

# HEALTH SYSTEMS GLOBAL PRE-CONFERENCES IN THE AMERICAS

# **CARIBBEAN**

In preparation for the 8th Global Symposium on Health Systems Research-Nagasaki 2024 Building Just and Sustainable Health Systems Centring People and Protecting the Planet

PRE CONFERENCE REPORT

January 5th, 2024
St Augustine, Trinidad and Tobag
Virtual Meeting







#### **Health Systems Global**

https://healthsystemsglobal.org/

#### **University of the West Indies**

https://www.uwi.edu/



#### **University of Guyana**

https://www.uog.edu.gy/



#### St. George's University

https://www.sgu.edu/



#### Anton de Kom Universiteit van Suriname

https://www.uvs.edu/



#### **Community of Practice**

https://sta.uwi.edu/cchsrd/community-practice



Caribbean Centre for Health Systems

Research https://sta.uwi.edu/cchsrd/



#### **Planetary Health Alliance**

https://www.planetaryhealthalliance.org/



#### **CLIPSS**

https://clipss.org/



#### Background

#### 8th Global Symposium on Health Systems Research in Japan

Health SystemsGlobal (HSG) is the international society that organizes a symposium every two years to bring together academics, policymakers and members of the civil society involved in health systems and policy research.

Afterthe Montreux 2010, Beijing 2012, Cape Town 2014, Vancouver 2016, Liverpool 2018, Dubai 2020, Bogotá 2022, Nagasaki was chosen as the venue for the next Global Symposium.

In this edition the main theme is "Building just and sustainable health systems centring people and protecting the planet". We invite you to take part in the LAC HSG Pre-Conference Cycle which seeks to promote regional exchange on health systems and services issues, in preparation for the global meeting in Nagasaki.

#### **HSGPre-Conferences in the Americas**

The main objective of this fourth Pre-Conference Cycle in the Americas is to enhance the debate on the design and implementation of policies for more equitable and effective health systems and services, with a focus on Latin America and the Caribbean.

The purpose of these events is twofold: on the one hand, to generate a space for local exchange on the most relevant experiences and transformative visions, which will fuel a necessary debate on health systems. Secondly, to support the selected abstracts forthis pre-conference for presentation at the Global Symposium to be held in Nagasaki.

With the purpose of bringing together researchers and policymakers to address issues related to health systems in the region, the aims of the pre-conference are:

- To promote the exchange of experiences between researchers and policymakers around interdisciplinary discussion tables.
- To stimulate the presentation of abstracts by Latin American and Caribbean authors in the Call of the Global Symposium.
- To strengthen the Latin American and Caribbean presence and presentation of studies on health systems and policies in the Global Symposium.

Expecting to see you in our events,

Daniel Maceira, PhD.

Member of the Executive Committee of Health Systems Global
HSG Regional Board Representative for the Americas



#### **ORGANIZING COMMITTEE**

#### **Health Systems Global Referent**



Daniel Maceira Daniel Maceira, is an Argentine citizen, Ph.D. in Economics from Boston University, with research fields in health economics and industrial organization. He is Professor at the Economic Department, National University of Buenos Aires (UBA), Argentina, Independent Researcher of the National Council of Scientific and Technological Research (CONICET), Senior Researcher at the Center for the Study of State and Society (CEDES), and Director of the MBA-Health of the University of San Andrés. He has also developed teaching activities in several Postgraduate Programs in Health Economics and Public Health Policy in Argentina and the Latin American Region, such as the Master Program in Public Policies at the University Torcuato Di Tella, the Master Program in Design and Implementation of Public Policies at FLACSO, the Latin American University in Social Sciences, and other postgraduate programs in subnational Argentine Universities. Maceira has collaborated with a wide array of institutions, such as the Canadian International Development Research Centre (IDRC), the Norwegian cooperation agency (Norhed), UNICEF, The World Health Organization, the Pan-American Health Organization, the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Development Program (UNDP), USAid, the Inter-American Foundation (IAF), the Gates Foundation, The World Bank, the Global Development Network, the Global Fund for HIV, Malaria and Tuberculosis; the Inter-American Development Bank; the Global Alliance for Vaccines and Immunization (GAVI Alliance), among others. He has numerous national and international peer review publications and coordinated many research projects and technical assistance initiatives in developing countries, particularly in the Latin America and the Caribbean Region. In 2016 Maceira was elected Board Member of Health Systems Global (HSG), the international society in health programs and systems research, where he holds the chair of The Americas until October 2024.

