

2014 Health & Humanitarian Logistics Conference • Mexico City

Conference Summary

The 6th annual Health & Humanitarian Logistics (HHL) Conference was hosted in June 4-5, 2014 by the Tecnológico de Monterrey in Mexico City and co-organized by the, Georgia Tech Health & Humanitarian Logistics Center (HHL), INSEAD Humanitarian Research Group, and the MIT Humanitarian Response Lab.

Speakers and participants discussed successes and challenges in strengthening supply chains that meet humanitarian needs. Topics focused on operations in global health, food security, emergency response and end-to-end supply chain management, emphasizing priorities and future goals in research, policy, strategy, and investments.

The agenda featured high level keynote speakers from Mexico, representing the Ministry of Health, the Institute for Transportation, and the Red Cross as well the president of the National Academy of Medicine in Mexico. Dr. Jose Jesús Trujillo, General Director of the Public Health Center for Mexico City (DF), opened the conference by sharing experiences and lessons learned during the 2009 H1N1 outbreak in Mexico. Other speakers included leaders from Aidmatrix, John Snow, Inc., OXFAM Great Britain and OXFAM Latin America/Caribbean, the Pan American Health Organization (PAHO) and the United Nations World Food Programme (WFP).

Plenary panels focused on the following topics: **Vaccination Supply Chain in Global Public Health; Market Mechanisms for Food Assistance; Infrastructure Needs for Coordination and Collaboration; and End-to-End Supply Chain Strategy for Health & Humanitarian Response.** Discussion topics included where and when to use cash or voucher programs versus in-kind food donations, preparedness and response for infectious diseases such as pandemic flu, the importance of standardization in humanitarian supply chain information systems, and the potential impact of implementing a comprehensive supply chain strategy including programming and effect on beneficiaries.

Conference take-aways emphasized emerging innovations that target last-mile delivery in the humanitarian sector such as market mechanisms for food delivery, “informed pushes” such as vendor-managed inventory, mobile phone applications, and systems modeling. Speakers also emphasized the need for additional technology and research in areas such as the long versus short-term impact of market mechanisms and the transition to more sustainable, low-cost infrastructure systems. Priorities for future strategy, policy and investment included an increased focus on supply chain strategy, the use of modeling to inform policy with information and evidence, improved training of logisticians and convincing donors, NGOs, governments, etc. to identify incentives and measure organizations' performance.

Several break-out workshops focused on related topics such as: *Strategies to Manage Material Convergence*, *Advancing the Health & Humanitarian Logistics Profession*, *Electronic Logistics Management Information Systems - A New Open Source Option*, and *Decision-support Tools to Assist in Health & Humanitarian Supply Chain Management*. The conference also featured a number of poster presentations highlighting new research in health and humanitarian logistics.

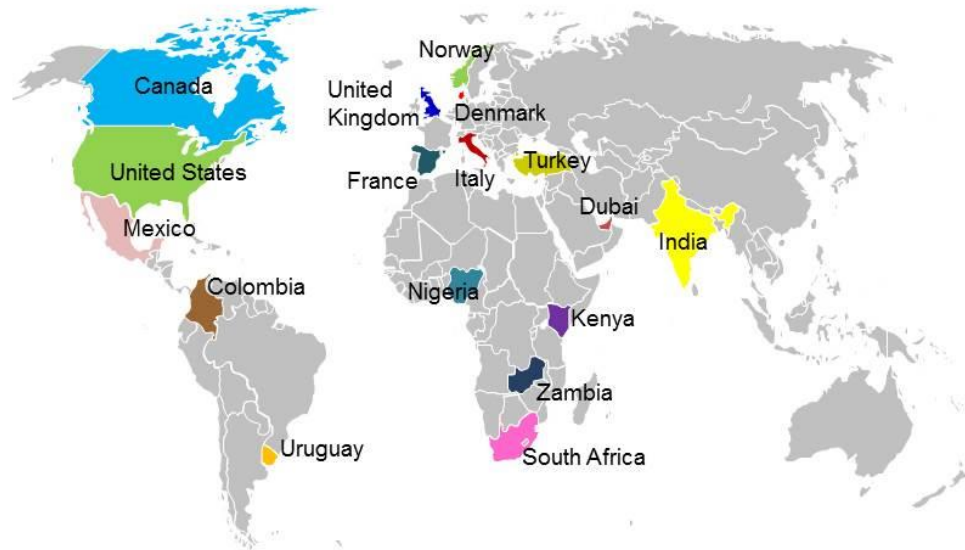
Below you may find a summary of conference information including information about participants and speakers, feedback from attendees, and panel and workshop discussions. Further details about the 2014 Health & Humanitarian Logistics Conference are available on the conference website, which includes speaker presentations (pdf), video recordings of panels, photos, and poster abstracts: <http://www.scl.gatech.edu/humlog2014>.

