



12th Global Health Supply Chain Summit

Dates: November 20-22, 2019

Location: Hilton Hotel, 138 Rivonia Road, Sandton, 2196, South Africa

Maximizing Global Health Supply Chain Impact: Data and Analytics, Entrepreneurship and Accessibility

The 12th Global Health Supply Chain Summit (GHSCS) will be held over three days, November 20-22, 2019 in Johannesburg, South Africa. The summit will focus on maximizing global health supply chain impact: data and analytics, entrepreneurship and accessibility. As in the previous conferences, the summit will assemble an impressive group of practitioners and experts from the global health supply chain field including academics, country planners, NGOs, logistics practitioners, pharmaceutical industry, and donor representatives. We encourage both English and French speaking presenters and participants.

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Agenda at a Glance

Day 1 (November 20) Hilton, Sandton, Johannesburg					
7:45 – 8:15 am	Registration				
8:15 – 8:20 am	Welcome to GHSCS 2019				
8:20 – 8:40 am	Welcome Speech: National Department of Health, South Africa <i>Location: Ballroom 1-2</i>				
8:40 – 9:20 am	Plenary Speaker 1: Jayashree K. Iyer Chief Executive Officer, Access to Medicine Foundation <i>Location: Ballroom 1-2</i>				
9:20 – 10:00 am	Plenary Speaker 2: Tarun Vij India Country Director, Global Alliance for Improved Nutrition <i>Location: Ballroom 1-2</i>				
10:00 – 10:30am	Coffee Break				
10:30 – 12:00 pm	Panel 1: Private Sector Engagement Models to improve Access to Medicines <i>Location: Ballroom 3</i>		Panel 2: Nutrition and Health in Africa <i>Location: Ballroom 1-2</i>		
12:10 – 1:20 pm	Lunch				
1:30 – 2:45pm (75 min track)	Track 1 <i>Location: Ballroom 3</i>	Track 2 <i>Location: Liduba</i>	Track 3 <i>Location: Tau</i>	Track 4 <i>Location: Umkombe</i>	Track 5 <i>Location: Ballroom 1-2</i>
2:45 – 3:05 pm	Coffee Break				
3:10 – 4:25pm (75 min track)	Track 6 (Prize Talks) <i>Location: Ballroom 1-2</i>	Track 7 <i>Location: Ballroom 3</i>	Track 8 <i>Location: Liduba</i>	Track 9 <i>Location: Tau</i>	Track 10 <i>Location: Umkombe</i>
4:30 – 5:45pm (75 min track)	Track 11 (Prize Talks) <i>Location: Ballroom 1-2</i>	Track 12 <i>Location: Ballroom 3</i>	Track 13 <i>Location: Liduba</i>	Track 14 <i>Location: Tau</i>	Track 15 <i>Location: Umkombe</i>
6:30 – 8:30 pm	Cocktail				
Day 2 (November 21) Hilton, Sandton, Johannesburg					
8:30 – 8:55 am	Plenary Speaker 3: Shabir Banoo Chief Technical Specialist for Pharmaceutical Policy and Programmes, Right to Care <i>Location: Ballroom 1-2</i>				
8:55 – 9:20 am	Plenary Speaker 4: Elizabeth Pisani Associate Professor at Erasmus School of Health Policy and Management in Rotterdam, holding honorary posts at London School of Hygiene and Tropical Medicine, the Policy Institute at King's College London and the George Institute for Global Health. <i>Location: Ballroom 1-2</i>				
9:25 – 10:50 am	Panel 3: Drug Quality - Substandard and Spurious Drugs: Issues and solutions <i>Location: Ballroom 1-2</i>		Panel 4: Healthcare Entrepreneurship in Sub-Saharan Africa <i>Location: Tau</i>	Panel 5: Procurement Mechanisms and Capacity Development for transitioning countries <i>Location: Ballroom 3</i>	
10:55 – 11:15 am	Coffee Break		Poster Session; <i>Location: Liduba & Tau</i>		
10:55 – 12:15 pm	Poster Session; <i>Location: Liduba & Tau</i>				
12:00 – 1:20 pm	Lunch				
1:30 – 2:45pm (75 min track)	Track 16 <i>Location: Ballroom 3</i>	Track 17 <i>Location: Liduba</i>	Track 18 <i>Location: Tau</i>	Track 19 <i>Location: Umkombe</i>	Track 20 <i>Location: Ballroom 1-2</i>
2:45 – 3:15 pm	Coffee Break				
3:20 – 4:00 pm	Plenary Speaker 5: Rashmee Ragaven Invest SA, South African Department of Trade and Industry <i>Location: Ballroom 1-2</i>				
4:00 – 4:30 pm	GHSCS Prize Announcements; <i>Location: Ballroom 1-2</i>				
4:30 – 5:00 pm	Closing Remarks; <i>Location: Ballroom 1-2</i>				
Day 3 (November 22)					
8:30 - 10:00 am	Tutorial 1: Data Analytics Andrew Inglis, GHSC-PSM <i>Location: Ballroom 3</i>		Tutorial 2: Public Health Network Design Roleplay Ryan Purcell, Llamasoft <i>Location: Tau</i>		9:00 - 11:00am Discussion of Research in Global Health (Academic Faculty/ Students/Curious); <i>Location: Liduba</i>
10:30 – 12:00 pm	Tutorial 1 (Repeat)		Tutorial 2 (Repeat)		
12:00 - 1:30 pm	Lunch				