#### Organizing Committee



Professor Donald Simeon Director of the Caribbean Centre for Health Systems Research and Development, and Professor of Biostatistics and Public Health, Faculty of Medical Sciences, University of the West Indies, Trinidad and Tobago. He is a Chartered Statistician, Fellow and Council Member of the Royal Statistical Society, UK as well as a Registered Public Health Nutritionist. He is a member of the Global Steering Group of the WHO Evidence-informed Policy Network (EVIPNet) and various Research Ethics Committees. He has published over 75 scientific papers in peer-reviewed journals with over 4200 citations and delivered over 80 presentations at scientific and professional meetings, globally. His hindex is 34 and has received over 7.8 million USD in academic grants.



#### Key note Speaker



Charmaine Metivier is a Research Fellow with the HEU, Centre for Health Economics of The University of the West Indies, St. Augustine, Trinidad and Tobago. Her research interests are in the areas of Health Financing in particular National Health Insurance and Universal Health Coverage, Health Economics issues pertaining to Chronic noncommunicable Diseases, Ageing, HIV and AIDS, and Fiscal Policy including Taxation of Tobacco, Alcohol and Sugar-Sweetened Beverages. Her focus is providing evidence-based research and technical advice to support and influence Health Policy and System development and decision-making in the Caribbean. Ms. Metivier has worked on various projects in Trinidad and Tobago and throughout the wider Caribbean.

#### **Policy Panel: Speakers**



Georgiana Gordon-Strachan PhD. Dr. Gordon-Strachan holds a PhD in Biochemistry from the University of the West Indies and an MSc in Health Policy, Planning and Financing from the London School of Hygiene and Tropical Medicine, University of London. She is the 2019 recipient of the Vice Chancellor's Award for Excellence in Research. She is the former Director of Epidemiological Research and Data Analysis at the Ministry of Health, Jamaica and the former Director of the Mona Office for Research and Innovation of the University of the West Indies, Mona. She is currently employed to the Caribbean Institute of Health Research where she serves as Director of the Tropical Metabolism Research Unit. She is the Executive Director of the Lancet Countdown's Health and Climate Change Regional Centre for Small Island Developing States.



Lawrence Jaisingh. Bsc and Msc in Economics; Master in Supply Chain and Logistics; Master in Telecommunications, Regulation and Policy; Master of Science in Health Management. Since October 2005, He has been employed in the Ministry of Health as the Director, Health, Policy Research and Planning with overall experience of 18 years working in the health sector. He had conducted a quantum of research with a view of assessing needs and providing technical research activities to inform policy development.



Dr. Ramon Figueroa Got a Public Health training at Hebrew University Hadassah School of Public Health, Israel. He Worked in the Public Sector, Ministry of Health, with a short stint as Health Systems Advisor for Eastern Caribbean countries based in Barbados (2012/2013). He has held positions as MCH Director, Director of Primary Care, Director of the Planning Unit, Permanent Secretary MOH (1998), CEO Ministry of Health 2015-2018, Director of Health Services (2015), and General Manager of the newly established National Health Insurance unit under SSB in 2000. Presently is the General Manager of the National health Insurance department of the Belize Social Security Board since 2018/19.





Shakel Henson is a public health physician from St. Vincent and the Granadines. Graduated from St. George's University in Grenada where she obtained the bachelor in medical sciences, Doctor of Medicine and master in public health degree. She is Master of sciences and international management (Liverpool University), Master of sciences in global Health and infectious diseases (University of Edinburg) and Master of sciences in bioethics (Clarkson University).



Ricky Brathwaite PhD. a seasoned professional with over 20 years of expertise in healthcare economics, health systems engineering, and bioengineering, is dedicated to advancing healthcare in the Caribbean region. As the Chief Executive of the Bermuda Health Council, he plays a crucial role in developing innovative payment and service delivery models, with a focus on improving healthcare quality and reducing costs. His work includes spearheading the development of National Health Accounts, publication of fee schedules, and feasibility assessments of drug formularies—crucial steps in addressing the unique healthcare challenges in the Caribbean.

**HSG-LAC team** 



Noelia Cabrera is a sociologist (National University of La Plata) and is the HSG LAC Regional Network Coordinator. She is an Assistant Researcher at the Center for the Study of State and Society (CEDES), and member of the National Directorate of Sexual and Reproductive Health of the Ministry of Health of Argentina. She has participated in projects of UNICEF, PAHO/WHO, IDRC, Wellcome Trust, among others.



