design innovations for scalability from the outset.</li> </ul>	<ul style="list-style-type: none"> <li>Fund community health infrastructure</li> <li>Adopt long-horizon impact metrics</li> <li>Support evidence-based scale-up</li> </ul>
<b>Healthcare Financing</b>	<ul style="list-style-type: none"> <li>Extend insurance to OPD services</li> <li>Implement value-based care frameworks</li> <li>Subsidise outpatient preventive care</li> </ul>	<ul style="list-style-type: none"> <li>Pilot subscription-based care models</li> <li>Develop bundled care packages</li> <li>Measure and report patient outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Build digital payment infrastructure</li> <li>Enable low-cost subscription platforms</li> <li>Create transparent cost-of-care tools</li> </ul>	<ul style="list-style-type: none"> <li>Structure first-loss capital vehicles</li> <li>Support bridge funding for scale-up</li> <li>Incentivise outcome-linked financing</li> </ul>
<b>MedTech &amp; Innovation</b>	<ul style="list-style-type: none"> <li>Create regulatory sandboxes for MedTech</li> <li>Reform procurement to include deployment readiness</li> <li>Fund Living Lab infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Participate in co-design processes</li> <li>Provide workflow feedback to innovators</li> <li>Champion Living Lab validation</li> </ul>	<ul style="list-style-type: none"> <li>Embed co-design from Day 1</li> <li>Prioritise deployment readiness</li> <li>Engage Living Labs for validation</li> </ul>	<ul style="list-style-type: none"> <li>Fund operational research alongside R&amp;D</li> <li>Require deployment evidence for scale investment</li> <li>Support Living Lab network expansion</li> </ul>
<b>Supply Chain</b>	<ul style="list-style-type: none"> <li>Mandate digital inventory management</li> <li>Transition to demand-driven distribution</li> <li>Track stock availability as KPI</li> </ul>	<ul style="list-style-type: none"> <li>Implement real-time stock tracking</li> <li>Train staff in supply chain management</li> <li>Report stockout incidents systematically</li> </ul>	<ul style="list-style-type: none"> <li>Build supply chain analytics tools</li> <li>Design for low-connectivity environments</li> <li>Integrate supply and clinical data</li> </ul>	<ul style="list-style-type: none"> <li>Fund last-mile logistics infrastructure</li> <li>Invest in cold chain capacity</li> <li>Support predictive demand modelling</li> </ul>
<b>Data Governance</b>	<ul style="list-style-type: none"> <li>Enact comprehensive health data protection law</li> <li>Require open standards in all public procurement</li> <li>Establish independent data oversight bodies</li> </ul>	<ul style="list-style-type: none"> <li>Adopt interoperable EHR systems</li> <li>Train staff in data privacy obligations</li> <li>Implement community consent protocols</li> </ul>	<ul style="list-style-type: none"> <li>Design privacy-by-default architectures</li> <li>Build dynamic consent interfaces</li> <li>Open-source core health data standards</li> </ul>	<ul style="list-style-type: none"> <li>Require open standards from investees</li> <li>Fund data governance capacity building</li> <li>Support community digital literacy</li> </ul>

Figure 6: Stakeholder Action Framework — recommended actions by stakeholder group and priority domain.

SECTION 12.0

# From Dialogue to Action

The measure of a workshop is not the quality of the conversation it generates, but the quality of the action it inspires. The Kolkata convening was designed from the outset to move beyond dialogue toward commitment to create the conditions in which the insights of the discussions could be translated into institutional decisions, partnership agreements, and implementation timelines. This section documents the concrete commitments and action pathways that emerged from the workshop.

## 12.1 The Living Lab: From Concept to Commitment



**|** ATLAS Healthworks – The Living Lab, iKure’s first district-scale health innovation platform

ATLAS Healthworks – The Living Lab is envisioned as the first district-scale Living Lab in India designed to strengthen health systems for women by bridging the gap between innovation and real-world implementation. The initiative focuses on translating research and technological innovation into scalable, system-level solutions that can be integrated into existing public health systems. The Living Lab will be implemented in phases across three sites in India, beginning with Alibag, Maharashtra, with an initial focus on improving maternal and newborn health pathways to ensure quality, continuity, and equity of care.