Day 1 – Oral presentation schedule

Day 1: November 20, 2019			
Tracks 1-5: 1:30 – 2:45 pm			
French translation is available in Ballrooms 1-2 and Ballroom 3. Un interprète est disponible dans Ballrooms 1-2 and Ballroom 3.			
Track 1 Data Analytics Location: Ballroom 3	[1.1] Enhanced supply chain management for improved health outcomes – deployment of eLMIS in Nepal with intelligent visualizations and analytics (44) Hemaka Wijegunasekara ^{1,*} , Dhanushka Kavindu ¹ ¹ Bileeta (Pvt) Ltd	[1.2] Mitigating the risk of commodity stock-outs in public health supply chains: empirical evidence from Indonesia (85) Amir Karimi ¹ , Karthik V. Natarajan ¹ , Kingshuk K. Sinha ¹ , Sarah Andersson ² , Bethany Saad ² , Omar Balsara ^{1,*} ¹ University of Minnesota Carlson School of Management, ² JSI	[1.3] Leveraging data on access to malaria commodities en route to elimination in the Greater Mekong Subregion (93) Marie Lamy ¹ , Jessy Tam ² , Yee Theng Ng ^{2,*} ¹ APLMA, ² IQVIA
Track 2 Supply Chain Improvement Location: Liduba	[2.1] Ripples into waves: Leveraging data and analytics through new and integrated technologies (110) Ishmael Muchemenyi ^{1,*} , Chad Davenport ¹ ¹ Partnership for Supply Chain Management	[2.2] Institutionalising digital supply chain management – lessons from national deployments in Nigeria (116) Victoria Shoyombor ^{1,*} , Othman Abubakar ¹ , Michael Moreland ¹ , Justin Lorenzon ¹ ¹ Field Technology Development Partners (Nig) Ltd	[2.3] Multi-country immunization supply chain cost and performance benchmarking (90) Tapiwa Mukwash ^{1,*} , Dorothy Thomas ¹ , Gabriella Ailstock ¹ , Joseph Roussel ¹ , Craig Usswald ¹ ¹ VillageReach
Track 3 Optimization Location: Tau	[3.1] Automated supply planning in the South African public health medicine supply chain (112) David Crewe-Brown ^{1,*} , Margaretha Van Loggerenberg ²	[3.2] Excel routing tool for optimizing supply chain distribution (83) Larissa P.G. Petroianu ^{1,*} , Mariam Zameer ² , Zeldia B. Zabinsky ¹ , Mamiza M. Muteia ² , Aida L. Coelho ² ¹ University of Washington, ² VillageReach	[3.3] The WFP Supply Chain Planning & Visibility approach to health logistics: giving voice to pragmatism in the field (161) Sergio Silva ¹ , Luis Anjos ¹ , Dr. Silvia Rossi ^{1,*} ¹ World Food Programme

	<i>¹Global Health Supply Chain Technical Assistance South Africa, ²North West Department of Health</i>		
Track 4 Diagnostics Location: Umkombe	[4.1] Lessons from optimizing TB diagnostic networks in Kenya and the Philippines: using supply chain design software to design patient-centered TB diagnostic networks (114) Sidharth Rupanii ¹ , Heidi Albert ² , Kekeletso Kao ² , Zachary Katz ² , Ryan Purcell ¹ ¹ LLamasoft, Inc., ² Foundation for Innovative Diagnostics	[4.2] Optimal motorcycle routing in sample transportation for diagnostic networks (154) Sarang Deo ¹ , Emma Gibson ^{2,*} , Jónas Oddur Jónasson ³ , Mphatso Kachule ⁴ , Kara Palamountain ⁵ ¹ Indian School of Business, ² MIT Operations Research Center, ³ MIT Sloan School of Management, ⁴ Riders for Health Malawi, ⁵ Kellogg School of Management	
Track 5 Entrepreneurship Location: Ballrooms 1-2 Moderator: Daniel Zapata, Kuehne Foundation	[5.1] Innovations in logistics; global health care (156) Dan Dougan ^{1,*} , Mitch Martin ¹ ¹ MEBS Global Reach	[5.2] Shelf Life: business model innovation to deliver supply chain impact for access and growth in Nigeria (105) Oluwaseun Ajayi ^{1,*} , Suleman Sule ¹ , Justin Lorenzon ¹ , Michael Moreland ¹ ¹ Field Technology Development Partners (Nig) Ltd	[5.3] Uberizing & revolutionizing supply chain delivery (108) Ruth Bechtel ¹ , Ana Costache ^{1,*} , Craig Usswald ¹ ¹ VillageReach

**Presenting author*

Day 1: November 20, 2019

Tracks 6-10: 3:10 – 4:25 pm

French translation is available in Ballrooms 1-2 and Ballroom 3. Un interprète est disponible dans Ballrooms 1-2 and Ballroom 3.

<p>Track 6 Prize Talk #1</p> <p>Location: Ballrooms 1-2</p>	<p>[6.1] An unfinished journey: vaccine supply chain transformation in Ethiopia</p> <p>Tesfalem Adoro^{1,*}, Paul Dowling², Marasi Mwencha²</p> <p>¹Ethiopian Pharmaceuticals Supply Agency, ²John Snow, Inc.</p>	<p>[6.2] Improving the limited visibility of stock status of health commodities at public health facilities in Lagos State, Nigeria</p> <p>Margaret Adedapo^{1,*}</p> <p>¹Logistics Management Coordinating Unit, Lagos, Nigeria</p>	
<p>Track 7 Data Analytics</p> <p>Location: Ballroom 3</p>	<p>[7.1] GPH SSA Supply Chain mapping (130)</p> <p>Jo Tierens^{1,*}, Michael Morton¹, Robert Kimbui¹, Jill Lavitsky¹, Hilton Snyder¹</p> <p>¹Johnson & Johnson</p>	<p>[7.2] Value stream descriptive analytics: lessons learnt and gains in the management of acquisition lead time. A case of Kenya Medical Commodities Program (109)</p> <p>Alex Kinoti^{1,*}, Douglas Onyancha², Martin Mwenda²</p> <p>¹USAID Kenya, ²USAID/KEMSA Medical Commodities Program</p>	<p>[7.3] Diagnosing the quality of medicines and health of supply chains in pursuit of UHC: multi-country study approach (92)</p> <p>Annie Wang^{1,*}, Yee Theng Ng¹</p> <p>¹IQVIA</p>
<p>Track 8 Accessibility</p> <p>Location: Liduba</p>	<p>[8.1] Laboratory supply chain: how Mozambique maintained zero stock outs during rapid growth (23)</p> <p>Leah Hasselback Folorunso^{1,*}</p> <p>¹USAID Mozambique</p>	<p>[8.2] Demonstrating the benefits of outsourced transportation management for medical commodity delivery to health facilities: lessons learned from the first year of implementation in Zambezia, Mozambique (86)</p> <p>Emily Lawrence^{1,*}, Lucilo Williams², Esselina Brito², Gabriel Joa², Craig Usswald³, Frederico Alberto Couana⁴, Zeca Gandar², Catherine Michel²</p>	<p>[8.3] Piloting unmanned aerial vehicles for health commodity transportation and delivery in remote settings (145)</p> <p>Scott Dublin^{1,*}, Julia Bem², Ashley Greve¹</p> <p>¹USAID Global Health Supply Chain Program – Procurement and Supply Management, ²USAID</p>

