



**Chagas
Initiative**

ISGlobal
Barcelona
Institute for
Global Health

Chagas Initiative

The Chagas Initiative aims to promote access to comprehensive care for people with Chagas disease in both vector-endemic and non-endemic countries, and to contribute to the global efforts made to control the disease. At the heart of the Chagas Initiative's work model is the concept of knowledge translation: the transfer of scientific evidence into concrete action. In both Europe and Latin America, the Initiative carries out research and development projects, provides medical care and trains healthcare professionals in the management of the disease, particularly in Spain, Bolivia and Paraguay. The Initiative works with patient associations and the Chagas Coalition to raise awareness and visibility of the disease.

Chagas disease is one of the main public health problems in Latin America, where it is more common than malaria

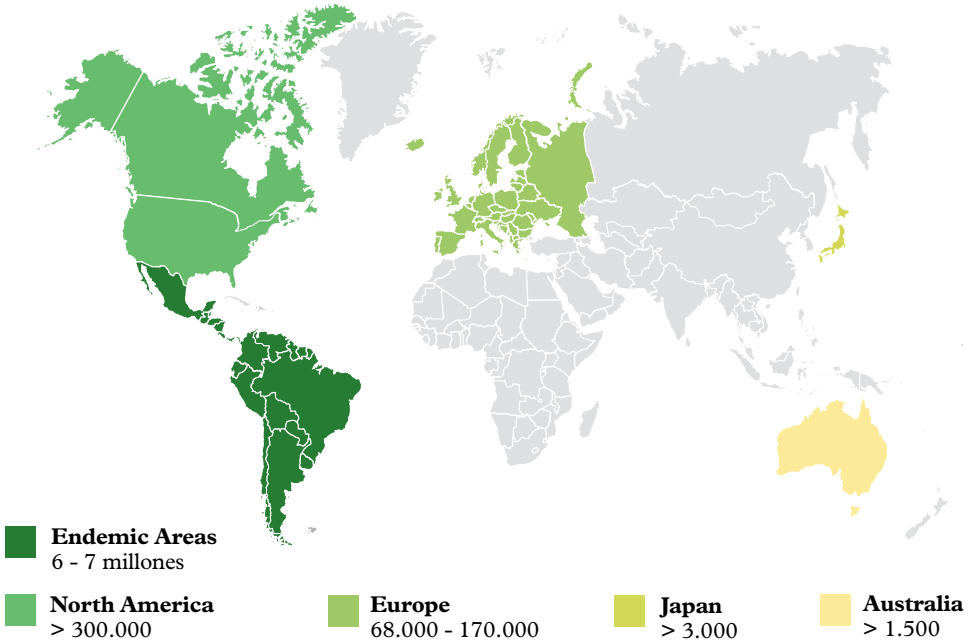
Chagas disease, or American tripanosomiasis, is caused by infection with the *Trypanosoma cruzi* (*T.cruzi*) parasite and it is listed by the World Health Organisation as one of the 20 neglected diseases. The disease is endemic in Latin America, although with the increase in migration and population movements it is now also found in North America, Australia, Japan and Europe.

The parasite is transmitted through the faeces of the triatomine vector insects but can also be transmitted through blood transfusions, organ transplants, by oral route and from mother to child during pregnancy or childbirth. It is described as a silent killer: people are often unaware they have Chagas disease (60% of people living with the disease never develop any symptoms) and its transmission goes unnoticed.

Every year between 1 and 2% of asymptomatic people become symptomatic. Most of the initial clinical symptoms are nonspecific and in the chronic stage when cardiac, digestive or neurological complications arise, these are often confused with other diseases. It is not yet known why some people develop symptoms while others do not and there are no indicators to show who will develop them.

Historically, very few resources have been devoted to the study of this disease or to provide medical care to those affected. The only drugs currently available for treatment, nifurtimox and benznidazole, were developed over fifty years ago by the pharmaceutical industry. They are highly effective, especially at an early age and administered early against the acute stages of infection. While it is necessary to research new drugs, it is essential that more is done to ensure patients are treated with the existing drugs. At present, according to our estimates, the vast majority of those affected have no access to or do not receive care.

