



# Global Health Supply Chain Summit

## POWERING SELF RELIANCE

Value Chains that Deliver, Sustain and Thrive

November 18-20, 2025 Kigali, Rwanda

## SUMMARY REPORT



**195** orgs **51** countries **133** submissions **4** site visits

*“GHSCS 2025 was an incredible experience bringing together global leaders, innovators, and practitioners to tackle the most pressing challenges in health supply chains. The sessions were practical, forward-thinking, and collaborative, offering actionable insights on AI, local manufacturing, and financing strategies. I left inspired and equipped with tools to strengthen systems and drive impact. This Summit is a must-attend for anyone committed to building resilient, sustainable health supply chains.” – Attendee Survey Response.*

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# TABLE OF CONTENTS

INTRODUCTION.....	1
OPENING CEREMONY .....	2
KEYNOTE SPEAKERS .....	3
H.E. Dr. Delese Mimi Anoakoa Darko, .....	3
Zeynep Kantur Ozenci .....	3
Danny Mutembe .....	4
SPECIAL SESSIONS .....	4
US Government.....	4
Francophone Country Supply Chains .....	4
PLENARY PANELS .....	5
SPONSORED PANELS & SIDE EVENTS.....	8
CONTRIBUTED SESSIONS.....	10
PRIZE PRESENTATIONS.....	10
RESEARCH CHALLENGE PRESENTATIONS.....	11
SITE VISIT SUMMARIES .....	12
EAPB CONFERENCE .....	15
CLOSING COMMENTS .....	18
AGENDAS-AT-A-GLANCE (Click here for full Program).....	19
2025 GHSCS Agenda at a Glance.....	19
2025 EAPB Agenda at a Glance.....	23
ACKNOWLEDGEMENTS.....	24
GHSCS Program Committee .....	24
Rwanda Local Committee – Rwanda Medical Supply .....	24
Content Partner for East Africa Pharma and Biotech Conference.....	24
Administrative Support & Student Assistants/Facilitators .....	24
2025 SPONSORS.....	25
ABOUT GHSCS .....	26

## INTRODUCTION

The [Global Health Supply Chain Summit \(GHSCS\)](#) uniquely focuses on global health supply chains, covering all components (including human resources) and contextual factors affecting their performance. It stands out by presenting a structured, holistic and multi-stakeholder approach to addressing challenges of designing and managing end-to-end global health supply chain challenges in Low- and Middle-Income Countries (LMICs). Between Nov 17-20, 2025, GHSCS held its 18<sup>th</sup> annual event (GHSCS2025) in Kigali with the key theme of **POWERING SELF-RELIANCE: Value Chains that Deliver, Sustain and Thrive**.

This 18<sup>th</sup> convening of GHSCS recognized an urgent and growing need for countries and global partners to come together to rethink and redesign healthcare supply chains – make them more innovative and effective so they can consistently deliver better results over time and help achieve universal health coverage. Countries have to reorganize their value chains in ways that make them more sustainable, and nurture and grow local supply chain talent. The evolving architecture of global health financing and procurement presents new opportunities for stronger country leadership and greater engagement of the in-country private sector to enhance efficiency, accountability, and sustainability in healthcare supply chains.

GHSCS2025 sparked discussions on how to translate these opportunities into concrete actionable projects and measurable outcomes. Discussions covered innovations across the end-to-end value chain from regional manufacturing to procurement to improving market access, innovations in financing the health supply chain, and addressing issues in topics such as vaccines, maternal newborn and child health, and diagnostics. [GHSCS2025](#) explored these issues in depth through a combination of curated plenary talks & panels as well as contributed panel discussions, talks, and posters. The Kigali summit drew over 430 attendees representing various stakeholders from donors, international agencies, implementing partners, ministries of health, public and private sector players, academia and NGOs. Over 70% of attendees came from the African continent.

GHSCS 2025 partnered with the [East Africa Pharma & BioTech \(EAPB\) Conference](#) for joint programming on November 20 to highlight content related to development and manufacturing of pharma, biotech and health products in Africa. EAPB convenes leading policymakers, industry stakeholders, development partners, and scientific experts committed to advancing regional manufacturing capacity for health products.

GHSCS 2025 was hosted in partnership with the Rwanda Medical Supply and the University of Michigan. The EAPB content was curated in partnership with the Rwanda Biomedical Centre and the Sathguru Management Consultants.

## OPENING CEREMONY

The Global Health Supply Chain Summit opening ceremony featured remarks from key stakeholders addressing Africa's healthcare supply chain challenges and opportunities.



In his welcome remarks, **Ravi Anupindi**, Chair of the GHSCS Organizing Committee recognized the distinguished guests and welcomed all the participants to the 18<sup>th</sup> convening of GHSCS in Rwanda. Giving a brief background on GHSCS and its history of convening uninterrupted since 2007, he recognized that GHSCS had become the largest gathering of global health supply chain thought leaders and practitioners on the continent. GHSCS had grown over the years and GHSCS2025 had 440 registered participants from all over the world, with over 70% of the attendees come from the African continent. He remarked that over these years, the arc of conversations in this community has shifted from public health downstream distribution supply chains, to increasing role of private sector, expanding the scope of health supply chains to include upstream activities of production, procurement, innovation, and regulatory issues. Within this end-to-end supply chain, the convening has deepened discussions on the role of financing, technology, human resources, and continuous improvement. The theme of GHSCS2025 recognized the recent developments in financing for global health and the urgent need to think about innovative ways to finance, design and execute global health supply chains. He welcomed all and urged them to participate fully in the sessions, learn, contribute and take away important lessons to build a better global health supply chain.



**Dr. Loko Abraham**, CEO of Rwanda Medical Supply welcomed participants to the summit in Kigali, Rwanda, saying that the summit could not have come at a more pivotal time when the state of health supply chains is a critical crossroad amid shifting global financing and development cooperation frameworks. While challenges are undeniable, they also present unprecedented opportunities. He said that Rwanda has been intentional in its clarity of vision and purpose in building supply chain systems, drawing from global best practices while tailoring them to our context and prioritizing self-reliance. Rwanda's robust response to Marburg outbreak is a testament to a system that had begun to deliver, sustain pressure, and was also thriving. He welcomed industry leaders, academics, and colleagues to foster dialogue, build networks, and learn from best practices. The goal is translating insights into actionable strategies that strengthen supply chains, improve lives, and catalyze innovation, collaboration, and sustainable impact across countries.



**Dr. Yvan Butera**, Rwanda's Minister of State for Health welcomed delegates from over 50 countries, emphasizing the critical need to close the gap between innovation and access. This gap determines whether mothers receive life-saving oxytocin, healthcare workers have necessary tools, and countries can withstand global shocks. He observed that supply chains face unprecedented pressures from tightening financing, geopolitical tensions reshaping production, climate disruptions, fragmented procurement, and Africa's continued heavy reliance on imported medicines. Supply chain fragility demands coordinated global response.

Minister Butera said that Rwanda demonstrates what's possible when countries take ownership of their value chains. He gave examples including through public-private

partnerships, drone delivery blood in minutes, covering over three-quarters of Rwanda's needs outside Kigali. He said that the 2023 Strategic Equipment and Medicine Acquisition Initiative achieved significant savings through direct negotiations, reducing essential equipment costs by over 50% and enabling reinvestment in oncology, dialysis, and services covered by Rwanda's community-based health insurance reaching 90% of citizens.

Dr. Butera said that Rwanda had built a digital backbone for real-time tracking, minimizing stockouts while expanding local manufacturing and strengthening regulatory systems with a longer-term vision to manufacture, test, and export health products regionally.

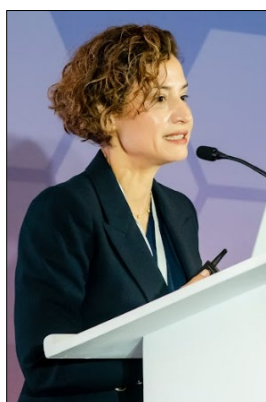
He said that summit's mission is clear: build supply chains that deliver by design, diversify manufacturing regionally, harmonize regulation, strengthen digital systems, align sustainable financing with national priorities, and ensure no nation faces crises alone.