What distinguishes ATLAS is its whole-system approach, which combines evidence-based healthcare practices with real-world system enablers. The Living Lab brings together public and private healthcare providers, referral networks, transport systems, insurance mechanisms, and community-level stakeholders to address delays in care-seeking and strengthen service delivery. By embedding digital technologies and artificial intelligence into routine health systems leveraging innovations emerging from IIT Powai, ATLAS aims to move beyond isolated pilots and establish scalable digital infrastructure that supports coordinated and data-driven healthcare delivery.

The Living Lab will operate through structured catalytic cycles designed to generate decision-grade evidence and scale-ready solutions. Through collaboration with partners such as MSD for Mothers, Jhpiego, iKure, government institutions, professional bodies like FOGSI, private healthcare providers, technology partners, and research institutions, ATLAS will test, refine, and adapt healthcare innovations within real system environments. The broader vision is to create a replicable model that transforms promising innovations into sustainable, scalable healthcare solutions capable of improving health outcomes across diverse settings.

## 12.2 The METORI Partnership: Field-Tested Diagnostics at Scale



*METORI Portable Diagnostic Device*

During the workshop, iKure Techsoft and Izawa Co. Limited, Tokyo, Japan signed a Memorandum of Understanding (MoU) to introduce the METORI-X device, a compact smartphone-compatible ophthalmic tool designed for observing the anterior segment of the eye. Developed over nearly a decade in response to challenges faced by ophthalmologists when examining elderly patients and children with conventional equipment, the device enables quick and accessible eye screening using a mobile phone. METORI-X attaches to a smartphone case and uses the camera of the mobile phone along with a built-in lens and LED illumination system to capture high-quality images of the eye, allowing clinicians to detect conditions such as cataracts and corneal injuries while enabling observation of up to 70% of the anterior segment. Portable and compatible with most smartphones, the device is designed for use in both clinical and field settings without requiring specialised training. Compliant with Japanese Industrial Standards (JIS), METORI-X offers a practical and scalable solution for expanding access to basic eye diagnostics, particularly in community and primary healthcare environments.

### 12.3 Immediate Commitments

**IMMEDIATE ACTION COMMITMENTS FROM THE WORKSHOP**

- ▶ The workshop marked a transition from dialogue to implementation through the launch of the Living Lab and the establishment of new technology partnerships.

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- ▶ The Living Lab will serve as a real-world platform to test, refine, and scale health system innovations within existing healthcare environments.

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- ▶ The METORI smartphone-based diagnostic device enables frontline providers to conduct portable eye examinations by capturing images of the anterior segment of the eye.

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- ▶ The approach will enable evaluation of operational feasibility, effectiveness, and scalability of healthcare innovations.

### 12.4 The Long-Term Implementation Horizon

Looking ahead, the ATLAS Living Lab will operate through structured catalytic cycles designed to generate decision-grade evidence and scale-ready implementation models. By bringing together public health systems, private providers, academic institutions, technology innovators, and financing partners, the Living Lab will test integrated approaches to healthcare delivery and identify solutions that can be replicated across districts and health systems.

The deployment of technologies such as the METORI-X device within these real-world environments also highlights the potential for portable diagnostics and digital tools to strengthen frontline healthcare delivery. As these technologies are tested and refined through implementation platforms like ATLAS, they can contribute to expanding access to essential diagnostics, improving early detection, and supporting more coordinated and data-driven healthcare systems.



SECTION 13.0

# Speaker Profiles

The workshop convened senior practitioners, innovators, policymakers, and investors from across the global health ecosystem. The following profiles identify each contributing speaker by name, title, organisation, and area of expertise. Profiles are presented in alphabetical order by surname.