Carla Valeria Carbonelli is an anthropologist (University of Buenos Aires). She is the Research Grants Coordinator of the Directorate of Health Research of the Ministry of Health, Argentina.



pre-conference Program





09:00-09:15	Welcome reception			
	Host Institutional Welcome	Donald Simeon	UWI	
	HSG mission and strategy in LatinAmerica and the Caribbean	Daniel Maceira	Health Systems Global Board / UBA/ CEDES/CONICET	
09:15-10:15	Key Note Speaker: Charmain Chair: Kershelle Barker; CCH		Economics, UWI	
	NCDs, Health Expenditure, an (Alafia Samuels, Vyjanti Beharn			
10:15-10:45	Break	y, Attrica Laroucade & Chairnair	ie Metivier)	
10:45-12:00	Panel I. Climate Change and Health: Contributions from the Caribbean			
	Chair: Professor Jack Menke; Anton de Kom University of Suriname			
	Title	Authors	Institutions	
	Building a Caribbean Climate Changeand Health Workforce	Chris Oura & Craig Stephen	University of the West Indies/ McEachran Institute, Canada	
	Connecting Climate Minds: Latin America and the Caribbean (LAC)Region – Setting the Research Agenda	Sandeep Maharaj; Natalie Greaves; Shamjeet Singh; SatishJankie; Gillian Bristol & Emma Lawrance	The University of the West Indies / UWI Cave Hill/ LatinAmerica and Caribbean Centre UWI/ Imperial College London	
	Assessing Policies for Climate- Resilient Health Systems in Guyana:A Comprehensive Mixed- Methods Study	Cecil Boston; Paulette Bynoe; Reeta Gobin; Quincy Jones; Olly Perreira & Sharlene Goberdhan	University of Guyana	
12:00-13:00	Lunch			
13:00-14:15	Panel II: Health Care Systems' Performance. Case Studies			
	Chair: Professor Rahul Naidu	<u> </u>		
	Title The double edge eword of	Authors Nicolo S. Hondrickson	Institutions FirecircleTT To End ALLforms	
	The double edge sword of digitaltransformation; women and theirhealth	Nicole S. Hendrickson	of Abuse	
	Epidemiology and distribution patternof cutaneous Leishmaniasis in Guyana: a surveillance study	R Kurup; T Roberts; A Michael; ZWilliams; R Niles-Robin & A Sampson	University of Guyana Ministry of Health, Guyana	
	Primary care physicians' perceptions of pre-exposure prophylaxis (PrEP) forHIV in Guyana: a qualitative study	AW Parkinson; R Kurup; B Alleyne& T Jagnarine	Campbellville Health Center, Georgetown Public Hospital Cooperation, Guyana/ University of Guyana/ University of theWest Indies/ Ministry of Health, Guyana	
	A Rapid Review of the Pharmaceutical Suitcase Trade in Trinidad and Tobago	Sandeep Maharaj, Darren Dookeeram, Roger Hosein, Kelvin Ramkissoon, Amrica Ramdass, Darleen Franco, Shalini Pooransingh, Dave Dookeeram	The University of the West Indies	
14:15-14:30	Break			



Dr. Ricky Brathwaite	Bermuda Health Council	Bermuda
Dr. Ramon Figueroa	National Health Insurance at Social Security Board	Belize
Dr. Georgiana Gordon Strachan	Caribbean Institute for Health Research, UWI	Jamaica
Mr. Lawrence Jaisingh	Ministry of Health	Trinidad and Tobago
Shakel Henson		Saint Vincent &





### Abstracts



#### **BUILDING A CARIBBEAN CLIMATE CHANGE AND HEALTH WORKFORCE**



**Chris Oura<sup>1</sup> & Craig Stephen<sup>2</sup>** 

<sup>1</sup>University of the West Indies

<sup>2</sup>McEachran Institute, Canada

#### **Purpose**

Healthcare systems in the Caribbean remain highly vulnerable to the impacts from Climate Change. To ensure that these healthcare systems are more climate resilient, the University of the West Indies is implementing a Climate Change and Health leaders fellowship programme. The goal of the fellowship is to create a network of interdisciplinary working professionals / leaders across 16 Caribbean territories, with the common goal of strengthening resilience to Climate Change, guided by a "One Health, One Caribbean" approach.