	¹ VillageReach USA, ² VillageReach Mozambique, ³ VillageReach South Africa, ⁴ Mozambique Ministry of Health Central Medical Store		
Track 9 Cold Chain Logistics Location: Tau	[9.1] Making cold chain equipment data more accessible for all countries: the Intelligent Maintenance and Planning Tool (IMPT) (115) Maria-Jose Meza-Cuadra ^{1,*} , Hamadou Dicko ¹ , Shahrzad Yavari ² ¹ Gavi, the Vaccine Alliance, ² Nexleaf	[9.2] ColdTrace Trek: cold chain transport monitoring (37) Shahrzad Yavari ^{1,*} , Denisse Ruiz ¹ , Hosea Kintu ¹ , Protas Sayo ² ¹ Nexleaf Analytics, ² Ifakara Health Institute	[9.3] Effects of integrating cold chain data and immunization data on EPI: results from Kenya and Tanzania (72) Amos Chweya ^{1,*} , Harrison Mariki ² , Alex Mbyalu ¹ , Mercy Lutukai ² ¹ John Snow, Inc., ² inSupply Health
Track 10 Supply Chain Assessment Moderator: Ravi Anupindi, U of Michigan Location: Umkombe	[10.1] Utilizing the National Supply Chain Assessment tool to drive country supply chain planning and decision-making, with a case study from Uganda (107) Kevin Pilz ^{1,*} , Harriet Akello ² , Noah Kafumbe ³ , Shimelis Belaineh ⁴ ¹ USAID Washington, D.C., ² Government of Uganda Ministry of Health, ³ USAID Uganda, ⁴ The Global Fund to Fight AIDS, Tuberculosis and Malaria	[10.2] Technical review of public health supply chain assessment tools: an analysis of major tools and approaches, 2019 (160) Hitesh Hurkchand ^{1,*} ¹ Interagency Supply Chain Group	[10.3] The “next generation” supply chain maturity model: a pathway to transition (159) Martin Ellis ^{1,*} ¹ Optimised Operations Limited

**Presenting author*

Day 1: November 20, 2019

Tracks 11-15: 4:30 – 5:45 pm

French translation is available in Ballrooms 1-2 and Ballroom 3. Un interprète est disponible dans Ballrooms 1-2 and Ballroom 3.

<p>Track 11 Prize Talk #2</p> <p>Location: Ballrooms 1-2</p>	<p>[11.1] Systems integration and decentralization of commodity management: a case of Kenya medical commodities supply chain</p> <p>Martin Mwenda^{1,*}</p> <p>¹KEMSA</p>	<p>[11.2] Realtime ARVs stock status monitoring and reporting system</p> <p>Joseph Kabanda^{1,*}</p> <p>¹Baylor College of Medicine Children's Foundation-Uganda</p>	
<p>Track 12 Data Analytics</p> <p>Location: Ballroom 3</p>	<p>[12.1] Innovations in product master data management: a necessity for efficient supply chains (141)</p> <p>Sean Lockhead^{1,*}</p> <p>¹USAID Global Health Supply Chain Program-Procurement and Supply Management,</p>	<p>[12.2] CCE management with mSupply Mobile & Tupaia (94)</p> <p>Craig Drown^{1,2,*}, Mark Prins^{1,2}, Tony Stanley^{1,2}, Andrei Evgeunov^{1,2}, Dhanya Herath^{1,2}, Michael Nunan³, Edwin Monk-Fromont³, Kurt Johnson³</p> <p>¹mSupply Foundation, ²Sustainable Solutions (NZ) Ltd, ³Beyond Essential Systems Pty Ltd</p>	<p>[12.3] Zambia Electronic LMIS endline evaluation (77)</p> <p>Chris Opit^{1,*}, Jeremy Sikazwe¹, Joseph McCord²</p> <p>¹JSI Research & Training Institute, Inc., ²John Snow, Inc.</p>
<p>Track 13 Equity</p> <p>Location: Liduba</p>	<p>[13.1] Promoting equity through immunization supply chains (84)</p> <p>Mariam Zameer^{1,*}, Nora Phillips-White¹, Dorothy Thomas¹</p> <p>¹VillageReach</p>	<p>[13.2] Automating refugee health facilities in Ethiopia (47)</p> <p>Meseret Zerihun^{1,*}, Taddel Awoke¹, Sami Tewfik¹</p> <p>¹JSI/AIDS Free Project, Ethiopia</p>	<p>[13.3] The Impact of increased data visibility of tuberculosis and leprosy medicine availability in Tanzania (27)</p> <p>Vicent Manyilizu^{1,*}</p> <p>¹GHSC TA-TZ</p>
<p>Track 14 Last Mile</p>	<p>[14.1] Old challenges, new solutions: re-imagining community health supply chains by using HCD to understand user needs and bridge the last mile health equity gap (73)</p>	<p>[14.2] Project Last Mile in South Africa: leveraging private sector innovation and route-to-market insights to improve access to medications in the public sector (56)</p>	<p>[14.3] Engagement of local shopkeepers to enhance last-mile delivery of essential medical supplies in hard-to-reach areas (41)</p>