PARTICIPANTS

This year's HHL Conference brought together speakers and participants from 17 countries and 5 continents, including: Canada, Colombia, Denmark, Dubai, France, India, Italy, Kenya, Mexico, Norway, Nigeria, South Africa, Turkey, United Kingdom, United States of America, Uruguay, and Zambia. Participants included representatives from the following sectors and organizations:

- **Non-governmental organizations**
AidSync, American Red Cross, Bridge, CARE International / CARE USA, Cruz Roja Mexicana, Doctors of the World USA, Institute for Healthcare Improvement, International Rescue Committee, OXFAM Great Britain and OXFAM Latin America/ Caribbean, Pan American Health Organization (PAHO)/WHO Revolving Fund, Riders for Health, TECHO – Mexico, UN World Food Programme-Global Logistics Cluster Support Cell, UNICEF Worldwide, UNICEF Mexico Country Office, VillageReach
- **Industry**
Advancenet Labs/Aidmatrix, Airlink, Booz Allen Hamilton, DHL Supply Chain Mexico, IMA, John Snow, Inc., LLamasoft, LOGYCA, Ryder Mexico, UPS Latin America/ UPS Mexico
- **Academia**
Arizona State University, Aston Business School, Bahcesehir University (Turkey), Centro de Biotecnología FEMSA, Columbia University- Department of Strategy and Logistics, BI Norwegian Business School- Department of Industrial Management and Logistics, Lund University, Friedman School, GCC, Georgia Institute of Technology, Gordon College, HEC Montreal and CIRRELT, INSEAD Humanitarian Research Group, ITESM, Minnesota State University Moorhead, MIT Humanitarian Response Lab, Naval Postgraduate School, Rensselaer Polytechnic Institute, Tecnológico de Monterrey (ITESM)- Trade & Logistics Innovation Center of Mexico; The Fletcher School- Tufts University, Universidad Nacional de Colombia, Université du Québec Business School (Montréal), William Davidson Institute (WDI) and Ross School of Business and the School of Public Health- University of Michigan
- **Public and private institutions**
Centers for Disease Control & Prevention, Mexican Institute of Transportation, Mexico City Ministry of Health, National Center for Infant and Adolescent Health

Participant Countries



CONTENT

Panel presentations and discussions examined SCM models, technology use, and collaboration across sectors and borders in both public health and humanitarian response while workshops allowed participants to examine specific cases and methods in greater detail.

Introductory Remarks and Other Comments: Day one began with introductions from conference co-organizers Jarrod Goentzel (MIT) and Dr. Özlem Ergun (GA Tech) who presented background information on the 6th annual conference and sponsors, including the UPS Foundation (6 year leading supporter), Georgia Tech, Ryder Mexico and Walmart.