## KEYNOTE SPEAKERS



H.E. Dr. Delese Mimi Anoakoa Darko, Director General of the African Medicines Agency (AMA), identified fragmented and inconsistent supply chains as transformation opportunities. She emphasized medication quality's role in building patient trust and highlighted AMA's value as a continental regulator. Dr. Delese Mimi Darko, Director General of the African Medicines Agency (AMA), emphasized that procurement is merely the starting point—what saves lives is supply chain integrity and regulatory oversight. She outlined critical risks: temperature failures, falsified medicines, poor traceability, and fragmented systems that erode trust in health systems and manufacturers.

However, Dr. Darko framed this as opportunity. AMA will harmonize standards and coordinate regulatory science across the continent, supporting—not replacing—national authorities. She announced a continent-wide, real-time monitoring system connecting regulators, procurement agencies, and manufacturers, ensuring decisions prioritize quality and patient safety as Africa expands its pharmaceutical manufacturing ambitions.



Zeynep Kantur Ozenci, IFC's Global Head of Health, acknowledged that despite \$13 billion invested in global health, traditional financing approaches are insufficient for Africa's needs. COVID-19 exposed vulnerabilities, but Africa's potential for resilient, commercially viable health industries is immense.

Ozenci urged ecosystem-level solutions over siloed interventions, addressing regulatory fragmentation, infrastructure gaps, and financing constraints through coordinated public-private action. She cited innovations like Rwanda's drone delivery and Senegal's AI pharmacy systems as transformative examples.

The World Bank Group's new integrated strategy focuses on enabling infrastructure, regulatory harmonization, regional trade, and private investment to expand local medical production, positioning Africa centrally in global health supply chains through collaboration and innovation.



**Danny Mutembe**, CEO, MD Conseil Medical Supply and Managing Partner of Pharmacie Conseil, emphasized Africa's pharmaceutical market challenges and opportunities. Despite hosting 1.4 billion people, Africa's pharmaceutical market is valued at just \$23 billion of the \$1.3 trillion global pharmaceutical market and produces only 30-40% locally, with 80% concentrated in eight countries.

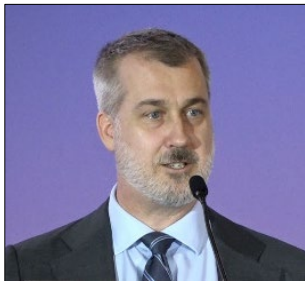
Mutembe highlighted initiatives like AfCFTA's Anchored Pharmaceutical Initiative—focused on bulk procurement, local manufacturing, and regulatory frameworks—and the East African Community's harmonization and local production efforts.

He praised Rwanda's government-private sector collaboration and FDA's ML3 achievement. However, he stressed the urgent threat of substandard and falsified medicines targeting malaria, tuberculosis, and antibiotics—the continent's heaviest disease burden.

Mutembe concluded with a call to achieve excellence in pharmaceutical production through quality assurance and cross-border collaboration.

## SPECIAL SESSIONS

### US Government



**Jeffrey Graham**, Senior Bureau Official for the Bureau of Global Health Security and Diplomacy, along with special guests, **Eric Kneidler**, U.S. Ambassador to Rwanda, and **John Carroll**, Senior State Department Advisor made a special visit to GHSCS 2025. In his address, Graham outlined the U.S. "America First Global Health Strategy," representing a fundamental shift from aid dependency to market-driven partnerships in Africa. He acknowledged that while U.S. investments have saved lives, they've created dependency rather than capacity. The new approach leverages American

technological leadership to build sustainable health systems while creating commercial opportunities.

Graham announced the \$150 million Zipline investment stating it exemplified this transformation—American technology delivering medicines to 130 million people, with African governments as paying customers, not aid recipients. Graham emphasized this represents "trade, not aid," with U.S. teams negotiating MOUs across 16 African countries to fundamentally transform health partnerships into sustainable commercial relationships.

### Francophone Country Supply Chains

GHSCS2025 also hosted a panel discussion to highlight issues and approaches to address health supply chains of francophone countries. The panel was moderated by **Patrick Gaparayi** of UNFPA and featured heads of central medical supply from Benin, Senegal, Central Africa Republic and Togo.

**Dr. Dèhoumon Louis Koukpedji** of Benin described comprehensive reforms clarifying ministerial responsibilities across health, finance, trade, and environment. Benin strengthened quality control at importation points, mandated supply chain digitalization, and established group procurement mechanisms for volume advantages. The country created prequalification processes for unregistered essential products and established MoUs for 12 products, partnering with nations having excess supplies during shortages.



**Dr. Lamtoro Mamadou Seck** of Senegal outlined PNA's monopoly public procurement system serving 1,600 facilities and 19 million people. Reforms focused on information systems optimization, needs forecasting, and governance through regulatory body ARP. PNA operates with profit markup for supply chain independence, conducting annual quantification workshops with partners. Dr. Seck emphasized francophone countries' adaptability and crisis management capacity strengthened through COVID-19.

**Dr. Louisa Abeye** of Central African Republic described their fragmented system following their procurement agency's bankruptcy. Challenges include limited resources, absent quality control laboratories, no district warehouses, and partner dependency. Despite instability, distribution continues remarkably, even placing products in rebel-controlled areas for public collection.

**Dr. Assih Mamessilé** of Togo highlighted CAMEG-Togo's centralized accountability model partnering regionally for last-mile delivery. A critical challenge is lacking national laboratory capacity, requiring expensive quality testing in neighboring countries like Benin.

## PLENARY PANELS

### Plenary Panel 1: Procurement as the Catalyst for Value Chain Redesign



Moderated by **Dr. Prashant Yadav**, this panel explored strategies for strengthening direct partnerships between national procurement bodies and manufacturers. **Ms. Diana Mutoni** of Rwanda Medical Supply (RMS) described policy reforms enabling greater flexibility, including accommodating manufacturer payment preferences, transparent forecasting, reverse auctions, and strategic sourcing. These innovations achieved 95% availability of essential health commodities with significant price reductions, though challenges remain due to Rwanda's landlocked geography and limited local manufacturing capacity.

**Dr. Abdu Mukhtar** discussed Nigeria's efforts to address fragmented state-level procurement through Medipool, which aggregates purchasing volume, and fiscal incentives supporting local manufacturers. **Michelle Akande** from Pfizer emphasized manufacturers' desire for long-term partnerships with public entities to improve efficiency and outcomes beyond product availability. **Dr. Claus Runge** of Bayer highlighted the need for pricing transparency, sustainable market conditions with adequate health spending, and harmonized regulatory frameworks to enable localized manufacturing.

Panelists underscored technology's role in improving forecasting, procurement processes, and information flow. Key takeaways included the importance of reducing dependence on single suppliers for resilience, addressing rent-seeking behaviors among intermediaries, and establishing consolidated structures that bring stakeholders together. Long-term manufacturing success requires regulatory access and market consolidation to overcome fragmentation.

### Plenary Panel 2: Securing Access to Quality Maternal, Neonatal, and Child Health Medicines



The MNCH panel, moderated by **Hitesh Hurkchand**, examined procurement challenges and innovative solutions across multiple stakeholders. **Jatu Abdulai** discussed Sierra Leone's transition from emergency response to sustained procurement, requiring new planning approaches, governance systems, and leadership development. This shift necessitated extensive coordination to move beyond historically reactive quality assurance systems.

**Dr. Ebrahim Adamjee** described Axmed's and Gates Foundation's partnership with seven procurement organizations, employing novel approaches like "buy one get one free" for MNCH medications to address affordability. Reducing procurement opacity has increased purchasing power, particularly important given WHO findings that one in ten medications in Africa are falsified or substandard, and emergency procurement typically incurs higher costs.

**Trip Allport** from Proquable highlighted their omnichannel approach managing 44,000 global shipping lanes. Edward Llewellyn explained GFF's role as a World Bank trust fund providing grants for commodity procurement co-financing, noting how policy instruments affect medication quality while incentivizing countries to mobilize procurement effectively.