Location: Tau	Yasmin Chandani ¹ , Gertrude Muchibi ^{1,*} , Mercy Lutukai ¹ , Eric Wakaria ¹ , Amos Momanyi ¹ , Sarah ¹ Hassanen <i>¹inSupply Health</i>	Phil Roberts ^{1,*} , Merlin Pillay ¹ , Sarah Christie ² , Erika Linnander ² <i>¹Project Last Mile, ²Yale School of Public Health</i>	Protas Sayo ^{1,*} , Fredrose Okumu ¹ , Samson Kiware ¹ , Zawadi Mageni-Mboma ¹ <i>¹Ifakara Health Institute</i>
Track 15 Interoperability Location: Umkombe	[15.1] Universal codes: the glue for health supply chain interoperability (87) Craig Drown ^{1,2,*} , Mark Prins ^{1,2} , Tony Stanley ^{1,2} , Dhanya Herath ^{1,2} <i>¹mSupply Foundation, ²Sustainable Solutions (NZ) Ltd</i>	[15.2] Removing barriers to effective data use with the Zenysis rapid data interoperability platform (79) Emily Tissot ^{1,*} <i>¹Zenysis Technologies</i>	[15.3] T(Ed) Talk: 2040 A Supply Chain Odyssey (82) Edward Wilson ^{1,*} , Yasmin Chandani ² <i>¹John Snow, Inc., ²inSupply Health</i>

**Presenting author*

Day 2 – Oral presentation schedule

Day 2: November 21, 2019			
Tracks 16-20: 1:30 – 2:45 pm			
French translation is available in Ballrooms 1-2 and Ballroom 3. Un interprète est disponible dans Ballrooms 1-2 and Ballroom 3.			
Track 16 Management and Operations Location: Ballroom 3	[16.1] Applying Salesforce Effectiveness (SFE) frameworks to optimize human resources for supply chain in Pakistan (91) Steven Harsono ^{1,*} , Dominique Zwinkels ² ¹ QVIA ² People that Deliver	[16.2] Factors affecting adoption of commercial sector supply chain management (SCM) best practices by the Nigerian public health sector (106) Bolaji Olawoyin ^{1,*} ¹ ASCM	[16.3] Digitizing inventory and warehouse management systems in Indonesia (80) Omar Balsara, ^{1*} Sarah Andersson ² , Bethany Saad ² ¹ JSI Research & Training Institute, Inc., ² JSI
Track 17 Multi-Country Location: Liduba	[17.1] Supporting the Early Warning System (EWS) in the 15 ECOWAS countries to reduce contraceptive stockouts and overstocks through increased data visibility and global coordination (16) Clétus Come Yélia Adohinzi ^{1,*} , Stanley Okolo ¹ , Angela Elong ² , Ellen Tompsett ³ , Tamah Kamlem ³ , Yves Mongbo ¹ ¹ West African Health Organization, ² USAID Global Health Supply Chain Program – Technical Assistance, ³ USAID Global Health Supply Chain Program – Procurement and Supply Management	[17.2] Commodity security surveys in 36 countries (1) Suzanne Gold ^{1,*} ¹ USAID Global Health Supply Chain Program – Procurement and Supply Management	[17.3] The re-design of an immunization system based on a systems framework, evidence from Rwanda and Kenya (65) Catherine Decouttere ^{1,*} , Nico Vandaelea ¹ , Kim De Boeck ¹ , Stany Banzimana ² ¹ Katholieke Universiteit Leuven, Belgium Centre for Access-To-Medicines, ² University of Rwanda, Kigali
Track 18 Delivery innovations	[18.1] Unmanned aerial vehicle (UAV) cost modeling for commodity delivery in Malawi (69)	[18.2] From warehouse to medicine vendors – digital solutions strengthening supply chains (13) Soraiya Verjee ^{1,*} , Yoland Janse van Rensburg ¹ ¹ Every1Mobile	[18.3] Building an open access software tool to allow countries to design patient-centered and cost-effective diagnostic networks (119)

<div>Location: Tau</div>	<div>Dorothy Thomas¹, Charles Matemba^{2,*}, Diego Miralles³, Carla Blauvelt², Luciana Maxim¹, Susan Truog¹, Fannie Kachale⁴, James Kandulu⁴, Stephen Njolomole⁵, Mike Mkochi⁶, Peter Makoza⁷, Alinafe Mbewe⁸, Olivier Defawe¹</div> <div>¹VillageReach USA, ²VillageReach Malawi, ³NextWing, ⁴Malawi Ministry of Health and Population, ⁵Malawi Blood Transfusion Service, ⁶Malawi Pharmacy Medicines and Poisons Board, ⁷Dowa District Council, ⁸Lilongwe District Council</div>	<div>Sidharth Rupani^{1,*}, Ryan Purcell¹, Neelima Ramaraju¹, Heidi Albert², Kekeletso Kao², Zachary Katz², Lillian Gu³, Clement B. Ndongmo³, Matthew C. Wattleworth³, Andrew Inglis³</div> <div>¹LLamasoft, Inc., ²Foundation for Innovative Diagnostics, ³USAID Global Health Supply Chain Program – Procurement and Supply Management</div>	
<div>Track 19</div> <div>Stockouts</div> <div>Location: Umkombe</div>	<div>[19.1] Why stock-out and expiration of medicines occur in developing countries: case study of Uganda (5)</div> <div>Albert Kalangwa^{1,*}, Desirée Knoppen², Ozlem Bak³</div> <div>¹Maastricht School of Management, ²EADA Business School, ³Brunel University</div>	<div>[19.2] Starting small and thinking big: building data-driven decision-making culture in supply chain management in Cameroon (143)</div> <div>Nkfusai Joseph¹, Patrick Gaparayi¹, Glenn Muffih¹, Joseph Bikoti², Feudjio Guylène³, Arrey Hysantine³</div> <div>¹USAID Global Health Supply Chain Program-Procurement and Supply Management, ²Littoral Regional Fund for Health Promotion, ³Regional Department of Public Health, Littoral</div>	<div>[19.3] The impact of changing vaccine vial size presentation on coverage, wastage rate, supply chain, and costs: a study from Zambia (2)</div> <div>Kirstin Krudwig^{1,*}, Natasha Kanagat¹, Francis Mwansa², Guissimon Phiri², Wendy Prosser¹</div> <div>¹JSI, ²Zambia Ministry of Health</div>
<div>Track 20</div> <div>Ensuring adequate supply</div> <div>Location: Ballroom 1-2</div>	<div>[20.1] Pooled procurement (157)</div> <div>Lisa Hedman^{1,*}, Jean-Baptiste Nikiema¹, Christophe Rerat¹</div> <div>¹World Health Organization</div>	<div>[20.2] Pooled procurement systems: assessing the feasibility of a cross-border supply chain system for reproductive health commodities in the EAC region (88)</div> <div>P.C. Kayumba^{1,2}, Stany Banzimana^{1,2,*}, J.D.A. Habaguenga^{1,2}, Deepak Batra^{1,2}, Kalidi Rajabu³, Mohit Aggarwal⁴, Barigye Vianney^{1,*}</div> <div>¹University of Rwanda East African Regional Center of Excellence for Vaccines, Immunization and Health Supply Chain Management, ²IQVIA, ³Makerere University, ⁴UNFPA ESARO</div>	<div>[20.3] Are procured quantities of implants adequate and appropriate? Modeling procurement, inventory, and consumption during increasing demand (71)</div> <div>Laila Akhlaghi^{1,*}</div> <div>¹John Snow, Inc.</div>