PANELS

Panel 1: Vaccination Supply Chain in Global Public Health

Today 83% of children around the world are vaccinated for the 6 leading preventable diseases according to the World Health Organization, and 2.5 million lives are estimated to be saved each year and millions more are protected from chronic illness and disabilities. In developing countries in particular, with a lack of adequate public health infrastructure, systems and personnel, vaccination campaigns provide an opportunity to treat large populations with little access to routine care. However, such campaigns also face significant challenges particularly related to supply chain management such as forecasting for a limited supply, delivery to populations in remote locations, and education and awareness of disease prevention. Campaigns also differ according to the type of targeted prevention (endemic vs. outbreak) and to the types of capacities demanded for response (supply, storage, human resources, etc). In the Vaccination Supply Chain in Global Public Health panel, we will examine the challenges, trade-offs, and successes and explore ways that the scientific and academic communities may contribute new research to address them.

Daniel Rodriguez, Pan American Health Organization (PAHO)/WHO Revolving Fund, International Supply Chain & Project Management

Cuauhtémoc Ruiz, Pan American Health Organization (PAHO), Comprehensive Family Immunization, Unit Chief

Ignacio Villaseñor, National Center for Infant and Adolescent, General Director Health, Mexican Ministry of Health

Allen Wilcox, VillageReach, President

Panel moderator:* **Enrique Ruelas, Institute for Healthcare Improvement, Senior Fellow

Panel 2: Market Mechanisms for Food Assistance

Humanitarian organizations increasingly rely on local markets to provide assistance in emergencies through cash and voucher-based programs. The dynamic strategies to combine these response options with traditional in-kind aid can have dramatic impact on beneficiaries and local markets – good or bad. This panel will use the context of food assistance to explore how we can build better evidence and make better decisions in planning response operations with a mix of transfer modalities. They will specifically focus on how a better understanding of the supply chains that support local markets is critical in this process and consider the impact that this may have on the logistics community.

Dan Maxwell, Tufts University, Professor and Research Director at Feinstein International Center; and Director of MA of Arts in Humanitarian Assistance Program in Friedman School of Nutrition Science and Policy

Claudie Meyers, OXFAM (Latin America and Caribbean), Livelihood and Food Security Coordinator

Rebecca Vince, UN World Food Programme, Global Logistics Cluster Support Cell, Cash and Markets Officer (Rome)

Panel Moderator: **Jarrold Goentzel, MIT, Humanitarian Response Lab, Director*

Panel 3: Infrastructure Needs for Coordination and Collaboration

In the panel on "infrastructure enabling collaboration and coordination in humanitarian response" our goal is to discuss what underlying infrastructure is needed for the humanitarian actors to be able to collaborate effectively. Although collaboration and coordination have been pointed out as an important area for increasing effectiveness of humanitarian actions often such collaborative activities are limited by lack of infrastructure. We hope to engage the panelists in a discussion on the current practices, challenges, and opportunities in establishing collaboration and coordination among different entities such as the local government, NGOs, military, and industry in responding to a humanitarian event; identifying areas in which collaboration and coordination can be most beneficial; understanding the physical and technological infrastructure needs for enabling such collaborations; and the challenges in providing for these needs.

Martijn Blansjaar, Oxfam Great Britain, Head of Logistics and Supply, International Division

Keith R. Thode, Advancenet Labs/Aidmatrix, COO and Chief Scientist

Mattias Wiklund, John Snow, Inc. (JSI), USAID | DELIVER, Senior Technical Advisor in MIS

Panel 4: End-to-End Supply Chain Strategy for Health and Humanitarian Response

In the "End-to-end supply chain management in humanitarian and developmental aid" panel our goal is to bring together practitioners who deal with designing supply chain strategies from programming to distribution. By bringing together different perspectives from different sectors and viewpoints we hope to discuss issues and challenges on a variety of topics including the interaction of programming and supply chain actions, impact of local procurement, etc. We will also address in what ways developing a comprehensive supply chain strategy may impact health and humanitarian operations and how can this impact (long and short term) be measured?