**Dr. Mariatou Tala Jallow**, from Vizuri Health Dynamics, employed market dynamics analysis, acknowledging that smaller countries will inevitably depend on others for manufacturing. The overarching conclusion emphasized collaboration and coordination as the most critical need, given severe market fragmentation preventing efficient MNCH commodity access across the continent.

### Plenary Panel 3: Addressing Barriers to Market Access



This panel, moderated by **Ravi Anupindi**, examined the complex challenges preventing life-saving health products from reaching patients in LMICs. Panelists emphasized that while many essential therapeutics exist, market access represents an end-to-end systemic challenge rather than a single bottleneck.

**Ben Kamarck** from Reach 52 explained his organization distributes health commodities across 15 African countries and India, focusing on market development for products with access gaps. He emphasized that high prices indicate market inefficiencies requiring investigation. Reach 52 prioritizes access over profit, launching products at dramatically reduced prices while investing in awareness campaigns, though acknowledging maternal and child health products remain financially challenging despite their importance.

**Michelle Akande** from Pfizer outlined how her company organizes access through multiple pathways: the Accord program providing not-for-profit pricing to 45 lower-income countries, global commercial

partnerships with organizations like GAVI reaching 300 million children, and health system strengthening interventions. She stressed the importance of partnership coordination, noting multiple pharmaceutical companies often duplicate efforts in the same therapeutic areas, wasting resources that could be used more efficiently through collaboration.

**Joanna Bischel** from Kasha described her platform's technology-enabled last-mile delivery across nine African countries, emphasizing the power of real-time data and GPS tracking. She advocated for flipping health supply chains to be consumer-focused rather than top-down, noting the artificial separation between public and private sectors doesn't reflect how patients actually access care.

**Colleen Connell** from Sifia explained their blended finance fund provides bespoke working capital solutions to healthcare supply chain companies, using risk-based pricing between concessional and commercial rates. The fund dedicates 15% of its portfolio specifically to maternal, neonatal, and child health products, acknowledging these higher-risk categories need dedicated support.

The discussion revealed persistent challenges: regulatory fragmentation requiring country-by-country registrations, insufficient awareness of innovative products, difficulties coordinating supply with demand generation programs, and chronic underfunding of women's health despite women representing the majority of healthcare consumers. Panelists emphasized that sustainable access requires long-term commitment, cross-sector partnerships, embedded finance solutions reaching small pharmacies, and leveraging technology for real-time supply chain visibility. They concluded that bridging public-private sector divides and centering patient needs—rather than maintaining siloed, top-down approaches—remains critical for transforming healthcare access in low- and middle-income countries.

#### Plenary Panel 4: Securing the Vaccine Value Chain for the Next Biological Threat



This panel, moderated by **Hitesh Hurkchand**, examined preparedness challenges and solutions. **Jimmy Ameny** from Uganda's Ministry of Health identified real-time supply data and logistics as critical challenges during outbreaks, alongside dependency on global structures. He emphasized that last-mile risks extend beyond vaccine storage—citing an island facility with solar-refrigerated vaccines but no electricity for childbirth—requiring integrated frameworks addressing electrification alongside immunization.

**Vishal Sonje** of CEPI described the widening gap between rapid scientific development, accelerated by

AI for sequencing and scale-up, and slower delivery hampered by resource constraints and equipment dependencies. CEPI's 100-day mission practices rapid response through exercises like Rwanda's tabletop simulation, which proved valuable during the subsequent Marburg outbreak, demonstrating readiness from vaccine development through clinical trials and regulatory approval.

**Dr. Ahmed Ogwell**, VillageReach, emphasized that vaccine confidence depends on system trust more than product efficacy. Community engagement must precede product delivery, understanding local contexts like harvest schedules or childcare constraints. **Ntokozi Tshabalala** from IFC highlighted sustainability through early-stage investments, partnerships leveraging complementary strengths, regional demand aggregation for economies of scale, and addressing regulatory hurdles. Panelists stressed translating real-time data from frontline health workers into actionable community-responsive solutions to prevent stockouts and build system confidence.

## SPONSORED PANELS & SIDE EVENTS



### **Session 1: Transformation Health Procurement & Supply Chains – A Vision for Efficient, Integrated, Sustainable Health Supply Networks**

This session introduced a transformative vision for global health supply chains through the landmark paper "Integrated, Sustainable Health Supply Networks." Key themes emphasized that collaborative partnerships built on trust and transparency are essential, as no single organization can address supply chain challenges independently. The paper established five core characteristics guiding countries toward sustainable systems. With constrained budgets, efficiency and strategic prioritization are critical. Long-term, deliberate investments—rather than reactive short-term solutions—are necessary to build resilient health networks that ensure medicines reach populations effectively.

### **Session 2: Enabling the Future of Health Networks**

This TED-style session showcased four innovative solutions for sustainable health networks. The Verification & Traceability Initiative accelerates supply chain transparency through collaborative toolkits across Africa and Asia. AI-enhanced logistics in Nigeria automates delivery reconciliation and invoice validation, embedding intelligence into existing processes. The Logistics Marketplace ([www.logisticsmarketplace.org](http://www.logisticsmarketplace.org)) provides open-access visibility connecting buyers with providers. The Smarter Warehousing Hub ([www.warehousing.health](http://www.warehousing.health)) guides evidence-based infrastructure investments, helping stakeholders avoid common pitfalls and build pharma-grade storage solutions through practical tools and shared lessons.



### **Intelligent Supply Chains – Practical Experiences with AI and ML from the Field**

This session led by IAPHL and inSupply Health explored AI and machine learning applications in health supply chains. Participants identified quantification as the primary beneficiary, while noting challenges including limited data quality, high investment costs, and policy barriers. Thirty-two percent felt unprepared to use AI-enabled tools. Key enablers include capacity building, supportive policies, funding, and simplified workflows. Technology adoption remains fragmented, requiring stronger government engagement and robust data governance. The IAPHL community convened in-person, affirming continued value and commitment to remaining membership-fee free, democratizing supply chain best practices with a new Rwandan chapter launching.



### **Universal Access for Every Woman, Every Newborn, Everywhere Building a Shared Vision for Change**

WHO/AFRO and Unitaid held a technical workshop bringing together experts from 13 countries to discuss expanding maternal newborn health product access. Delegates examined barriers including market intelligence, funding flows, procurement systems, and demand creation, acknowledging national governments' primary financing responsibility. Through Blue Sky thinking exercises, participants envisioned improved government collaboration, enhanced data analytics, meaningful private sector engagement, and cross-country learning mechanisms. The workshop will produce a Pathway toward consistent quality MNH product access, launching at the International Maternal Newborn Health Conference in Nairobi, March 2026, to guide defragmentation efforts for measurable improvements in product availability and utilization.

 **Logenix International** **How to Scale-Up Alternate Procurement, Streamlined Importation and Regional Manufacturing for Diagnostics**

This side event by Logenix International highlighted significant cross-border trade challenges. Panelists identified customs delays, regulatory barriers, high duties and taxes, cold chain requirements, supply chain bottlenecks, and documentation compliance as primary obstacles, describing the process as "hurry up and wait."

Ethiopia and Rwanda shared perspectives on genomic sequencing procurement. Ethiopia's Pathogen Genomics Initiative utilizes the Illumina platform through Africa CDC support and has developed a national genomic strategy with one-day clearance policies for the current Marburg virus response. Rwanda's genomics program, established in 2021, operates through Rwanda Medical Supply as an intermediary for annual procurement contracts.

Proposed solutions included automation, pre-arrival documentation, country-specific checklists, and alternate procurement models such as product bundling, pay-per-result, and all-inclusive procurement with consolidation for improved efficiency. Suppliers from Illumina and Oxford Nanopore noted that rapid COVID-19 delivery demonstrated that expedited processes are achievable with political will.

