

Innovative Strategies for the Comprehensive Transmission Control and Care of Chagas Disease in Health Networks

Session Date: October 26

Session Time: 1:00 pm – 4:00pm

Session Location: Endymion, 8th Floor

Session Description: The overall aim of the session is to share new strategies of implementing the comprehensive Transmission Control and care of Chagas diseases in health networks in different countries with affected populations. The goals of the session include: 1) Presenting Innovative Transmission Control initiatives with health systems and communities engagement, both in Vector Control and in Mother to Child Transmission Control, taking into account that Transmission Control in Chagas is the first step towards elimination; 2) Discussing the outcomes in terms of commitment and active participation of Health Structures and Communities in these initiatives; 3) To present innovative models to integrate comprehensive care of Chagas disease in Health system networks in countries like Bolivia, Colombia and Guatemala. 4). Practice workshop on participatory methodologies for the building of needs assessment involving all actors working on operational research process.

Session Chairs: **Javier Sancho**, Chagas Disease Global Coalition
Sergio Sosa-Estani, DNDi

Session Rapporteur: **María Elena Bottazzi**, Baylor College of Medicine

“Originality consists of returning to the origin. Thus, originality means returning through one’s resources, to the simplicity of the early solutions”

Antonio Gaudi

KEY DISCUSSION POINTS

1. Implementation research is crucial to improve access and advocacy and to guide the development of alternative and innovative control and elimination strategies.
2. There is a need for stakeholders to work together stimulating a dialogue to deliver solutions.
3. Community and civil society participation are a must!
4. Four Innovative Initiatives were presented:
 - a. **The Virtual Vector Laboratory** (*Janine Ramsey from Centro Regional de Investigación en Salud Pública INSP, Chiapas, México*): A program that aims to stimulate a collective approach using community participation, artificial intelligence and machine learning for vector surveillance and to improve taxonomic identification of triatomines that can lead to better understanding of the entomological (infestation) and epidemiological landscape (<https://vectorlab.org/>) of Chagas.

- b. **Mundo Sano-PAHO ETMIPlus** (*Marcelo Abril from Mundo Sano*): An operational model to integrate mother-to-child transmission control into health interventions and structures. This plan of action expands and leverages the maternal and child health (MCH) platform to include elimination of Chagas disease in endemic countries building upon the lessons learned from the PAHO 2010 Strategy and Plan of Action for the EMTCT of HIV and Congenital Syphilis.

(<http://iris.paho.org/xmlui/handle/123456789/34306>)

- c. **An Access Partnership Model** (*Colin Forsyth from DNDi*): To identify and solve multi-dimensional barriers such as structural (political and economic inequalities), systemic (health systems), clinical (challenges in Diagnostics and Treatment) and psychological (stigma) barriers and implement a circular access intervention strategy. The framework for this model called "4D" includes:

- i. Diagnosis: a situational assessment, SWOT analysis and access seminars to create shared visions and identify barriers and solutions
- ii. Design: of an access plan
- iii. Delivery or implementation of a pilot project
- iv. Demonstrate and report the impact, such as a new diagnostic algorithm, updated treatment processes

A summary of a patient-centered model in Colombia can be read in the following article:

<https://www.scielosp.org/pdf/rpsp/2017.v41/e153/en>.

- d. **Science shops** (*María Jesús Piñazo from ISGGlobal and Anne-Sophie Gresle from Bolivia Chagas Platform*): An independent participatory research support system in response to concerns by civil society. This initiative shifts the focus onto the community needs and works with the communities so that questions arise from their needs ensuring responsible research and innovation, open access and equity

(<http://www.inspiresproject.eu/>).

KNOWLEDGE GAPS IDENTIFIED

1. The need for access data to be in the public domain and that translation of the information systems is applicable for use in real time to tackle better access and care strategies.
2. The need to integrate Chagas access and care activities with the goal of addressing the sustainable development goals and global strategies.
3. The need to increase training and fostering of clinical teams to increase diagnosis.
4. The need to create intensive, specialized and periodic actions to integrate mother-to-child transmission control into health interventions and structures.
5. The co-creation of research questions in partnership with the community and social society. These processes should be circular versus linear and include: 1) bottom-up demand approaches, 2) prioritization according to community needs and urgent societal issues, 3) the use of appropriate tools and techniques, 4) sensitivity towards "power" relationships, cultural context, and a dialogue highlighting representativeness versus representation.
6. A consensus is needed to better define how to achieve Chagas control, care, and elimination and their targets.
7. The need to develop better tools or indexes for monitoring Chagas control, care, and elimination as a global public health problem.

RECOMMENDED NEXT STEPS

1. Continue to improve the vector taxonomic system and generate deep neural networks for identification purposes through the Virtual Vector Laboratory. The utility of this model can be increased by a comparison of methods, improving diagnostic accuracy, expanding the total number of species, and exploring the possibility of using smart-phone technology with georeferencing.
2. Continue to give priority to the prevention of congenital Chagas – Mundo Sano to launch a global campaign called “No Baby with Chagas.”
3. Expand on the topic of the integration of mother-to-child transmission control into health interventions and structures in the 2019 COR-NTD meeting.
4. Disseminate and integrate the concept of practical workshops and active discussion on participatory methodologies for involving stakeholders in (i) the development of needs assessment and (ii) operational research process.
5. Strengthen the tools to measure “access” impact.
6. Strive to integrate operational research within all Control and Care country initiatives such that representatives from ministries of health can be more efficient in adopting any changes in policy or strategy for Chagas.
7. Build more effective, scalable and sustainable partnership models – with local and regional stakeholders ensuring the inclusion of a local champion and securing political commitment.