Abstract # to Track Mapping

Abstract	Track
1	17.2
2	19.3
5	19.1
13	18.2
16	17.1
23	8.1
27	13.3
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Abstract	Track
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71	20.3
72	9.3
73	14.1
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80	16.3
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83	3.2

Abstract	Track
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85	1.2
86	8.2
87	15.1
88	20.2
90	2.3
91	16.1
92	7.3
93	1.3
94	12.2
105	5.2

Abstract	Track
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107	10.1
108	5.3
109	7.2
110	2.1
112	3.1
114	4.1
115	9.1
116	2.2
119	18.3
130	7.1

Abstract	Track
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143	19.2
154	4.2
145	8.3
156	5.1
157	20.1
159	10.3
160	10.2
161	3.3

Color-coding Legend

Day 1 (Nov. 20), Tracks 1-5, 1:30 – 2:45 pm
Day 1 (Nov. 20), Tracks 6-10, 3:10 – 4:25 pm
Day 1 (Nov. 20), Tracks 11-15, 4:30 – 5:45 pm
Day 2 (Nov. 21), Tracks 16-20, 1:30 – 2:45 pm

Day 2 – Poster presentations

Day 2: November 21, 2019

[P1] Assessment of warehousing and inventory management performance after HCMIS implementation in Tikur Anbessa specialized Hospital, Addis Ababa, Ethiopia (7)

Getahun Tefera¹, Bruck Messele¹, Senayit Ambaye¹

¹*School of Pharmacy, Addis Ababa University College of Health Science*

[P2] VAN and the use of data for improving decision making through the Champions League (20)

Timoteo Chaluco¹, Dercio Duvane¹

¹*VillageReach Mozambique*

[P3] Strengthening rug and Therapeutic Committee at health facility (21)

B. Dinkineh¹, S. Habtamu¹

¹*Clinton Health Access Initiative*

[P4] Piloting outsourced last mile delivery of vaccines, a review of findings from a midline assessment (26)

W. Musubire¹, M. Kuch², F. Luwaga², N.L. Kabunga², C. Lanyero³, J. Ameny³, N. Amony⁴, A. Nsubuga⁴, M. Seru⁵, P.Njala⁴, L. Angwenyi⁴, A. Nsubuga⁴

¹*National Medical Stores*, ²*Clinton Health Access Initiative, Correspondence*,
³*Uganda Ministry of Health Expanded Program on Immunisation*, ⁴*Freight in Time*,
⁵*Uganda Ministry of Health Pharmacy Division*

[P10] Data review teams: a promising practice to improve data use and strengthen immunization supply chains (95)

Swetha Srinath¹, Vidya Sampath¹, Jane Feinberg², Rachel Key³

¹*VillageReach*, ²*John Snow, Inc.*, ³*Clinton Health Access Initiative*

[P11] Impact Assessment of Pharmacy Assistant Graduates in Malawi Health Centers: A mixed-method, quasi-experimental evaluation of matched health facilities with and without Pharmacy Assistants (96)

Luciana Maxim¹, Thokozani Chimenya¹, Charles Matemba¹, Erin Larsen-Cooper¹, Lusubiro Mwamsamali¹, Willard Lwasha², Mercy Chimosola², Paschal Mujasi³, Charles Chimenya², Matthew Ziba¹

¹*VillageReach*, ²*Malawi Ministry of Health*, ³*Global Health Supply Chain Program-Procurement and Supply Management*

[P12] Improving the Limited Visibility of Stock Status of Health Commodities at Public Health Facilities in Lagos State, Nigeria (118)

M.O. Adedapo², E.A. Odele², A.O. Oshunniyi³, N.A. Ocheke⁴

¹*Logistics Management Coordinating Unit, Lagos State Ministry of Health*,
²*UNOCASA*, ³*Instrat Global Health Solutions*, ⁴*Biomaterials and Drug Delivery Unit, University of Jos, Nigeria*

[P13] Utilizing remote sensors to monitor temperature and humidity for ambient health products in the supply chain (126)