Key recommendations emphasized regulatory harmonization across African countries similar to the EU system, establishing channel partners for last-mile delivery beyond airport arrival, and deliberate early engagement using proforma invoices before shipment readiness. Participants noted that shifting from forecast-based to shipment-based exemptions has created additional inefficiencies requiring policy reform and mindset changes among laboratory leadership.

 **Accord for a healthier world by Pfizer** **Public-Private Partnerships to Enable New & Sustainable Supply Chain Capacity Opportunities**

This session highlighted the Accord for a Healthier World, a global access initiative addressing health inequities in lower-income countries through sustainable partnerships rather than short-term aid supported by Pfizer. The program offers patented medicines and vaccines at not-for-profit pricing while strengthening health system capacity, including supply chain infrastructure, diagnostics, workforce training, and digital health capabilities. Recognizing that access extends beyond affordability, the initiative emphasizes end-to-end supply chain resilience, cold chain optimization, improved data visibility, and local capacity building for independent procurement management. This approach represents a paradigm shift toward structured, system-focused access models, positioning Pfizer as a long-term partner in health system development and demonstrating that equitable health outcomes require functioning infrastructure and sustained multi-stakeholder collaboration alongside affordable pricing.

 **ARC** **CGD** **CENTER FOR GLOBAL DEVELOPMENT** **Unpacking Health Financing and Supply Chain Nexus for Improved Availability & Affordability of Medicines in LMIC's**

This session examined the interdependencies between health financing and supply chain performance in Low- and Middle-Income Countries (LMICs). Three research presentations addressed a novel conceptual framework for healthcare supply chain financing, supply chain finance for last-mile delivery, and data integration best practices. Discussions yielded several key insights. Participants emphasized the need to distinguish budgeting from disbursement and to refine the conceptual framework's coverage of delivery and monitoring phases. Rigid legal frameworks and governmental resistance to transparency were identified as significant barriers to reform. On data integration, participants stressed donor accountability,

actionable benchmarking, and aligning data requirements with financing decision-making needs. The session concluded that improving medicine availability and affordability requires simultaneously addressing financing mechanisms and supply chain performance through data-driven, accountable approaches.

## CONTRIBUTED SESSIONS

The **contributed portion** of GHSCS-2025 included 37 talks and 18 posters. Presenters explored diverse topics such as forecasting, supply chain governance, performance, and management, last-mile delivery, health supply chain workforce, planning budgeting and finance, local manufacturing and innovation, end-to-end visibility, planning, vaccine supply chains, supply chain resilience and sustainability. Details of the sessions and talks are available on the GHSCS website <https://ghscs.com>

## PRIZE PRESENTATIONS

Challenges in managing supply chains to deliver health outcomes in global health contexts abound, particularly when factors beyond the control of supply chain managers such as infrastructure, port clearance delays, weather, governance issues, location of clinics, human resource capabilities, etc. all impact success. Despite such challenges, we see stories of remarkable success in improving health delivery and outcomes that leverage partnerships between organizations, and in cooperation with governments, NGOs and donors, deploying innovative and appropriate technology and human resource practices. *Each year, GHSCS seeks to recognize such organizations by celebrating & sharing practices that have delivered documented success.* In 2025, GHSCS received 24 submissions; four finalists were selected to present their work at the Kigaali summit.

**Kenya Medical Supplies Authority** presented their implementation of an AI-driven forecasting tool within the national Integrated Logistics Management Information System, using predictive analytics, seasonality modeling, and commodity classification to strengthen demand forecasting and distribution. Built on existing digital infrastructure and partnerships, the system improved order fulfillment, reduced wastage, enhanced supply chain visibility, and informed decision-making. The initiative demonstrated AI's role within broader governance and monitoring frameworks essential for sustainability and scale.

**Nasarawa State, Nigeria** detailed a reform of the pharmaceutical supply chain through establishment of a centralized Drug Management Agency (DMA). The state's pharmaceutical supply chain suffered from inconsistent medicine availability, price disparities, weak quality assurance, and paper-based management. Subsequently, a centralized DMA implemented governance structures, strategic sourcing, financial sustainability models, upgraded warehousing, and a digital Warehouse Management Information System. Results included significantly higher order fill rates, reduced lead times, minimal expiries, and improved health facility service levels—demonstrating successful sub-national supply chain transformation.

A team from the **Ministry of Health and National Medical Stores, Uganda** addressed COVID-exposed oxygen supply chain bottlenecks—including centralized limitations, inadequate production, distribution shortages, and fragmented logistics—through a "milkman" model utilizing public-private collaboration and data-driven coordination. The pilot, scaled from 2021-2022 with CHAI support deploying 238 cylinders, decreased stockouts, improved cost efficiency, reduced neonatal hypoxemia deaths, and trained 758 health workers in oxygen therapy and supply chain management.

The **Center for Medical Mobilization Board, Kenya** showcased a pilot to address poor NCD medication availability and paper-based reporting at primary care through a quality assurance framework combining supply chain digitization, information system strengthening via daily activity registers, and innovative seed

fund financing. Despite county-level capacity disparities, the initiative achieved end-to-end data integration, increased medicine access and patient retention, supported by government leadership and universal health coverage alignment.

The entries were judged by **Hany Abdullah** (Gates Foundation), **Diana Mutoni** (RMS), **Dr. Ebrahim Adamjee** (Axmed), and **Gilbert Hiteshi** (SBTF). Judges commended all teams for understanding African health system realities and proposing practical, locally adaptable solutions working within existing structures. All presentations had thoughtfully integrated data and digital tools while engaging key stakeholders—Ministries of Health, medical stores, and communities. There was a strong emphasis on sustainability, local ownership, and national alignment was evident.

**The winner of the 2025 GHSCS Prize Competition was the Oxygen Supply Chain project from Uganda.** Judges observed that the Uganda project was distinguished by its comprehensive end-to-end systems approach strengthening production through demand generation. Though the intervention was simple, the judges observed that the project showcased strong execution, effective scaling, robust financing and demonstrated verified patient-level impact through compelling frontline testimonials.



## RESEARCH CHALLENGE PRESENTATIONS

Through this challenge, with support from Chemonics International and ARC, the GHSCS group provided small seed research grants of up to **\$13,000** to teams with research proposals **reflecting high impact and academic development potential**. In 2025, we received 71 research proposals. Through a rigorous review process, which focused the quality of the research proposal as well as of the team, two projects were selected for work to be completed over a 9-month period in 2025. Throughout this period, a core team from GHSCS comprising senior researchers, which included **Prof. Ravi Anupindi**, **Prof. Sriram Dasu** (USC) and **Prof. Jérémie Gallien** (LBS), with editorial experience in leading academic journals provided project and research capability development mentorship to the two research teams at least on a monthly cadence. Completed research work was presented at GHSCS2025.

### **Project 1: A Pilot Multifaceted Strategy to Enhance Adverse Drug Reaction Reporting Among Community Pharmacists: A cluster randomized controlled trial in Anambra State, Nigeria**

A cluster randomized controlled trial in Nigeria addressed critically low adverse drug reaction (ADR) reporting among community pharmacists—a major pharmacovigilance challenge in low-middle income countries where underreporting reaches 10-30%. Researchers implemented a hybrid incentive model combined with education interventions. Using paired t-test analysis of questionnaires and interviews, the study demonstrated significantly increased ADR reports post-intervention, suggesting this multifaceted approach effectively improves reporting culture among healthcare providers. This research was led by **Prof. Sunday O. Nduka from the Nnamdi Azikiwe University**.

## Project 2: Social and Behavioral Barriers to Advancing Sustainable e-Supply Chain Adoption in Ghana's Health System

Ghana's GhILMIS adoption for health supply chain management showed mixed utilization. Researchers applied Technology Acceptance Model frameworks using concurrent nested mixed methods with stratified purposive sampling comparing high versus low utilization regions. Findings revealed significant barriers: staff demotivation, financial burdens, nurses' lower adoption rates, inadequate training, poor knowledge transfer, and widespread internet connectivity gaps. The study highlights critical social, behavioral, and infrastructure challenges hindering sustainable e-supply chain implementation in resource-limited settings. This research was led by **Prof. Roger A. Atinga of the University of Ghana**.