Gabriel Aparicio, UPS Latin America, Region Solutions Manager

Carlos Brambila, Tecnológico de Monterrey, Director of the Center for Research and Public Policy (EGAP)

Carmit Keddem, John Snow, Inc. (JSI), Deputy Director, Health Logistics

Maeve Magner, Bill and Melinda Gates Foundation (BMGF), Strategic Advisor

WORKSHOPS

Session 1

- ***Strategies to manage material convergence (unsolicited donations, etc.) to disaster sites***

Large disasters prompt individuals, companies, public agencies, and international organizations to send relief supplies to disaster sites. The resulting flow of supplies, referred to as material convergence, is a highly heterogeneous mix that encompasses items that: (1) are urgently needed by either the impacted population or the response itself (high priority supplies); (2) may be needed at a later stage of the response (low priority supplies); and (3) are not needed at all, are not consistent with the local needs and culture, are expired, are not amenable for efficient distribution, are dangerous to the people in need (non-priority supplies). The complications produced by the non-priority supplies--that could represent 60% of the total of supplies that arrive at the disaster in the initial phases of the response--are such that it is referred to as "...the second tier disaster..." As part of this workshop, the panel will discuss the strategies to deal with this vexing problem.

José Holguín-Veras, Rensselaer Polytechnic Institute

Luk Van Wassenhove, Professor, Henry Ford Chair of Manufacturing, INSEAD and Academic Director INSEAD Humanitarian Research Group

- ***Advancing the Health & Humanitarian Logistics Profession***

Public health and humanitarian supply chains share similar missions and operate in similar contexts. Organizations in both sectors also face a shortage of experienced logistics professionals. This workshop reflects on existing efforts to advance the profession and considers new paths. Leaders from the Humanitarian Logistics Association (HLA), the International Association of Public Health Logisticians (IAPHL), and People that Deliver (PtD) will briefly present the history and current status of each effort. Participants will then work in groups to consider the role of supply chain professionals in these sectors and propose ways to develop critical skills. Finally, the group will discuss ideas to strengthen and grow the network of health and humanitarian supply chain professionals.

Carmit Keddem, International Association of Public Health Logisticians (IAPHL) member and John Snow, Inc. (JSI), Deputy Director, Health Logistics

Martijn Blansjaar, OXFAM Great Britain, Head of Logistics and Supply, International Division

Jarrod Goentzel, MIT, Humanitarian Response Lab, Director

- ***Health System Transportation***

End-to-end transport solutions for improved health care delivery: In this workshop, we will discuss the crucial role that transportation plays in ensuring quality health care delivery and access. As many know only too well, access is particularly challenging

throughout rural areas, and there is an overwhelming tendency for vehicles to break down before the end of their mechanical life. These breakdowns thwart health care delivery efforts and cause many costly bottlenecks in systems. Despite this, often enough, transportation is not carefully considered or planned for as a major support area (or building block) for the health system. This workshop is aimed at a wide audience, including participants from governments, NGOs, academics, industry, etc. We would like to build on this diversity of expertise to elevate the issue of transport, share experiences, highlight successes and innovation as well as challenges, and learn from each other. We hope that the information discussed will help prioritise transport and influence policy, planning and budgeting accordingly.

Kameko Nichols- Riders for Health (Africa), Partnership Director

Session 2

- ***Electronic Logistics Management Information Systems – A New Open Source Option***

Public health supply chains need accurate, timely logistics data from health facilities to make decisions about procurement and resupply. In low- and middle-income countries the distribution of medicines relies on a fragmented array of software systems that often focus on isolated parts of the supply chain or on a single health program. OpenLMIS is a global initiative that has developed enterprise-quality open-source electronic logistics management information system software. In this workshop OpenLMIS will be introduced and demonstrated followed by an interactive discussion.