Scott Dubin¹

¹*Chemonics International*

<p>[P5] Optimized supply chain modeling to increase EID case finding at alternative entry points in Uganda through POC testing. A closed loop supply chain case study (46)</p> <p>George Senyama¹, Ademola Osigbesan²</p> <p>¹Clinton Health Access Initiative, ²Unitaid</p>	<p>[P14] How mapping private pharmaceutical institutions is driving regulatory change in Guinea (138)</p> <p>Abu Bakar Sidique Quisia¹, Aicha Drame², Amadou Sylla¹</p> <p>¹USAID Global Health Supply Chain Program – Procurement and Supply Management, ²Ministere de la Sante</p>
<p>[P6] Project Last Mile in Mozambique: applying private sector solutions and data analytics for sustainable supply chain management (SCM) in the public health sector (55)</p> <p>Jose Neves¹, James Flood² Emily Cherlin³, Sarah Christie³, Erika Linnander³</p> <p>¹Project Last Mile, ²Frontline Research Group, ³Yale School of Public Health Global Health Leadership Initiative</p>	<p>[P15] In Mali, the marriage between two systems brings data harmony (146)</p> <p>Coumba Diallo¹, Seydou Diallo², Adama Ouattara³, Mariam Doumbia Spouse Togola⁴</p> <p>¹USAID Global Health Supply Chain Program – Procurement and Supply Management, ²Chemonics, ³MEASURE Evaluation Project, ⁴Ministry of Health's Department of Pharmacy and Medicines</p>
<p>[P7] Maximizing global health supply chain impact through scaling-up of viral load testing in Nigeria by coordinated sample referral systems (61)</p> <p>G. Zachary¹, O. Abiodun¹, F. Ajani, I. Ezeagu¹, M. Abdulsalam¹, Avwerhota¹, R. Olukolade¹, P. Ahern, C. Morrison¹</p> <p>¹Axios Foundation</p>	<p>[P16] Vendor managed inventory for condoms and voluntary medical male circumcision (VMMC) helps to reduce lead time (148)</p> <p>Nagesh N. Borse¹, Reden Sagana², Stephen Wynn¹</p> <p>¹USAID Global Health Supply Chain Program – Procurement and Supply Management, ²Supply Chain for Health Division, Office of HIV/AIDS, USAID Bureau for Global Health</p>
<p>[P8] Demonstrating the potential of drones for vaccine transport to remote communities: data and lessons learned from test flights in the Democratic Republic of the Congo (DRC) (70)</p> <p>José Monzembela¹, Eomba Motomoke², Dieudonné Nseleka Mwanza², Archimède Makaya², Freddy Nkosi², Luciana Maxim³, Susan Truog³, Eric Peck⁴, Fletcher Miles⁴, Innocent Kakese Lumanisha⁵, Théodore Assani⁵, Olivier Defawe³</p> <p>¹Équateur Province, ²VillageReach DRC, ³VillageReach USA, ⁴Swoop Aero, ⁵Ministry of Public Health, DRC</p>	<p>[P17] After the storm: key learnings from disaster response following Cyclone Idai in Mozambique (151)</p> <p>Antonio Assane¹, Leah Hasselback², Dimitri Pepper</p> <p>¹Mozambique Ministry of Health Central Medical Store, ²USAID Mozambique, ³USAID Global Health Supply Chain Program-Procurement and Supply Management</p>
<p>[P9] Strengthening the supply chain workforce through mentorship and on-the-job training (81)</p> <p>Omar Balsara¹, Sarah Andersson¹, Bethany Saad¹</p> <p>¹JSI Research & Training Institute, Inc.</p>	<p>[P18] BMFG Project – Kaizen Institute's support to SOLVE countries (focus family planning) (158)</p> <p>Jayanth Murthy¹</p> <p>¹Kaizen Institute Africa</p>

PANEL 1: Private Sector Engagement Models to Improve Access to Medicines

Day 1 (Nov 20, 2019); 10:30am-12pm; Location: Ballroom 3

Description: The focus of this panel is to discuss empowering the private sector to assume a greater role in enhancing access to medicines in underdeveloped and geographically challenged areas. The private sector can play a multitude of roles. The panel will showcase several examples of direct and indirect engagements through investments and knowledge sharing. Examples include investing in private practitioners to improve access to health services; empowering the private sector to improve access to services in under-served communities; improving access to health commodities through a private sector distribution model; harnessing private sector competences to improve public sector efficiencies; and, how to leverage the private sector to optimize donor investments,

Moderator: Lloyd Matowe, Pharmaceutical Systems Africa (Liberia, Nigeria, & Zambia)

Panelists

1. Alfons Van Woerkom, The Global Fund
2. Iain Barton, Imperial Health Sciences
3. Gordon Comstock, Management Sciences for Health
4. Sowedi Muyingo, Medical Access Uganda Limited
5. Linus Odoemene, Federal Ministry of Health, Nigeria

PANEL 2: Nutrition and Health in Africa*

Day 1 (Nov 20, 2019), 10:30am-12pm; Location: Ballroom 1-2

Description: Nutrition is one of the most important contributors to human health. In addition to managing weight, blood pressure and cholesterol, a healthy diet can help prevent and manage a number of non-communicable diseases (NCDs) such as diabetes, heart disease, stroke, and some cancers.[†]

Africa as a continent is faced with triple burden of malnutrition, whereby population clusters are affected by under-nutrition, over-nutrition and micro-nutrient deficiency. Although donors, Governments and nutrition groups are working towards meeting both the UN targets for 2025 and the SDGs the progress is slow[‡]. For example, in Africa, Stunting has reduced from 38.3% to 30.3% although the number of stunted children has increased from 50.6 million in 2000 to 58.7 million in 2017.

A Multi sectoral approach is key in addressing the triple burden of malnutrition. Enabling policies, partnerships, social protection and nutrition-sensitive food systems have been advanced as key to end hunger and malnutrition in the region.

This panel will explore the state of nutrition in Africa and discuss the role of government, and private sector in reducing malnutrition through innovation and education, while ensuring food safety & security.

Moderator: Elizabeth Kamau, Egerton University, Kenya

Panelists

1. Norman Nyazema, University of Limpopo, South Africa
2. Penny Campbell, Senior Manager, Food Control, National Department of Health, South Africa
3. Dorothy Mituki, Egerton University, Kenya
4. Markus Frolich, Chair of Econometrics Universität Mannheim
5. Dharmarai Naicker, Council for Scientific and Industrial Research, South Africa
6. Seyi Aboyade, Nutrigo, South Africa

* A more detailed description of the panel and issues that will be discussed is available in [this document](#). If you would like to ask the panel a question please email the questions to Prof. Yehuda Bassok (ybassok@marshall.usc.edu).