<p><b>AB</b></p> <p><b>Madhavika Bajoria</b>  <b>Executive Director, Health and Nutrition Platform at AVPN</b></p> <p>Executive Director of the Health and Nutrition Platform at AVPN, Asia's largest network of over 600 social investors across 35 countries. She leads AVPN's regional health strategy, mobilising catalytic capital and advancing Asian-led innovations across climate and health, gender, mental health, and integrated disease solutions.</p>	<p><b>PS</b></p> <p><b>Pompy Sridhar</b>  <b>Director, India, MSD for Mothers</b></p> <p>Pompy is the India Director, MSD for Mothers – Social Business Innovation Team, with over 20 years of experience in healthcare and finance. She specialises in outcome-based and market-driven financing to expand access to affordable quality care.</p>
<p><b>DB</b></p> <p><b>Dr. Dinesh Baswal</b>  <b>Strategic Advisor — iKure; Former Additional Commissioner Maternal Health, Government of India</b></p> <p>34 years in public health; pioneer of national programmes ASHA, PMSMA, and LaQshya; instrumental in reducing India's Maternal Mortality Ratio; Johns Hopkins Public Health Scholar.</p>	<p><b>CB</b></p> <p><b>Dr. Carolina Batista</b>  <b>Partner and Head of Global Health-Baraka Impact Finance</b></p> <p>Her professional life spans board leadership, global commissions, and strategic advisory work, including shaping health investment strategies at Baraka Impact Finance.</p>
<p><b>GC</b></p> <p><b>Dr. Gautam Chakraborty</b>  <b>Director, Innovative Financing — Impact Scale Ventures; Former Senior Health Finance Specialist, USAID/India</b></p> <p>Over 30 years in healthcare financing; led the \$300M SAMRIDH blended finance platform and India's first Development Impact Bond (Utkrist); DBA in Blended Finance; recipient of U.S. Ambassador's Eagle Award 2024.</p>	<p><b>VC</b></p> <p><b>Vivek Choudhary</b>  <b>Assistant Professor — Nanyang Business School, NTU Singapore; Former Consultant, McKinsey &amp; Company</b></p> <p>Research at the intersection of behavioural operations and digital health platforms; led data-driven health projects for Singapore and Indian government bodies; PhD from INSEAD.</p>
<p><b>AD</b></p> <p><b>Aparna Dua</b>  <b>Partner — The Blended Finance Company (TBFC)</b></p> <p>Designed the ASPYRE student finance facility and India's first Social Impact Bond at Asha Impact; expert in outcomes-based and blended finance structures; MBA from INSEAD; began career at Credit Suisse and BCG.</p>	<p><b>RG</b></p> <p><b>Ramakrishnan Ganesan</b>  <b>Impact Modelling Consultant — Mathematica, Inc.; Former Country Representative, Abt Global</b></p> <p>25+ years supporting evidence-driven decision-making in global health; managed large-scale USAID-funded health programmes across Asia and Africa; specialist in public-private health systems partnerships.</p>
<p><b>SG</b></p> <p><b>Soumitro Ghosh</b>  <b>Chief of Party — Abt Global (formerly Abt Associates)</b></p> <p>30+ years in global health and development; founding CEO of WISH Foundation India, transforming 1,500+ primary health centres; formerly led USAID private sector health systems strengthening in Afghanistan.</p>	<p><b>MI</b></p> <p><b>Mr. Masao Izawa</b>  <b>Chief Technology Officer — IZAWA Co. Ltd., Tokyo</b></p> <p>Technical leadership in health-adjacent industrial and information technology sectors, with expertise in applied technology solutions for healthcare delivery contexts.</p>



**Annette Jung**  
**Founder — Develop2Impact | Impact Finance Advisory**

20+ years across international banking and purpose-driven innovation; founding member of Philips Capital; led creation of the Transform Health Fund for Africa; Advisory Board member of Baraka Impact Finance.



**Dr. Tsuyoshi Kano**  
**Associate Professor — Kanazawa Institute of Technology; CEO — ICT for Development Japan**

Expert in ICT-enabled development solutions with a focus on bridging technology innovation and real-world application in resource-limited health contexts across Asia.



**Arun Khanna**  
**Director — Karbir Asia; Former Asia President, Dun & Bradstreet**

Extensive experience leading businesses across Asia in FMCG, data analytics, and impact consulting; regional and global roles at P&G, Cabot, Nestlé, and Johnsonville; advisory board member for multiple non-profit organisations.