#### Design

The fellowship has been designed using an adaptively managed curriculum. Weekly online themed sessions include local / regional experts, so experiences are grounded in local realities and learning is tied to tangible 'real-world' issues relevant to the learners. The fellowship uses a "Learning by Doing" approach with each fellow implementing a project and running a symposium in their home country. Throughout the fellowship, opportunities for practicing what has been learnt, for peer-peer learning and for learning through shared experiences are maximised.

#### Findings / Results

network multidisciplinary of 18 Caribbean professionals from multiple sectors including, government, academia, civil society, communities, and the private sector, from 11 Caribbean countries, have so far been armed with the necessary skills to turn plans and policies into action. Each fellow is a working professional in different aspects of their respective country's healthcare system and is currently shaping and implementing policies to make their populations and systems more climate resilient.

#### Value

Creating such a network of informed, motivated, and highly qualified multidisciplinary professionals, who can support their governments and communities, as well as each other, to ensure that Caribbean healthcare systems are resilient to the effects of Climate Change, is a crucial step to building needed capacity, which will ensure that Caribbean health is better protected in the face of the current Climate Change emergency.



### CONNECTING CLIMATE MINDS: LATIN AMERICA AND THE CARIBBEAN (LAC) REGION – SETTING THE RESEARCH AGENDA

Sandeep Maharaj¹; Natalie Greaves²; Shamjeet Singh¹; Satish Jankie¹; Gillian Bristol³ & Emma Lawrance⁴

- <sup>1</sup>The University of the West Indies, St. Augustine, Campus
- <sup>2</sup> UWI Cave Hill
- <sup>3</sup> Latin America and Caribbean Centre UWI
- <sup>4</sup> Imperial College London

The countries of continental Latin America and the small island developing states of the Caribbean face severe challenges associated with climate change and its detrimental impact on the health and wellbeing of their populations. The impact of acute and creeping threats on mental health, and the mechanisms by which changes in mental health occur are poorly documented in the region and are yet to be understood. To address this gap in knowledge, a mixed methods research project was designed to aid in the identification and prioritization of key research areas, with further articulation of the human and non-human resources needed to create a sustainable community of practice within the LAC.

This mixed methods study involved the conduct of a scoping review of the literature followed by a regional dialogue with 8 focus groups. The participants were multisectoral stakeholders knowledgeable of and actively engaged in climate change

knowledge generation, mitigation, or management.

Data was collected from three (3) sources, Notes from a trained notetaker of break-out session, real time rapid summary of the meeting plenary was done by one analyst for early identification of priority issues, and verbatim transcripts of the breakout room. All non-English room transcripts were translated via Al and rechecked by humans for contextual accuracy.

The analysts first established consistency in the interpretation of codes and coding method by independently coding 4 pages of dialogue with subsequent discussion and resolution of differences. Once this quasi-interrater reliability was established, the transcript data set was divided amongst the analysts. Each transcript was then coded by one analyst with subsequent quality checks for consistency in the application of the coding frame by a second analyst. Within the LAC we identified 32 basic themes and 25 research questions

### ASSESSING POLICIES FOR CLIMATE- RESILIENT HEALTH SYSTEMS IN GUYANA: A COMPREHENSIVE MIXED-METHODS STUDY



Cecil Boston; Paulette Bynoe; Reeta Gobin; Quincy Jones; Olly Perreira & Sharlene Goberdhan University of Guyana

#### Background

Like other Small Island Developing States, Guyana is characterized by fragile health systems that are susceptible to the deleterious effects of climate change.

#### Design and methods

The study sought to critically evaluate Guyana's policies, over a 20-year period, for a climate-resilient health sector using a mixed-methods case study. Data were gathered through stakeholder engagement, literature review, quantitative surveys, semi-structured interviews, and situational analyses. The analysis utilised the WHO Operational Framework and provided a situational analysis of health system policy responses to climate change.

#### Results

The results showed multiple policies addressed climate change impacts on health, including the National Health Plan, Country Cooperation Strategy, and Climate Change Resilience Strategy and Action Plan. These proposed interventions sought to improve

occupational safety, disaster preparedness, and vector control. However, implementation was hindered by limited resources, coordination issues, and the evolving nature of climate change policies, rendering progress incomplete to embryonic.