[†] <http://www.fao.org/pulses-2016/news/news-detail/en/c/386990/>

[‡] Development 2018

PANEL 3: Drug Quality - Substandard and Spurious Drugs: Issues and solutions

Day 2 (Nov 21, 2019), 9:25-10:50am; Location: Ballroom 1-2

Theme: African drug market is projected to increase (2013-2020) by 200%, and it is estimated that in 2020 the pharmaceuticals market in Africa will reach a size of \$45 billion. To ensure effective delivery of health, however, it is crucial to develop policies that guarantee a high quality of the drugs that reach the African markets. According to the London School of Hygiene and Tropical Medicine estimates that falsified or substandard malaria medication account for an additional 116,000 deaths each year. The cost to patients and health ministries of these fake drugs is about \$38.5 million[§].

The drug quality problem has multiple dimensions including degraded drugs, accidental production errors, intentionally poor quality of drug by recognized manufacturers, or what looks like drugs but has no active ingredients, or those produced by unrecognized pharmaceutical companies. Each of these issues present different challenges and require different solutions. This panel will attempt to address some of these issues and possible solutions.

Moderator: Yehuda Bassok, University of Southern California, Los Angeles (USA)

Panelists:

1. Elizabeth Pisani, Associate Professor, School of Health Policy and Management, Erasmus University, Rotterdam
2. Amanda Lotheringen, Head of Patents and Copy Protection, Department of Trade , Government of South Africa
3. Emile Malan, CEO, Vicore Health, Johannesburg, S. Africa
4. David Katerere, PharmaConnect Africa NPO
5. Chinedum Chijioke, CEO, Sproxil Africa

[§] <https://qz.com/africa/1140890/one-in-ten-medical-products-sent-to-developing-countries-are-falsified-or-below-standard-who/>

PANEL 4: Healthcare Entrepreneurship in Africa

Day 2 (Nov 21, 2019), 9:25-10:50am; Location: Tau

Theme: In order to meet the challenging needs of health of the population, we need all actors – public, private and entrepreneurs to play a role. Entrepreneurship is the process of designing, launching and running a business that attempts to serve specific needs of its customers. Healthcare is an important domain for entrepreneurship. This panel has assembled entrepreneurs from various segments of the healthcare value chain to explore progress and challenges of entrepreneurs in healthcare space in sub-saharan Africa.

Moderator: Ravi Anupindi, Ross School of Business, University of Michigan

Panelists

1. Tom Kirengo, Chairman, Executive Director, Imara Mediplus
2. Patricia Ekuba Odoi-Atsem, CEO, 3M&C Health Systems
3. Tiroyaone Mampane, President, Boitekanelo Group
4. Cosmas Mukaratirwa, Cospharm

PANEL 5: Procurement Mechanisms and Capacity Development for Transitioning Countries

Day 2 (Nov 21, 2019) 9:25-10:50am; Location: Ballroom 3

Objective: Discuss the role of procurement mechanisms in the context of graduating countries with consideration for local regulation, procurement capacity, devolution, private sector healthcare actors and procurement marketplaces.

Description: Over the past two decades, development partners have funded initiatives that have dramatically improved the availability, affordability and quality of lifesaving medicines and diagnostics through improved procurement practices i.e. market shaping, advanced market commitments and pooled procurement. As low and middle-income countries progress economically, their governments are taking on more of the financial responsibility for their healthcare services and with that procurement of medicines and diagnostics.

In this session we will explore the relevance of these global practices as countries transition and what mechanisms/approaches are best suited to ensure the continuity and quality of supply and the ongoing introduction of innovative products. With the advent of technology, we will also explore the role of virtual marketplaces/platforms, and how to ensure alignment with local regulations, quality of supply and contract management

Moderator: Maeve Magner, Advisor | Board Member | Start Up Mentor | Global Health Expert

Panelists:

1. Jessica Vernon, Maisha Meds
2. Alfons Van Woerkom, Global Fund
3. Annemarie Haverhals, I+ Solutions
4. TBD, CIPS

Day 3 – Tutorials

Day 3: November 22, 2019		
8:30 – 10:00 am	Tutorial 1: Data analytics Andrew Inglis ¹ <i>¹USAID Global Health Supply Chain Program-Procurement and Supply Management</i> Description: The rapid growth in digital data in supply chains is profoundly changing the opportunity for data visualization and analysis. However, the fundamentals remain people make decisions in supply chains. Therefore, we must design visualization and analysis with the user at the center of design. When designing for people, it is important to understand how people’s brains interpret data when making decisions. Additionally, digital data has changed how we can calculate and use indicators to better target actions. We will look through a “Decision Driven Design” approach how we can use digital data to better target future actions not past issues. Location: Ballroom 3	Tutorial 2: Public Health Network Design Role play Ryan Purcell ¹ <i>¹LLamasoft</i> Description: In this workshop, attendees will: <ul style="list-style-type: none"> • Collaborate with colleagues to design the network for a country health system • Review demand, make choices on site locations and capacities and try to work as a team to obtain the best balance of access and cost • Directly experience the tradeoffs that lie at the core of network design and see if you can manage them. Location: Tau
10:30 – 12:00 pm	Tutorial 1: Data analytics Location: Ballroom 3	Tutorial 2: Public Health Network Design Role play Location: Tau

Day 3 – Discussion

Day 3: November 22, 2019

8:30 – 12:00 pm

Discussion: Global Health Supply Chain Research

Ravi Anupindi¹, Anton L.V. Avanceña², Yehuda Bassok³, Sriram Dasu³, Noel Watson⁴, Prashant Yadav^{5,6}

¹Stephen M. Ross School of Business, University of Michigan, ²School of Public Health, University of Michigan, ³Marshall School of Business, University of Southern California, ⁴William Davidson Institute, University of Michigan, ⁵Center for Global Development, ⁶INSEAD

Description: Global health with its scarcity of resources; the presence of different supply chain actors and stakeholders; and the differing financial, health-related and developmental returns for resource investments is an exciting academic research area for the application & development of supply chain management principles and techniques. It is one of the objectives of the Global Health Supply Chain Summit (GHSCS) to influence the research agenda of academics from leading institutions worldwide around relevant healthcare supply chain issues. To that end, we invite academics, graduate research students and the curious to a discussion facilitated by supply chain academics on the state of research in global health supply chains and cover the following topics:

- Current & future supply chain issues lacking in supportive research
- Research collaborations (North-South, South –South)
- Research funding

Location: Liduba

Bios of Plenary Speakers**



Shabir Banoo holds the position of *Chief Technical Specialist and Head: Pharmaceutical Policy and Programmes* within Right to Care, a donor-funded non-profit organisation linked to the University of the Witwatersrand. In this role, he oversees Right to Care's pharmaceutical technical assistance, research and support programmes to ministries of health in South Africa and several African countries. This focus is aimed at strengthening pharmaceutical policy, regulation and governance in public health programmes through implementation of best practices to improve patient management and care, particularly for HIV and related diseases.