## SITE VISIT SUMMARIES

### NATIONAL HEALTH INTELLIGENCE CENTER

Two groups of 15 participants visited Rwanda's National Health Intelligence Center (NHIC) and met with Senior Policy Advisor **Evode Niyibizi**. Launched in April 2025 in response to the COVID-19 pandemic, NHIC aims to transform Rwanda's health sector by supporting the Rwanda Biomedical Center, Rwanda Medical Supply, Food and Drug Authority, and health facilities. Key initiatives include digitizing medical



records across all healthcare levels (expected completion at community level by year-end), integrating the Rwanda Health Insurance portal with unique patient IDs, and developing an AI laboratory for research, implementation, and talent incubation. Participants toured facilities featuring live data dashboards tracking cesarean rates, malaria prevalence, and disease surveillance.



### RWANDA MEDICAL SUPPLY

GHSCS delegates visited the Rwanda Medical Supply Authority (RMS), a Parliament-established, government-owned entity in operation since 2020 and built on over 45 years of pharmaceutical and logistics experience.

Designed to function with operational independence, RMS consolidated previously fragmented supply chain units into a coordinated national structure overseen by an independent Board and management team. The organization manages procurement, warehousing, stock monitoring, and last-mile distribution of essential medicines, consumables, and medical equipment nationwide, with vaccines being the one

major category outside its mandate. Health facilities receive direct delivery, including drone delivery to remote sites, eliminating the need for facility-level pickup. A real-time electronic logistics system enables



early stockout detection and commodity redistribution across districts. RMS leverages revenue from high-volume products to sustain availability of essential but low-demand commodities, and is transitioning toward long-term strategic supplier partnerships to strengthen quality assurance and cost efficiency. Its model has attracted significant regional interest, with delegations from Nigeria, Sierra Leone, and Chad visiting Rwanda to study its centralized approach.

## ZIPLINE



GHSCS delegates visited Zipline's Muhanga Distribution Center, one of two hubs covering nearly all of Rwanda since 2016. The recently profitable Series E company operates approximately 50 drones delivering up to 3kg payloads across 190km ranges with 2-5 meter precision accuracy. Health facilities order blood products, vaccines, plasma, and emergency supplies via USSD, WhatsApp, or integrated platforms. Zipline acts as government custodian and last-mile distributor, significantly reducing stockouts and maternal mortality while improving emergency response times. Rwanda remains Zipline's highest-volume market globally, completing over 1.5 million autonomous deliveries in 2024. Next-generation Platform 2 drones will enable precise home delivery with increased payload capacity.

## TKMD

GHSCS delegates visited TKMD Rwanda's syringe manufacturing facility in Bicumbi, Eastern Province, a subsidiary of Anhui Tiankang Medical Technology established to localize production of essential medical consumables across Africa. The WHO-prequalified facility, developed in partnership with the Rwandan government and global health stakeholders, produces auto-disable immunization syringes designed to support safe vaccination programs and strengthen regional health system resilience. During the visit, delegates toured the warehouse and fully integrated production line, observing injection molding, automated needle assembly, and final syringe and plunger assembly alongside rigorous in-process quality control checkpoints. At full capacity, the plant can produce Rwanda's entire annual syringe demand in approximately one week of operation, highlighting its strategic role in enabling rapid national response to vaccination campaigns and public health emergencies.

TKMD's localized manufacturing model reduces dependence on imported medical supplies while shortening procurement timelines from months to days, improving supply chain reliability for Rwanda and neighboring countries. The facility supplies national immunization programs and global procurement partners, including UNICEF, while also creating skilled local employment and advancing technical manufacturing capabilities within the region. By combining government support, international partnerships, and technology transfer from its parent company, TKMD Rwanda represents a foundational step toward building a sustainable, Africa-based medical device manufacturing ecosystem.



The third day of GHSCS was jointly hosted with the [East Africa Pharma & Biotech Conference \(EAPB\)](#). EAPB convenes leading policymakers, industry stakeholders, development partners, and scientific experts committed to advancing regional manufacturing capacity for health products.



The opening session established a unified and forward-looking tone, emphasizing the urgency and momentum behind Africa's drive to strengthen local manufacturing and health security. **Pushpa Vijayaraghavan**, Director, Sathguru Management Consultants, opened by reaffirming EAPB's role as a unique continental platform, co-hosted by Rwanda and supported by GIZ, dedicated to advancing pharmaceutical and biotechnology value chain development through multisector alignment.

**Jeanne Umuhire**, Deputy Director General, Rwanda Biomedical Center, underscored that building regional manufacturing capacity has become a strategic imperative rather than an aspiration. Rwanda's sustained investments in technical capacity, regulatory strengthening, and ecosystem development are explicitly designed to serve regional and continental needs, positioning the country as a continental front-runner. **Elise Hadman**, Head of Cooperation at the European Union Delegation to Rwanda, highlighted the European Union's strong commitment to Africa's health sovereignty, citing key initiatives including support to the African Medicines Agency, the MAV+ program, talent development, and SME strengthening. A landmark milestone was announced: a EUR 95 million financing package from the European Commission and European Investment Bank with BioNTech to establish a Kigali mRNA manufacturing facility capable of producing up to 50 million doses annually. **Prof. Emile Bienvenu**, Director General, Rwanda FDA, Government of Rwanda, contextualized the stakes, noting Africa's stark import dependency: over 70% of pharmaceuticals, 99% of vaccines, and more than 90% of medical devices. He highlighted Rwanda's growing biomanufacturing ecosystem, featuring BioNTech, BioUsawa, TKMD, and CooperPharma, and celebrated Rwanda FDA's achievement of WHO Maturity Level 3 in 2024, with progression toward Level 4 and WHO Listed Authority status underway. Collectively, speakers framed EAPB 2025 as a pivotal moment for translating continental ambition into tangible manufacturing transformation.

In his keynote address (summarized earlier) **Danny Mutembe**, CEO, MD Conseil Medical Supply and Managing Partner of Pharmacie Conseil, contextualized Africa's pharmaceutical landscape, underscored the critical role of regional initiatives pushing regulatory harmonization and expanding manufacturing potential and noted Rwanda's progress and achievements.

## EAPB Plenary Panel: Regional Manufacturing of Pharma & Health Products in Africa



The EAPB plenary panel, moderated by **Pushpa Vijayaraghavan**, Director of Sathguru Management Consultants, explored pharmaceutical market opportunities and regulatory capacity's role in attracting investment. **Professor Emile Bienvenu**, Director General of the Rwanda FDA, highlighted Rwanda FDA's achievement of WHO maturity level 3, establishing a stable regulatory system that minimizes manufacturer risk, enables WHO prequalification, and attracts investors seeking robust regulatory environments. Rwanda now supports innovative product development beyond generics through academic partnerships building scientific and regulatory capacity.

**Zeynep Kantur Ozenci** Global Health Head at the International Finance Corporation, described IFC's 40-year pharmaceutical investment strategy focusing on creating regional champions through technology transfer, portfolio diversification, and acquiring multinational brands in exited markets, prioritizing quality and commercial viability while geographically diversifying API manufacturing. **Edward Claessen** outlined European Investment Bank's €3 billion healthcare investment using venture debt for high-risk, less mature sectors, exemplified by the UN Development Accelerator combining EIB loans, European Commission security, and Gates Foundation expertise tailored to individual projects. **Mugisha Bai** of TKMD Medical Rwanda explained their 2018 entry following Uganda customer invitation, choosing Rwanda for its business environment and government support. Chinese technology teams trained local workers for prequalification, ISO, FDA, and CE certifications, with Rwanda's geographic position enabling cost-effective regional exports. **Menghis Bairu** of BioVusawa described rapidly progressing from concept to manufacturing monoclonal antibodies in Rwanda within one year, driven by ensuring African patients receive standard oncology care.