Allen Wilcox, President, VillageReach

- ***Decision-support Tools to Assist in Health & Humanitarian Supply Chain Management***

Health and humanitarian supply chains can be very complex, with demand that is seasonal or uncertain; sourcing of products that can be local, regional, or international; or with decisions that interact across the supply chain. Decision-support tools can be developed to assist in aggregating information, analyzing decisions, or understand the trade-offs between different elements. In this workshop we describe three such tools, which perform the following functions: 1) forecasting of disasters and the associated supply requirements for 100+ countries using historical data and population growth; 2) develop a distribution system for deploying teams for Indoor Residual Spraying to prevent seasonal malaria; and 3) design an end-to-end supply chain from creation of a food basket, to sourcing, transportation, and comparison to vouchers. These tools have been created in collaboration with entities including CARE-USA, the World Health Organization, and the World Food Programme. Each will be discussed with participation from the audience, along with ideas for future decision-support tools in the health or humanitarian sectors.

Özlem Ergun- Georgia Institute of Technology, School of Industrial & Systems Engineering, Coca-Cola Associate Professor, and HHL Center Co-Director

Pinar Keskinocak- Georgia Institute of Technology, School of Industrial & Systems Engineering, William W. George Chair, and HHL Center Co-Director

Julie Swann- Georgia Institute of Technology, School of Industrial & Systems Engineering, Harold R. and Mary Anne Nash Associate Professor, and HHL Center Co-Director

Session 3

- ***Transportation Market Analysis and Procurement Strategies in Developing Countries***

Empirical research characterizing transportation markets in developing countries is scarce. Lack of information makes transportation procurement and cost evaluation difficult for health and humanitarian organisations, which often operate in these markets. During this workshop, we will present results from econometric analysis of World Food Programme (WFP) transportation contracts in Ethiopia. This case illustrates how analytical approaches lead to insights on transportation cost drivers that operators themselves may not realize. We will discuss how such insights enhance transportation procurement and contracting practices to improve both cost and reliability. Finally, we will open the floor to discussion of workshop participants' experiences with transportation and consider how better transportation market analysis can facilitate economic development.

Jarroed Goentzel- MIT Humanitarian Response Lab, Director

Marie Ève Rancourt- Business School of the University of Quebec in Montreal (ESG UQÀM), Professor, Department of Management and Technology

- ***Humanitarian Logistics in Action: Decision Making for Natural Disaster Preparedness and Response***

In this workshop students are confronted with a challenging case involving planning of a company's supply chain operations to deploy inventories during a natural disaster preparedness and response phases. Uncertainty in terms of supplies' demand and natural disaster impact is a key element to be taken into account in the planning strategy. Students will present the main case assumptions and results in an exciting competition facilitated by Georgia Tech and Monterrey Tech faculty.

Eric Porras- Trade & Logistics Innovation Center – Tecnológico de Monterrey, Research Director

Tecnológico de Monterrey students

- **Disaster & Humanitarian collaborative intervention models in Mexico and LATAM**

This workshop will consist of presentations by two Mexican based NGO's:

Emilia Garcia-Arteaga- TECHO – México, Directora de Administración y Finanzas

TECHO is a youth led NGO organization present in over 15 countries in Latin America. TECHO Community Intervention focuses on the most excluded slums of the continent. The joint work of families and young volunteers, who work to produce concrete solutions to the problematic of poverty, is the key driver of the intervention. TECHO drives a continuous community strengthening process, taking community development as the transversal axis of the intervention. In association with Fundacion Kaluz (www.fundacionkaluz.org), they support the rebuilding stage and temporary housing in case of natural disasters in collaboration with the communities, the government, and other NGO's. www.techo.org

Unidos por Ellos is an initiative born in 2002 as a response to natural disasters, based on promoting a prevention culture supporting immediate and long term support to displace families due to natural disasters in Mexico. They have created a national supply chain for consolidation of supplies and support. Their intervention model integrates the efforts of the private, public and social sectors for effective actions in case of natural disasters. Their efforts have accomplished positive impacts in cases such as: Northeast droughts, Southeast floods, Haiti earthquake, and Hurricane Stan/Wilma and Isidoro." www.unidosporellos.org