Shabir graduated with a degree in pharmacy from Rhodes University in 1986, later obtaining a doctorate in pharmacology from Rhodes University in 1992. He has previously held senior positions in government as well as in the private and NGO sectors. He has also held positions in academia and research at the University of Witwatersrand, and at Rhodes University as associate professor of pharmacology. Shabir has worked as a technical consultant for the South African Ministry of Health and has served on a number of advisory panels and task teams on national drug policy, medicine regulation, pharmaceutical pricing and public health. He has actively contributed to the development of national standard treatment guidelines and management policies including those for HIV, TB, maternal, child and woman's health (MCWH) and malaria programs.

Shabir currently serves as a Board member of the South African Health Products Regulatory Authority (SAHPRA). He has previously served as a member of the former Medicines Control Council (MCC) of South Africa and on a number of its technical committees and task teams. He has contributed, in this role, to the modernization of the legislative and governance framework for medicine regulation, streamlining procedures and processes for registration, and developing guidelines and policies to support the registration of medicines and regulation of clinical trials. He also serves as a member of the South African National AIDS Council (SANAC) Treatment Technical Task Team. He is also a member of the Central Drug Authority (CDA) of South Africa and has served on the National Essential Medicines List Committee (NEMLC). Shabir serves on a number of international panels and is regularly called upon as a technical advisor to the World Health Organisation (WHO) and other international organisations and programmes.

His technical areas of expertise include basic and clinical pharmacology, public health, pharmacoepidemiology and pharmacovigilance, health products and clinical trials regulation, health technology assessment, evidence-based medicine and rational medicine use, and pharmaceutical and commodity security.



Jayashree K. Iyer leads the [Access to Medicine Foundation](#) as Executive Director. She directs the Foundation's strategy, its stakeholder dialogues and research programmes. As a spokesperson, she is actively involved in stimulating change within the pharmaceutical industry.

Jayasree joined the Foundation in 2013 to build up its in-house research expertise and to lead the development and application of its methodology for measuring company behaviour. She has worked at the interface of the global health community and the pharmaceutical industry for 12 years. Before joining the Foundation, Jayasree was responsible for creating, negotiating and managing public private partnerships in R&D for infectious diseases and oncology. She has worked at NGOs, academic institutions and think tanks, and holds various postgraduate degrees (Masters and PhD) from Singapore and the Johns Hopkins School of Hygiene and Public Health.

**Bios of panelists are available on GHSCS website (<https://ghscs.com/>)



Tarun Vij has worked in international development organizations since 2005 after transitioning from a career as an entrepreneur in the automotive sector. He leads the India Country Program of [GAIN](#) to drive impact at scale through partnerships with both the public and private sectors, and in coordination with donors and the development partner community. Currently GAIN is implementing projects on large-scale food fortification, community management of severe acute malnutrition and workplace nutrition in the tea sector in India.

Prior to joining GAIN, Tarun led the India country office of [PATH](#), a global health non-profit, executing projects in maternal and child health, tuberculosis control, vaccines, and immunization, rice fortification, drug development, water and sanitation among others. These projects partnered with government, civil society and the private sector in India.

Prior to PATH, Tarun served as Country Director for the [American India Foundation](#), leading AIF's India programs focusing on maternal and child health; computer-aided learning among middle school children; skills training for unemployed urban youth; primary education for children of migrants; micro-finance for rickshaw pullers and a Fellowship program for young American professionals to gain grassroots work experience in India.

He was previously the Project Director of TCI Foundation, implementing an HIV/AIDS prevention program funded by Avahan, the India AIDS Initiative of the Bill & Melinda Gates Foundation to reduce the spread of HIV in India through a national network of interventions across India's highway system.

Tarun holds an Honors degree in Electrical Engineering from Panjab University, Chandigarh, India and an MBA from the Ross School of Business, University of Michigan, Ann Arbor.



Elizabeth Pisani is an epidemiologist focusing on the intersection between public health evidence and the messy realities of politics, culture and money. She is currently leading research that uses economic and market indicators to predict the risk of substandard and falsified medicines in national supply chains. Elizabeth is an Associate Professor at Erasmus School of Health Policy and Management in Rotterdam, and holds honorary posts at London School of Hygiene and Tropical Medicine, the Policy Institute at King's College London and the George Institute for Global Health.

She holds a PhD in Infectious Disease Epidemiology and an MSc in Medical Demography (both from LSHTM) and, absurdly, an MA in Classical Chinese from Oxford.



Ms Rashmee Ragaven is responsible for Investment Facilitation / Promotion at a division called Invest SA, which is the focal point for all foreign direct investment into the country. She is responsible for interacting and engaging with companies in advising on how to optimise their investments in the country. She sits on many task teams including being part of the team that was responsible for the Presidential Investment Conference. She also sits on the Industrial Financing adjudication committee (Technology for Human Resources and Industry Development, Automotive Investment Scheme and Strategic Partnership Programme).

Programme).

She also has extensive knowledge and experience in the Industrial Financing Division as he was responsible for Strategic Partnerships and Customer Care and advised on the various incentives programmes offered by the dti and advised on implementation of the Black Economic Empowerment scorecard on the second phase of the development of the codes.

Rashmee also had private sector experience as the Head of Regulatory and External Affairs for Ford Motor Company of Southern Africa where she played an integral role in facilitating and leading the negotiation on the investment of the ranger in SA.

She holds a B Com Honours and has been trained by the World Bank on Investment Facilitation. She enjoys tennis and table tennis.

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