### Session 2: Shaping the Next Generation of Human Resources

This session, moderated by **Dr. Shree Divyya** of Sathguru Management Consultants and **Dr. Innocent Hahirwa** of the University of Rwanda examined the human capital and skills development initiatives essential to building Africa's pharmaceutical, biotechnology, and health products value chain. Speakers including **Dr. John Patrick** (EAC RCE-VIHSCM), **Dr. Felix Seyfarth** (syllAbi – MINEDUC), and **Mr. Bradley Cerff** (UvU Bio) presented complementary perspectives on regional training hubs, applied skilling programs, and incubation platforms, collectively illustrating how integrated models linking education, research, industry training, and entrepreneurship can accelerate workforce readiness. Rwanda and East Africa provided concrete examples, with initiatives such as syllAbi, UvU Bio, and the EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management (EAC RCE-VIHSCM) showcasing early progress.

Key themes included the critical workforce gaps in specialized production, quality assurance, regulatory affairs, and bioprocess engineering, alongside the need for experiential, industry-integrated learning beyond purely academic training. Panelists also stressed the importance of simultaneously building research capacity to transition Africa from "making" to "discovering and developing" health innovations. Policy and regulatory reforms enabling flexible, cross-institutional learning models were identified as necessary enablers. The session concluded with broad consensus that sustainable pharmaceutical and biotechnology manufacturing ambitions require long-term, coordinated investments in human capital,

supported by international partnerships, robust research infrastructure, and enabling policy environments.

### **Session 3: Cross-stakeholder Round Table**

This high-level roundtable, moderated by **Pushpa Vijayaraghavan** of Sathguru Management Consultants and the Medicines Patent Pool, convened senior representatives from industry, government, financing institutions, and global health partners to assess requirements for building a sustainable pharmaceutical and biotechnology manufacturing ecosystem in Africa. Participants acknowledged meaningful continental progress while agreeing that fully de-risking the business case for manufacturers remains an ongoing challenge.

Key themes included the shared aspiration to reduce Africa's import dependency and position the continent within global production networks. Achieving this requires financing models responsive to long gestation periods, substantial capital requirements, and complex regulatory pathways, supported by expanded blended finance instruments and better coordination among development finance institutions. Quality assurance, GMP strengthening, and WHO Prequalification pathways were identified as essential prerequisites for accessing global procurement markets. Participants further stressed the importance of transitioning African manufacturers toward sophisticated product categories, including biologics, to achieve long-term export competitiveness. Technology access and intellectual property solutions, exemplified by the Medicines Patent Pool's partnership pathways, were recognized as critical enablers. Rwanda's targeted government investments and planned Life Sciences Park were highlighted as models of enabling policy environments. The session concluded that sustained cross-sector collaboration remains indispensable to realizing Africa's pharmaceutical manufacturing ambitions.

### **Session 4: Diagnostics - Nurturing Continental Value Chain at Scale** (by CHAI as part of EAPB sessions)

Co-moderated by **Mariatou Tala Jallow** of Vizuri Health Dynamics and **Trevor Peter** of CHAI, this session examined the evolving landscape of diagnostics manufacturing in Africa, an area of strategic importance for health security and economic resilience. Despite growing demand, the continent remains heavily dependent on imported diagnostics, with the COVID-19 pandemic exposing systemic vulnerabilities including fragmented demand, raw material dependence, regulatory hurdles, and quality system gaps.

Panelists representing manufacturers, research institutions, and regional bodies included **Faith Olumide Ajani** (Africa CDC), **Clarisse Musanabaganwa** (Rwanda Biomedical Centre), **Thomas Sasu** (Incas Diagnostics), **Rufus Andrew** (Corning Incorporated), and **Cheikh Tidiane** (IPD DIATROPIX), who shared practical insights on emerging solutions, including co-manufacturing models, technology transfer partnerships, local raw material substitution, and strengthened after-sales capabilities. Persistent barriers were candidly discussed, encompassing import dependency, volatile supply chains, high working capital requirements, and complex quality certification and regulatory pathways.

Predictable demand was identified as fundamental to achieving manufacturing scale. Participants called for more flexible tender structures, multi-year framework contracts, advance purchase commitments, and improved working capital access. Regulatory harmonization across regional economic communities, including SADC, EAC, and ECOWAS, combined with WHO Prequalification mentorship, was highlighted as among the most transformative opportunities available. The session concluded that diagnostics manufacturing represents one of Africa's most near-term scalable opportunities, requiring coordinated investment, reduced input dependency, strengthened quality systems, and harmonized regulatory frameworks to realize its full potential.

## CLOSING COMMENTS

**Dr. Loko Abraham**, CEO of RMS, representing Minister Butera, expressed gratitude to Dr. Anupindi and the organizing team for selecting Rwanda to host the Global Health Supply Chain Summit. He praised the successful three-day event, noting participants' excitement and satisfaction. Highlighting that global health supply chains face unprecedented pressures requiring unconventional solutions, he emphasized the need for ecosystem-wide transformation—from regulatory frameworks and manufacturing through last-mile distribution. Rwanda showcases efforts in both manufacturing and supply chain innovation. The summit effectively convened country-level implementers, global actors, private sector representatives, academia, and industry leaders. He extended a warm invitation for future summits in Kigali, emphasizing Rwanda's continued commitment to advancing global health supply chain excellence.

In his closing remarks, **Prof. Ravi Anupindi** thanked the Government of Rwanda and RMS for their strong support to host the event in Rwanda and actively participate in the events; he thanked all distinguished speakers, panelists and presenters for their contribution and participation. He appreciated the active contribution of several organizations to feature interesting content. He thanked the Government of Rwanda, RMS, Zipline and TKMD for facilitating site visits so participants could see the excellent work being done in Rwanda. He recognized the generous financial support from all of the sponsors to help GHSCS and EAPB make the event possible and thanked Logenix for sponsoring the cocktail reception that included a cultural show to allow participants to unwind from a long day of discussions. Finally, he acknowledged the GHSCS Program Committee for their support and contributions curating the program, with special thanks to **Prashant Yadav** and **Hitesh Hurkchand**; and the team from the University of Michigan – students, **Molly Bachmann**, **Nicol Coelho**, **Danielle Maduka**, **Sarika Mahimkar**, **Shruti Prasad**, **Mohiika Rastogi**, **Ajay Yeleswaram**, and **Sue Booth**, Administrative Assistant for GHSCS, for their dedication and hard work before, during and after the event, to make GHSCS 2025 memorable.



*University of Michigan team members - left to right: Ravi Anupindi, Ajay Yeleswaram, Mohiika Rastogi, Shruti Prasad, Sarika Mahimkar, Danielle Maduka, Molly Bachman, Sue Booth*



# 2025 GHSCS Agenda at a Glance

## MONDAY, NOVEMBER 17

### A. Rwanda National Health Intelligence Center (NHIC)

Located in Kigali, **NHIC** was launched in April 2025 by the Ministry of Health to provide real-time health data analysis for evidence-based policymaking and system optimization in Rwanda. This state-of-the-art facility integrates data from various health systems, uses advanced analytics for disease surveillance and resource optimization, and aims to improve response to health challenges through data-driven insights.

### B. Rwanda Medical Supply (RMS)

Visit to the Central warehouse of the **Rwanda Medical Supply Ltd**, located in Kigali. A government-owned company dedicated to ensuring the consistent availability of essential healthcare supplies across Rwanda. Their comprehensive supply chain management ensures that healthcare providers have the resources they need to deliver quality care to the Rwandan people.

### C. TKMD Rwanda Factory

Established in partnership with the Gates Foundation, **TKMD Rwanda** began production in November 2024 and has since produced 22 million syringes.

### D. Zipline Drone Operations Center

**Zipline’s** operations in Rwanda include its distribution centers, referred to as “nests,” located in Muhanga and Kayonza. From these centers, Zipline uses drones to deliver medical supplies like blood, vaccines, and medications to hospitals and clinics across the country.