#### Conclusions

Despite these challenges, Guyana's 2023 budget shows its commitment to health mitigation with impact significant investments. The study also identified a knowledge-action gap, with respondents unaware of the specific health impacts of climate change or response initiatives, highlighting the need for better awareness. The findings, mapped to the WHO Operational Framework, noted leadership, governance, financing, and workforce issues. In conclusion, despite proactive strategies, implementation is hindered by resource, poor coordination, and knowledge-action gaps. Future studies should focus on financing mitigation efforts locally and effectively using potential oil industry revenue. The study calls for continuous critical assessments of climate change policies

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## THE DOUBLE EDGE SWORD OF DIGITAL TRANSFORMATION; WOMEN AND THEIR HEALTH



Nicole S. Hendrickson
FirecircleTT To End ALL forms of Abuse

As we seek to move toward a more digitised space, through digitisation to ultimately end up with the digital transformation of data across all sectors, there are some things we need to be aware of to make all persons connected to the data safer.

With the advent of COVID-19, what does the conversation around digitisation, digital transformation, and advancement in technology inclusive of telehealth have on the population?

This paper is a literature review on how these advancements come at the expense of the well-being of women, possibly taking on a whole new realm. We have not been able to take a good look at the implications of this down the road. Due to the focus on upgrading our systems and optimise health for the whole population, there are negative aspects to the technology.

One of them is the mental health toll of invading the privacy of women and girls' reproductive health. Why would a country need to have such information?

Especially when tracking data without a person's knowledge.

Technology Facilitated Gender Based Violence (TFGBV) has been a concern worldwide, and there are specific targets, namely sportswomen, human rights defenders, women who seek public office, women and girls who game, and women journalists. In Trinidad and Tobago, the amended Domestic Violence Act now penalises psychological harm. How can this be viewed from a health concern perspective when we seek to deal holistically with health?

Healthcare data is valuable to hackers as they contain financial and sensitive personal data and can cause severe distress to persons if there is a breach in their storage.

This paper is specifically for the Caribbean region as we seem to be behind in telehealth, its possible cybersecurity implications and the general well-being of all healthcare seekers.



### EPIDEMIOLOGY AND DISTRIBUTION PATTERN OF CUTANEOUS LEISHMANIASIS IN GUYANA: A SURVEILLANCE STUDY

R Kurup<sup>1</sup>, T Roberts<sup>1</sup>, A Michael<sup>1</sup>, Z Williams<sup>1</sup>, R Niles-Robin<sup>2</sup>, A Sampson<sup>2</sup>

- <sup>1</sup> College of Medical Sciences, University of Guyana, Guyana
- <sup>2</sup> Neglected Tropical Disease Program, Vector Control Services, Ministry of Health, Guyana

#### **Objective**

The goal of this study was to identify the epidemiologic pattern and the degree of distribution of Leishmania species during climate change in Guyana.

#### Methodology

A retrospective study was conducted over five years (2017–2021), examining the epidemiologic pattern and the degree of distribution within the country using heat maps. Data was collected from different testing sites across the country, such as Vector Control Services in Georgetown, Lethem Hospital, and Bartica Hospital. All 23 positive microscopy slides preserved for cutaneous leishmaniasis were sent for species identification with support from PAHO.

#### Results

This study provided a correlation between the socio-demographic characteristics of cutaneous Leishmaniasis in Guyana. The study identified that the disease predominantly affects the male gender, the Agro-Guyanese ethnic group, and those between the ages of 34 who live or work in the hinterland region, particularly regions 7, 9, and 10. Notably, males with mining occupations or in the army stationed in the hinterland regions were at the highest risk due to significant exposure to the bite of sandflies that are widespread in these regions.

#### Conclusion

This study presented a comprehensive depiction of how Leishmania species are distributed across Guyana. Molecular diagnosis and genotyping of Leishmania from smear-positive samples of patients confirmed Leishmania spp. subgenus L. (Viannia).

# PRIMARY CARE PHYSICIANS' PERCEPTIONS OF PRE-EXPOSURE PROPHYLAXIS (PREP) FOR HIV IN GUYANA: A QUALITATIVE STUDY



AW Parkinson<sup>1</sup>, R Kurup<sup>2</sup>, B Alleyne<sup>3</sup>, T Jagnarine<sup>4</sup>

- <sup>1</sup> Junior Medical Registrar, Kitty Health Center, Georgetown Public Hospital Cooperation, Guyana
- <sup>2</sup> College of Medical Sciences, University of Guyana, Guyana
- <sup>3</sup> University of the West Indies Open Campus
- <sup>4</sup> National AIDS program secretariat, Ministry of Health, Guyana

#### **Objectives**

To explore primary care physicians' knowledge and opinions of PrEP.