Session 4

- **Logistics Preparedness - More Than Prepositioning of Goods?**

In spite of increased attention, there is no unified understanding of logistics preparedness and how it contributes to improvements in humanitarian operations. On the one hand, organizations lack tools to assess and improve their preparedness. On the other, humanitarian logistics research focuses mainly on one aspect - prepositioning of goods. Through short introductions the workshop leaders will provoke discussion on what constitutes logistics preparedness, on gaps between practice and research, and on how applied research can support organizations in developing and improving their preparedness.

Luk Van Wassenhove, Professor, Henry Ford Chair of Manufacturing, INSEAD and Academic Director INSEAD Humanitarian Research Group

Marianne Jahre, Professor, BI Norwegian Business School

- **Supply Chain Design in the Complex Field of Health and Humanitarian Logistics**

Evaluating and balancing the inherent trade-offs in factors like service, cost, complexity, and risk is a difficult but necessary task for every successful logistics network, especially those in as important and complex an area as Health and Humanitarian aid. With *Supply Chain Design*, an analytical approach is utilized to help better

understand and plan the future state of a given supply chain. In this workshop, participants will go through a hypothetical case study with the help of an experienced Supply Chain Designer from one of the leading technology providers in the field. Health context, data sensitivities, political considerations, and logistics impacts will be explored numerically and graphically, and participants will gain an understanding and appreciation for how Supply Chain Design techniques can be applied in their country-specific context.

Ryan Purcell - LLamasoft Africa, Middle East, and India, Managing Director

CONFERENCE FEEDBACK

The positive feedback received has proven the conference's success while many have also suggested helpful ways of improving certain aspects for future conferences. Here are some quotes from the written comments received through conference evaluations or by email:

I loved the transportation market analysis workshop. The presenters' energy and enthusiasm was really infectious

I like delving into the open ELM IIS software: the supply-chain design workshop was awesome – so much participation in great insights. The transport session on day two sparked interesting debate...

Workshops were quite interesting coming from a commercial perspective, I was surprised that the ideas were very mixed for current best business practices – some great ideas.

Participants also praised the opportunity to network and the inclusion of a broad range of topics in the humanitarian sphere within a smaller setting:

Fantastic dialogue and networking for future initiatives and improvements – good combination of humanitarian needs and development.

Great conference, love the smaller more intimate affair.

Excellent networking opportunities.

We are pleased with the enriching discussions and practical skills and knowledge shared during this year's conference. We look forward to seeing the positive impact the new information and ideas generate for more efficient and effective health and humanitarian organizations as well as the connections and future collaborations begun at the conference

within and across sectors. We look forward to bringing together another diverse group of participants next year!



CONFERENCE CO-CHAIRS

Özlem Ergun, Georgia Institute of Technology, Coca Cola Associate Professor, Stewart School of Industrial and Systems Engineering and Health & Humanitarian Logistics Center Co-Director

Jarrod Goentzel, MIT Humanitarian Response Lab, Founder & Director

Pinar Keskinocak, Georgia Institute of Technology, William W. George Chair, Stewart School of Industrial and Systems Engineering and Health & Humanitarian Logistics Center Co-Director

Miguel Martinez, Trade & Logistics Innovation Center of Mexico - Tecnológico de Monterrey
Executive Director

Eric Porras, Trade & Logistics Innovation Center of Mexico - Tecnológico de Monterrey
Research Director

Julie Swann, Georgia Institute of Technology, Harold R. and Mary Anne Nash Associate Professor, Stewart School of Industrial and Systems Engineering and Health & Humanitarian Logistics Center Co-Director

Luk Van Wassenhove, INSEAD, Humanitarian Research Group, Academic Director