SITE VISIT LOGISTICS – Check in at Marriott Hotel parking lot as per instructions received by email			
SITE VISIT A: National Health Intelligence Center	SITE VISIT B: Rwanda Medical Supply	SITE VISIT C: TKMD – Syringe Manufacturing Plant	SITE VISIT D: Zipline Drone Operations Center
<b>AM Group:</b> Check-in Time: 8:50-9:20 am Departure: 9:30 am Return Time: Est. 12:30 pm <b>PM Group:</b> Check-in Time: 12:50-1:20 pm Departure: 1:30 pm Return Time: Est. 4:30 pm	Check-in Time: 8:50-9:20 am Departure: 9:30 am Return Time: Est. 12:30 pm	Check-in Time: 8:00-8:20 am Departure: 8:30 am Return Time: Est. 3:30 pm	Check-in Time: 8:00-8:20 am Departure: 8:30 am Return Time: Est. 3:30 pm


**OPTIONAL EARLY REGISTRATION & NETWORKING**

All are welcome.

Time: 6:30 – 8:00 pm

Location: Marriott Kilimanjaro Foyer

# TUESDAY, NOVEMBER 18

7:45 – 8:45 am	<b>Registration &amp; Arrival Coffee:</b> Kilimanjaro Foyer			
9:00 – 9:15 am	<b>Welcome to GHSCS 2025</b> <b>Prof. Ravi Anupindi</b> , Chair, GHSCS & University of Michigan <i>Location: Kilimanjaro Ballroom</i>			
9:15 – 9:30 am	<b>Ceremonial Opening Remarks: Dr. Loko Abraham</b> , CEO, Rwanda Medical Supply <i>Location: Kilimanjaro Ballroom</i>			
9:30 – 9:55 am	<b>Inaugural Address by Guest of Honor: Dr. Sabin Nsanzimana</b> , Minister of Health, Rwanda <sup>1</sup>			
9:55 – 10:15 am	<b>Dr. Delese Mimi Amoakoa Darko</b> , Director General, African Medicines Agency (AMA)			
10:15 – 10:45 am	<i>Coffee Break &amp; Networking: Location: Kilimanjaro Foyer</i>			
10:45 – 11:05 am	<b>Leadership in Action: Welcoming National Supply Agency Heads</b>			
11:10 – 12:20 pm	<b>Plenary Panel 1: Value chain re-organization focused on procurement</b> (Moderator: Prashant Yadav) <i>Location: Kilimanjaro Ballroom</i>	<b>Plenary Panel 2: Securing Access to Quality Maternal, Neonatal, and Child Health Medicines: Procurement Pathways and Policy Levers</b> (Moderator: Hitesh Hurkchand) <i>Location: Seminar+Isaro Rooms</i>		
12:30 – 1:45 pm	<i>Lunch: Location: Soko &amp; Iriba Restaurants</i>			
2:00-3:10 pm	<b>Track 1 (Prize Presentations)</b> <i>Location: Kilimanjaro A</i>	<b>Track 2 Last-Mile Delivery</b> <i>Location: Kilimanjaro C</i>	<b>Track 3 Health Supply Chain Workforce</b> <i>Location: Muhazi+Virunga</i>	<b>Track 4 Panel: Enhancing Supply Chains in Francophone Countries</b> <i>Location: Seminar+Isaro</i>
3:10-3:40 pm	<i>Coffee Break – Networking: Location: Kilimanjaro Foyer</i>			
3:40– 4:50 pm	<b>Track 5 (Prize Presentations)</b> <i>Location: Kilimanjaro A</i>	<b>Track 6 Local Manufacturing and Innovation</b> <i>Location: Kilimanjaro C</i>	<b>Track 7 Governance and Management</b> <i>Location: Muhazi+Virunga</i>	<b>Track 8 Sustainability Through Coordination</b> <i>Location: Seminar+Isaro</i>
5:00 – 6:10 pm	<b>Site Visit Debriefs:</b> All are welcome to hear about yesterday's tours <i>Location: Kilimanjaro A</i>	<b>Side Event by Pfizer's Accord for a Healthier World</b> Title: Public-Private Partnerships to Enable New & Sustainable Supply Chain Capacity Opportunities <i>Location: Muhazi+Virunga</i>		<b>Side Event by LOGENIX</b> Title: How to Scale-Up Alternate Procurement, Streamlined Importation and Regional Manufacturing for Diagnostics <i>Location: Seminar+Isaro</i>
6:30 – 8:30 pm	<b>Cocktail Party sponsored by LOGENIX</b> <i>Location: Malaika Garden</i>			

<sup>1</sup> Dr. Sabin Nsanzimana had to cancel and Dr. Yuvan Butera gave the inaugural address.

# WEDNESDAY, NOVEMBER 19

7:45 – 8:45 am	<b>Arrival Coffee:</b> Kilimanjaro Foyer			
9:00 – 9:30 am	<p><b>Keynote Speaker: Zeynep Kantur Ozenci</b>            Global Head – Health Sector, International Finance Corporation  <i>Location: Kilimanjaro Ballroom</i></p>			
9:40 – 10:50 am	<p><b>Poster Sessions / Sponsor Exhibits / Networking</b>  <i>Location: Kilimanjaro Foyer</i></p>			
	<p><i>Coffee Break – Networking: Location: Kilimanjaro Foyer</i></p>			
10:55 – 12:05 pm	<p><b>Plenary Panel 3: Addressing Barriers to Market Access</b>            (Moderator: Ravi Anupindi)  <i>Location: Kilimanjaro Ballroom</i></p>		<p><b>Plenary Panel 4: Securing the Vaccine Value Chain for the Next Biological Threat</b>            (Moderator: Hitesh Hurkchand)  <i>Location: Seminar+Isaro</i></p>	
12:05 – 1:20 pm	<p><b>Lunch:</b> <i>Location: Soko and Iriba Restaurants</i></p>			
1:30 – 2:45 pm	<p><b>Track 9 Supply Chain Performance</b>  <i>Location: Kilimanjaro A</i></p>	<p><b>Track 10 Vaccine Supply Chains</b>  <i>Location: Kilimanjaro C</i></p>	<p><b>Track 11 End-to-End Visibility</b>  <i>Location: Muhazi+Virunga</i></p>	<p><b>Track 12 Planning and Budgeting</b>  <i>Location: Seminar+Isaro</i></p>
2:45 – 3:15 pm	<p><i>Coffee Break – Networking: Location: Kilimanjaro Foyer</i></p>			
3:15 – 4:30 pm	<p><b>Track 13 Sponsored Panel – SC FUNDERS FORUM Transforming Health Procurement &amp; Supply Chains</b>  <i>Location: Kilimanjaro A</i></p>	<p><b>Track 14 Topics in Logistics</b>  <i>Location: Kilimanjaro C</i></p>	<p><b>Track 15 Financing</b>  <i>Location: Muhazi+Virunga</i></p>	<p><b>Track 16 Resilience and Sustainability</b>  <i>Location: Seminar+Isaro</i></p>
4:45 – 6:00 pm	<p><b>Side Event by ARC-CGD</b>  <b>Title: Unpacking Health Financing and Supply Chain Nexus for Improved Availability and Affordability of Medicines in LMICs</b>  <i>Location: Kilimanjaro A</i></p>	<p><b>Interactive Session by IAPHL</b>  <b>Intelligent Supply Chains – Practical Experiences with AI and ML from the Field</b>  <i>Location: Muhazi+Virunga</i></p>		<p><b>Side Event by UNITAID / WHO</b>  <b>Title: Universal Access for Every Woman, Every Newborn, Everywhere: Building a Shared Vision for Change</b>  <i>Location: Seminar+Isaro</i></p>

# THURSDAY, NOVEMBER 20

## (EAPB Collaboration Option)

8:15 – 9:00 am	<b>EAPB Registration &amp; Arrival Coffee</b>		
9:00 – 9:25 am	<b>Opening Remarks</b>		
9:30 – 10:00 am	<b>Keynote Speaker: Danny Mutembe</b> CEO, MD Conseil Medical Supply and Managing Partner of Pharmacie Conseil, and Board Member, Rwanda Biomedical Centre <i>Location: Kilimanjaro Ballroom</i>		
10:00 – 10:30 am	<i>Coffee Break – Networking: Location: Kilimanjaro Foyer</i>		
10:40 – 11:50 am	<b>EAPB PLENARY PANEL</b> <i>(All are welcome)</i>	<b>Track 17</b> <b>Sponsored Talks –</b> <b>SC FUNDER’S FORUM</b> <b>“Enabling the Future of</b> <b>Health Networks”</b> <i>Location: Muhazi+Virunga</i>	<b>Track 18</b> <b>Forecasting</b> <i>Location:</i> <i>Location: Seminar+Isaro</i>
	<b>Regional Manufacturing of Pharma &amp; Health</b> <b>Products in Africa</b> (Moderator: Puspha Vijayaraghavan) <i>Location: Kilimanjaro A</i>		

\* Admittance to EAPB sessions beginning at 11:55 is by designation on name badge (EAPB or GHSCS+EAPB)  
 Tracks 19 & 20 are open to ALL attendees.