#### Methods

The qualitative, phenomenological approach couched in the interpretivist paradigm was used. Ethical approval and informed consent were obtained. Purposive sampling was used to achieve a heterogeneous group of physicians from publicly funded clinics in Region 4. Inperson interviews lasting 25-45 minutes were conducted using a piloted, semistructured guide. These interviews were audio recorded and transcribed verbatim, and themes were developed following a hybrid of inductive and deductive coding. Saturation occurred at the 13th participant.

#### Results

Eleven females and two males representing varying years of experience and specialization participated. The four themes developed were:

- 1) physicians' experiences;
- 2) physicians' clinical competence;

- 3) opinions of and concerns about PrEP;
- 4) perceived facilitators of and barriers to prescription.

All the participants knew what PrEP was used for and viewed it as a necessary intervention. Concerns about the safety of the drug, patients' adherence, drug resistance, increased incidence of sexually transmitted infections, and diversion of the drug from the HIV program to facilitate PrEP prescription were expressed. Continuous medical education was perceived as a facilitator while unavailability of the drug and limited support staff were identified as potential barriers.

#### Conclusion

Primary care physicians knew what PrEP was used for, were able to identify who should use it, and believed it was necessary to reduce HIV incidence. Targeted educational programs should be developed to improve their clinical competence, increase confidence in the safety of the drug, and address their concerns so they can confidently prescribe PrEP.

## A RAPID REVIEW OF THE PHARMACEUTICAL SUITCASE TRADE IN TRINIDAD AND TOBAGO



Sandeep Maharaj, Darren Dookeeram, Roger Hosein, Kelvin Ramkissoon, Amrica Ramdass, Darleen Franco, Shalini Pooransingh, Dave Dookeeram The University of the West Indies

#### **Purpose**

Trinidad and Tobago is located in the Southern Caribbean and is a part of the Caribbean Community (CARICOM). Despite being classified as a Small Island Developing State by the United Nations it has a high Human Development Index and a Gross Domestic Expenditure spent on health of 7.31%. Although there is a developed formal public and private healthcare system that is available, it was realized in the post pandemic era that informal, unregulated suitcase trade in medication had become established that provided access to unproven remedies for COVID-19. This informal trade highlighted a multidimensional threat to the healthcare system that required a similarly robust response.

#### **Focus**

The focal question of this paper was to determine the potential impact of the illicit trade of pharmaceuticals in Trinidad and Tobago and to explore the aspects of multisectoral regulation that would be necessary to curb the problem.

#### Content

A rapid review of the literature was performed between June and October of 2023. The population was the general public of Trinidad and Tobago, the exposure was the impact of illicit pharmaceuticals and the outcome was any published data that publicly available. The resources included PubMed, EBSCO and local news sources. Items were included if they were published within the previous five years, in English and included keywords "Suitcase Trade", "Illicit Pharmaceuticals", and "Pharmaceutical Regulation". The

reviewers included a senior lecturer at the school of pharmacy, three health systems professionals, one senior attorney at law and one senior economist. Disagreements on content were resolved by engaging an expert external health system professional. Appraisal content extracted key themes associated with the impact of the Suitcase Trade of Pharmaceuticals.

#### **Significance**

The resources screened yielded an average of 50 papers, when overlapping hits and less relevant documents were removed, a total of 10 academic papers, 2 legal papers, 5 economic papers and 10 news media items were considered relevant. There was overwhelming evidence of the Suitcase Trade being an unspoken component of the local pharmaceutical industry which was in agreement with the International Monetary Fund's recognition of a practice that exists on the edges of a formal trade. There was little that was officially known about the volume of trade but it was recognized as opportunistic to the loopholes of regulation that provided an unfair economic advantage. There was a recognized threat to health status of populations but no published evidence of this was readily available. The root case of the problem was that the practice presented itself as a disruptive innovation that bridged gap in availability, often with a significant price differential. The legislative landscape was found to be unformidable with an even This greater enforcement challenge. therefore indicates that addressing this problem requires solutions that include health, legal, trade, security and information technology.



### **Pictures**



















### Secretaría para América Latina y El Caribe healthsystemsglobal.lac@gmail.com