**Dr. M.V. Ravi Kumar**  
**Advisor, Mentor & Founder — IMPACT Foundation**

Serial entrepreneur and social impact leader; co-founded Rotary Avoidable Blindness Foundation; mobilised over ₹200 million for eye-care initiatives for underprivileged communities across India.



**Abhishek Mishra**  
**Associate Vice President, Digital Health Transformation & Innovation — iKure Techsoft**

10+ years in AI-driven health solutions; worked with India's National Health Authority and global organisations including PATH; leads digital health strategy and large-scale implementation at iKure



**Pragya Mishra**  
**Innovation Expert — World Health Organization (WHO)**

WHO specialist in MedTech and health innovation; provides strategic guidance on technology adoption pathways and innovation ecosystems for global health applications.



**Dr. Shirshendu Mukherjee**  
**Managing Director — Wadhvani Foundation**

Leads the Wadhvani Innovation Network; former Mission Director of Grand Challenges India; led Mission COVID Suraksha enabling four indigenous vaccines; PhD in Microbiology and law degree.



**Carl Nicholas Ng**  
**General Partner & Head of Impact/ESG — Verge HealthTech Fund**

Singapore-based early-stage health technology investor; led investments in Bot MD, OLI Technologies, and PathwayMD (acquired for \$63M); MBA from Harvard Business School.



**Prof. Yoshiro Okazaki**  
**Associate Professor — Waseda University, Tokyo; Adjunct Professor — VIT Chennai**

Research on affordable healthcare technologies for resource-limited environments (ophthalmology, endoscopy); formerly led R&D at Fujifilm and Olympus; PhD from University of Tokyo.



**Sivaram Rajagopalan**  
**CEO & Principal Consultant — Shiva Consultants LLP, Singapore**

30+ years in medical technology; former Asia-Pacific Business Manager at HP and Philips Medical; Managing Director of Laerdal Medical South Asia; mentor for health-tech startups across India, Asia, and Europe.



**Dr. Suranjeen Prasad P**  
**Senior Director, Strategy & Partnership — Jhpiego India**

Senior Director of Strategy and Partnership at Jhpiego India, leading strategic partnerships and programme development in maternal and reproductive health systems across India.



**Dr. Parvez Memon**  
**Associate Director — Jhpiego India**

MD. Associate Director at Jhpiego India, with expertise in reproductive, maternal, newborn and child health (RMNCH) programming and health system strengthening across India.



**Dr. Lena Robra**  
**Head of Academic Engagement — Swissnex India**

Bridges Swiss and Indian research landscapes in health, sustainability, and digital transformation; focus areas include antimicrobial resistance, digital health, and planetary health.



**Nilanjan Roy**  
**Country-level Business Leader & Founder-Operator; Former Senior Leader — Times Business Group**

20+ years scaling technology-driven organisations; completed executive education at Wharton; works with innovation ecosystems including IISc; focuses on technology, financing, and healthcare system evolution.



**Sujay Santra**  
**Founder & CEO — iKure Techsoft Pvt. Ltd.**

Social entrepreneur and architect of sustainable community-anchored primary healthcare delivery models; pioneer in last-mile health innovation across South Asia.



**Dilpreet Singh**  
**Founder & CEO — Juvoxa; Partner & JAPAC Head — Consulting Services, Singapore**

Digital health innovator with deep expertise in Asia-Pacific healthcare technology markets; specialist in health-tech venture development and regional market strategy for digital health platforms.



**James Bair**  
**Managing Director / Partner — Baraka Impact Finance**

Directs health-focused impact investments in emerging markets; formerly VP of Strategy at AsiaMD.com and health systems leader at Stanford University and UCSF.



**Rieko Yano**  
**Founder & CEO — Prougrn LLC, Japan; Former General Manager — Mitsubishi Shoji Taiyo**

37 years at Mitsubishi Corporation in Information Systems and global SAP implementation; strategic advisor and investor for iKure and other social ventures; leverages IT and AI to address healthcare disparities in emerging markets.



**Krishna Bhaskar**  
**IAS Officer (2012 Batch); Chairman & Managing Director — TGTRANSCO, Telangana**

Oversees electricity transmission for nearly 40 million consumers in Telangana. Recipient of the Prime Minister's Award for Excellence in Public Administration (2019, 2020). Holds degrees from IIT Kharagpur, ISB (Finance & Marketing), and MIT (Applied Economics); Fulbright-Nehru Scholar; Robert Solow Fellow (MIT); World Bank Governance Analytics Fellow (2025).