11:55 am – 1:05 pm	Track 19 2024 Research Challenge Presentations <i>Location: Kilimanjaro A</i>	Track 20 Digitizing the Last Mile <i>Location: Muhazi+Virunga</i>	<b>EAPB SESSIONS (11:55-4:30) *</b>
	 <b>EAST AFRICA                  PHARMA &amp;                  BIOTECH                  CONFERENCE '25</b> connect. interact. discover.		
1:10 - 2:20 pm	<i>Lunch: Location: Soko and Iriba Restaurants</i>		
2:30 – 3:45 pm	GHSCS <b>Valedictory Closing Address:</b> <b>Dr. Yvan Butera</b> Minister of State for Health, Rwanda  Prize Announcement and Closing Ceremony		See EAPB Agenda at a Glance on page 5  Full Schedule on pages 31-35  <i>Lunch 12:55 – 1:55</i> <i>Location: Soko and Iriba Restaurants</i>  All EAPB Sessions located in <i>Seminar+Isaro</i>



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**2025 EAPB Agenda at a Glance**

20<sup>th</sup> November 2025, Kigali Marriott, Rwanda  
Conference website: [www.eapbconferences.com](http://www.eapbconferences.com)

**Thursday, November 20**

8:15 – 9:00 am	<b>EAPB Registration &amp; Arrival Coffee</b>	
9:00 – 9:25 am	<b>Opening Remarks</b>	
9:30 – 10:00 am	<p><b>Keynote Speaker: Danny Mutembe</b> CEO, MD Conseil Medical Supply and Managing Partner of Pharmacie Conseil, and Board Member, Rwanda Biomedical Centre <i>Location: Kilimanjaro Ballroom</i></p>	
10:00 – 10:30 am	<i>Coffee Break – Networking: Location: Kilimanjaro Foyer</i>	
10:40 – 11:50 am	<p><b>EAPB PLENARY PANEL</b> <i>All are welcome!</i> <b>Regional Manufacturing of Pharma &amp; Health Products in Africa</b> (Moderator: Puspha Vijayaraghavan) <i>Location: Kilimanjaro</i></p>	
11:55 am - 12:55 pm	<p><b>EAPB Session 2</b> <b>Shaping the Next Generation of Human Resources</b> <i>Location: Seminar+Isaro</i></p>	
12:55 - 1:55 pm	<i>Lunch: Soko and Iriba Restaurants</i>	
1:55 - 3:15 pm	<p><b>EAPB Session 3</b> <b>Cross-stakeholder Round Table</b> <i>Location: Seminar+Isaro</i></p>	
3:15 - 3:30 pm	<i>Tea / Coffee Break – Networking</i>	
3:30 - 4:30 pm	<p><b>EAPB Session 4</b> <b>Diagnostics: Nurturing Continental Value Chain at Scale</b> <i>Location: Seminar+Isaro</i></p>	<p><b>EAPB Session 5</b> <b>Corporate Presentations</b> <i>Location: Muhazi+Virunga</i></p>

## ACKNOWLEDGEMENTS

### GHSCS Program Committee

- **[Chair] Professor Ravi Anupindi**, University of Michigan, Ann Arbor (USA)
- **Professor Anton L.V. Avanceña**, University of Texas, Austin (USA)
- **Professor Sriram Dasu**, University of Southern California (USA)
- **Dr. Ibnou Khadim Diaw**, Africa Resource Center, Africa
- **Professor Jérémie Gallien**, London Business School (UK)
- **Patrick Gaparayi**, United Nations Population Fund (UNFPA), West and Central Africa Region (Senegal)
- **Hitesh Hurkchand**, Independent Health Consultant (USA)
- **Dr. Janamarie Perroud**, GAVI
- **Azuka Okeke**, Africa Resource Center for Excellence in Supply Chain Management (Nigeria)
- **Dr. Noel Watson**, OpsMend (USA)
- **Prof. Prashant Yadav**, Senior Fellow Council on Foreign Relations, Washington DC (USA)

### Rwanda Local Committee – Rwanda Medical Supply

- **Dr. Loko Abraham**, CEO
- **Diana Mutoni**, Deputy CEO
- **Alliance Ishimwe**, MSc, BPharm., Strategic Advisor to the CEO
- **Geoffrey Beingana**, Senior Supply Chain Advisor, RMS Ltd

### Content Partner for East Africa Pharma and Biotech Conference

- **Pushpa Vijayaraghavan**, Director, Sathguru Management Consultants
- **Shree Divyya**, Associate Vice President-Healthcare Advisory, Sathguru Management Consultants
- **Sonali Umanath**, Associate Consultant-Healthcare Advisory, Sathguru Management Consultants

### Administrative Support & Student Assistants/Facilitators

- **Sue Booth**, GHSCS Administrative Assistant, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Molly Bachmann** PT, DPT, PhD student, School of Public Health, University of Michigan, Ann Arbor (USA)
- **Nicol Coelho**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Danielle Maduka**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Sarika Mahimkar**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Shruti Prasad**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Mohiika Rastogi**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)
- **Ajay Yeleswaram**, MBA Class of 2026, Ross School of Business, University of Michigan, Ann Arbor (USA)



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# Global Health Supply Chain Summit

## ABOUT GHSCS

The [Global Health Supply Chain Summit \(GHSCS\)](#) uniquely focuses on global health supply chains, covering all components (including human resources) and contextual factors affecting their performance. It stands out by presenting a structured, holistic and multi-stakeholder approach to addressing challenges of designing and managing end-to-end global health supply chain challenges in LMICs, particularly in Africa. GHSCS serves as a forum to bring rigor and systematic thinking to the work of the field practitioners as well as provide a platform to connect practitioners with the latest academic and industry insights. The issues addressed range from technical and operational to governance architecture and leadership, ensuring relevance across all levels of supply chain management.

**The secretariat of GHSCS is located at the [Ross School of Business, University of Michigan, Ann Arbor, MI \(USA\)](#).**

**Convening:** Starting in 2008 as a workshop, GHSCS has been convening annually without interruption and has grown into a 3-day conference attracting about 400 people representing various stakeholders in the global health supply chain space. The program committee curates plenary sessions, which include keynote talks and panel sessions; in addition, GHSCS selectively features work being done on the ground in parallel track presentations and poster sessions. GHSCS also features sponsored sessions by stakeholders, side events, and arranges for site visits in the convening location.

**Recognition of Excellence:** GHSCS seeks to recognize organizations that have delivered documented success in improving healthcare supply chain practice. Annually GHSCS runs a prize competition to show case excellence in global health supply chain implementation in LMICs. Selected teams present their work at the annual GHSCS convening and a winner is selected by an independent panel of judges.

**Research Development Initiative:** Under this initiative, GHSCS fosters a rigorous research-oriented approach to addressing global health supply chain challenges through a small seed grant award and mentorship support. The initiative was launched in 2021 with financial support from Chemonics International and in later years joined by the Africa Resource Center. Using a competitive process, research teams are selected for the award and offered mentorship throughout the nine-month research project engagement. Teams present their completed project in the following annual GHSCS convening.