

Preventing Mother-to-Child Transmission: Scaling Up Access to Eliminate Chagas Disease

Session Date & Time:	Monday, November 18; 1:00 PM to 4:00 PM
Session Location:	Mandalay Bay
Session Description:	Interrupting congenital Chagas disease is an important public health goal. How can progress toward this goal be measured? How can barriers be identified and addressed through operational research? How can we ensure strategies align with broader initiatives to improve access for all affected people?
Session Chairs:	María Elena Bottazzi , Baylor College of Medicine Javier Sancho , Chagas Disease Global Coalition
Session Rapporteur:	Colin J. Forsyth , DNDi

KEY DISCUSSION POINTS

Every year, around 9,000 infants are born with congenitally transmitted Chagas disease. Preventing mother-to-child transmission of the disease has been prioritized by the Pan American Health Organization as part of a framework to eliminate communicable diseases in the Americas. Current therapeutic tools are effective at preventing congenital transmission and curing infection in infants, but the diagnostic process remains cumbersome and presents major challenges. This session consisted of four presentations focused on elimination of congenital transmission, after which three parallel group discussions took place.

The session was organized by the Chagas Coalition, an international alliance of several organizations dedicated to improving the reality of people affected by Chagas disease through advocating for access to diagnosis and treatment, greater visibility of the disease, and increased investment in public health programs and research.

Presentations

- “Maternal transmission control as an entry point to increasing access to diagnosis and treatment of Chagas Disease” – Pierre Buekens, Tulane University
- “Health economics research in support of public health programs to halt congenital transmission” – Eileen Stillwaggon, Gettysburg College
- “The EMTCT+ implementation in Latin American Countries. Progress, Lessons Learned, and Future Research Needs” – Luis Castellanos, Pan American Health Organization
- “Implementation of EMTCT (Elimination of Mother-to-Child Transmission) programs in different settings (rural and urban) of an endemic country” – Marcelo Abril, Fundacion Mundo Sano
- Comments from Yenny Sanchez, International Federation of Associations of People Affected by Chagas disease (FINDECHAGAS)

The presentations highlighted continuing low screening and treatment coverage of women of childbearing age and infants. With current diagnostic tools, congenital infection of infants cannot be confirmed until 8-10 months post-partum, at which point many are lost to follow up. Studies have shown benznidazole prevents future mother-to-child transmission, but there are challenges in implementing treatment of women, including the fact that the safety of benznidazole and nifurtimox in pregnancy is unknown, and the side effects they produce could interrupt breastfeeding. Chagas disease continues to receive a low priority from governments despite the earlier success of vector control initiatives, and despite the fact that universal screening in prenatal care in the United States and elsewhere has been shown to be cost effective. One solution has been to include Chagas disease within PAHO’s Eliminating Mother-to-Child Transmission Initiative (EMTCT+) (along with HIV, syphilis, and hepatitis B), capitalizing on countries’ interest in eliminating HIV transmission. This initiative aims to ensure >90% screening and treatment coverage of seropositive mothers and newborns. Pilot projects in support of EMTCT+ have been successfully implemented in different contexts in Argentina, including in remote, rural areas.

Group Discussions:

Controlling Mother-to-Child Transmission: From a public health standpoint, should all women be screened and treated at or prior to childbearing age, or should we focus initially on girls or

women in prenatal care? Prenatal care and delivery are a golden opportunity to reach women; use of medical services to deliver babies is very high even in rural Latin America, and women who give birth at home can be reached through field screening. Cord blood (which is normally discarded) represents an opportunity to check for infection. Although prenatal screening is mandated in Argentina and Bolivia, implementation is very uneven. Currently, too many are lost to follow up. Mothers cannot be treated until after pregnancy, and while studies suggest trypanocidal drugs do not harm infants via breastmilk, side effects may make it difficult for mothers to breastfeed. For infants, the need to return for a second point of serological testing at 10 months is a major barrier creating extensive loss to follow-up. The group discussed how to simplify the process, and where to prioritize public health efforts.

EMTCT+ is a comprehensive approach to eliminate mother-to child transmission of HIV, syphilis, Chagas and perinatal hepatitis B. Taking advantage of the HIV Platform has helped galvanize some interest toward Chagas disease, while shifting from a focus on vector control towards a more comprehensive view. Interventions need to occur within countries' health care systems to foster sustainability and countries' accountability. A key problem is a lack of reliable data. There is a substantial gap between reported cases and official estimates; with limited, uneven data collection at country level. Another issue is not all *T. cruzi* strains have the same ability for vertical transmission and studies report a wide range of transmission rates.

Economic Impact: More cost data is needed. One possibility is to link to cardiovascular or other disease initiatives for which more data or data collection mechanisms may be available. Much of the cardiovascular data is related to treatment; for Chagas disease, the focus would rather be on prevention of cardiac progression. Key questions include who the target audience would be, how to incorporate the primary healthcare level, and what types of technologies need to be used. Estimating economic losses should take into account DALYs as well as impact on others within the social network.

KNOWLEDGE GAPS IDENTIFIED

- Which groups should be prioritized for screening to prevent mother-to-child transmission?
- How can interruption of congenital transmission serve as an entry point to expanding coverage for all people affected by Chagas disease?
- What is the best point within people's healthcare interactions to implement screening for Chagas disease?
- How can diagnosis of congenital infection be simplified, eliminating the 10-month gap between screening of neonates and confirmatory diagnosis?

- What is the current capacity in countries; how can laboratory and information systems be strengthened?
- How to increase collaboration between public and private health facilities? Most patients are treated within the public sector, but many initiatives are taking place in the private sector.
- How is GDP impacted by Chagas disease and prevention efforts?
- What are the costs and benefits of elimination of mother-to-child transmission?
- What are the socioeconomic benefits of achieving EMTCT+ targets for Chagas disease?
- What are the costs of implementing EMTCT+ at the country level?
- How can universal screening/treatment programs be adapted to local contexts?

RECOMMENDED NEXT STEPS

- New diagnostic technologies capable of confirming congenital infection at birth.
- Ascertaining whether new/shorter drug regimens are effective at eliminating congenital transmission.
- Promote compulsory reporting of Chagas disease while strengthening in-country data collection and reporting to track progress toward EMTCT+ goals.
- Encourage local pilots to gather data regardless of national system maturity level (strengthen data collection from the bottom up).
- Develop an economic valuation of elimination of congenital transmission which considers the full range of social and economic impacts of the disease.
- As a first step, consider feasibility of screening girls at school or in tandem with vaccination programs to promote wide coverage, using a rapid test.
- Compare potential impact of different screening strategies (via schools, vaccinations, antenatal care, all women) in different settings.
- Develop laboratory capacity in all affected countries, taking into account geographic differences in the performance of tests.
- Consider the use of health economics tools such as cost- effectiveness analysis, modeling and budget impact to leverage EMTCT (+) adoption.
- Learn from other initiatives (e.g. Global Cancer Observatory) to improve systematic data collection.