**Rohit Shrivastava**  
**Vigyan Shri Awardee and Himanshu Patel Chair Professor @ IIT Bombay | Leading Bioengineering Researcher**

Chair Professor of Applied Biosciences at IIT Bombay and Co-Founder of several healthcare startups from Nanobios Lab emphasises a mission to make medical technology accessible



**Dr. Naseer Masoodi**  
**Corporate Asst. Chair / Senior Consultant, Ambulatory General Internal Medicine; Corporate Lead, Clinical Engagement and Transformation — Hamad Medical Corporation, Qatar**

MD, MBA, FACP, AGSF, CPE. Corporate Vice Chair Clinical Informatics; Deputy Chair IRB; Chair CIS Optimisation Committee, Hamad Medical Corporation. Specialist in clinical informatics and health system transformation.



**Dr. Niti Pall**  
**President-Elect — International Diabetes Federation**

Global health systems leader with over two decades of experience across digital health, policy, and healthcare innovation. Her work focuses on strengthening equitable access to care and advancing scalable solutions for diabetes prevention and management worldwide.

SECTION 14.0

# Photo Highlights from the Workshop

The images below document key moments from the International Workshop on the Future of Healthcare, Kolkata 2026.



VISUAL RECORD

# Photo Highlights from the Workshop

*A visual record of two days of dialogue, collaboration, and innovation at the International Workshop on the Future of Healthcare, Kolkata, March 2026.*



## SECTION 15.0

## Conclusion

*The International Workshop on the Future of Healthcare marked a defining moment in the discourse on health system strengthening — a conversation that moved beyond the metrics of coverage to the deeper and more demanding metrics of continuity, quality, and trust.*

The collective intelligence assembled in Kolkata over two days of structured dialogue pointed to a single, inescapable conclusion: the models of the past are insufficient for the challenges of the future. The epidemiological transition to non-communicable diseases demands a structural response — not incremental improvement, but architectural transformation. This transformation is not optional. It is the only viable response to the scale, the complexity, and the equity dimensions of the NCD burden that health systems now face.

The path forward is clear, even if its implementation is complex. Health systems must be built that are preventive by design — systems in which the economic logic, the clinical protocols, the payment mechanisms, and the performance metrics all align around the imperative of keeping people well rather than treating them once they are ill. These systems must be community-anchored — built around the home as the primary site of care, with community health workers as the primary delivery mechanism, supported by digital tools and portable diagnostics that bring the analytical power of modern medicine to the doorstep of every patient, regardless of geography.

These systems must be financed with the creativity and patience that transformative change requires. Blended finance structures, subscription-based primary care models, value-based reimbursement frameworks — these are not exotic policy experiments. They are practical, evidence-informed responses to the financing failures that current systems perpetuate. And they require investment and institutional commitment from governments, development finance institutions, philanthropic foundations, and commercial investors working in strategic partnership.

These systems must be governed by trust — a trust that is earned through transparent data practices, reliable supply chains, accountable clinical quality, and the demonstration, over time, that the health system's purpose is the wellbeing of the communities it serves. Trust is not a soft aspiration; it is the foundational infrastructure on which every dimension of health system performance depends.

*"The vision of a health system that flows like a river — continuous, adaptive, life-sustaining — is within reach. But it requires us to build differently, finance differently, measure differently, and govern differently than we have before."*

— WORKSHOP CLOSING SYNTHESIS, KOLKATA, MARCH 2026

As delegates returned from Kolkata to their respective institutions, the mandate was clear: to turn insight into action. Through the Living Lab expansion, the METORI deployment partnership, the blended finance working group, and the evidence commitments announced at the workshop, the work of building a resilient, inclusive, and genuinely preventive future for healthcare has already begun.

The challenges are systemic. The solutions must be equally systemic. And the will to pursue them — demonstrated in the quality of the dialogue and the concreteness of the commitments made in Kolkata — is the most promising signal that the future of healthcare is closer than the scale of the challenge might suggest.

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