Estimated Cases of Chagas



An estimated 7 million people are infected and over 75 million are at risk, most of them in Latin America.

Only a minority of people with Chagas disease receive the care they need. In Spain, an estimated 70% of people with the disease are undiagnosed and untreated.

Research

The aim of the Chagas Initiative's research agenda is to contribute to the global efforts made to improve disease management and to develop methods for evaluating treatment success. The Initiative undertakes:

- **Epidemiological and clinical studies** on Chagas disease in Europe and Bolivia, and the heart and digestive complications that arise as a result of the disease.
- **Research on new accessible, effective and rapid diagnostic methods** for the control of congenital transmission in endemic areas.
- **Clinical trials for new drug** candidates in collaboration with other organisations such as DNDi, the University of Texas at El Paso, and Fundación CEADES.
- **Identification and development of biomarkers** for therapeutic efficacy in treated patients and for early detection of cardiac damage in patients with Chagas disease.
- **Identification of new molecules with antiparasitic activity** in collaboration with other academic institutions, and study of the mechanisms of pathogenesis of *Trypanosoma cruzi*.

The global financial cost of Chagas disease exceeds US \$7 billion annually



Policy and Global Development

A stronger international political commitment and a significantly larger financial investment are needed to increase coverage of comprehensive care, as well as more resources to fund research to develop new diagnostic tools and new drugs to treat Chagas disease.

In **Spain**, ISGlobal advocates for early detection of infection in pregnant women and newborns and for quality care for people living with the disease. Based on the high efficacy of the treatment in newborns, we have contributed to the implementation of a vertical transmission control programme in Catalonia, which should be expanded to all the communities in the country so that they carry out a systematic control of vertical transmission of the disease.

The estimated number of people with Chagas disease in **Europe** is around 170,000. Although some European countries have established national measures to control transmission, many countries still lack the suitable legislation.

On an international level, ISGlobal advocates for Chagas to be included in the health agendas across Latin America. We participate in the Ibero-American NHEPACHA network, which aims to share experiences, develop research strategies on Chagas biomarkers and train researchers. And we are also a technical advisor to the Ibero-American Secretary of State's "No Baby with Chagas Disease" initiative for the control of vertical transmission.

ISGlobal is one of the founding members of the Global Chagas Coalition, an international alliance established in 2012 and joined by around twenty organisations. The Coalition promotes collaborative work, visibility, advocacy, research and innovation on Chagas disease, in order to increase access to comprehensive care for those affected.



Training and Education

Difficult access to knowledge and lack of experience in the management of Chagas cases by health staff is one of the barriers that prevent affected people from receiving adequate care. Therefore, one of the Initiative's key priorities is training health professionals in the Latin American and European countries where we work and have established collaborative networks. Activities in this area include:

- **Technical training of health staff** in the clinical management of *Trypanosoma cruzi* infection. So far the Platform for the Integral Care of Patients with Chagas Disease has trained more than 1,600 healthcare professionals.
- **Doctoral and professional-exchange programmes**, aimed at strengthening the skills of researchers and clinical staff from Bolivia, Paraguay and Spain.
- **Educational activities** aimed at informing the general population about Chagas disease and where to go for diagnosis and treatment.
- **Workshop on Imported Chagas Disease.** An annual event organised since 2005 in Barcelona by ISGlobal in collaboration with Fundación Mundo Sano that brings together around 150 scientists and health professionals from all over the world to review the latest advances made in the diagnosis, treatment and management of Chagas disease.
- **Triangular training.** With the support of the European Union's Adelante2 Programme, and thanks to the training acquired at the Chagas Platform Centres, specialists from Bolivia, Paraguay and Spain have exchanged knowledge in seminars and internships to improve care for people affected in their countries, generating greater demand and coverage.
- **PECAP.** Hybrid programme (online and face-to-face) of People-Centred Education in Care, focused on Chagas disease and cardiological disorders. With the participation of hundreds of Bolivian and international health professionals, carried out in collaboration with the Universidad Mayor de San Simón in Cochabamba, the Chagas Platform, the departmental SEDES and Novartis.



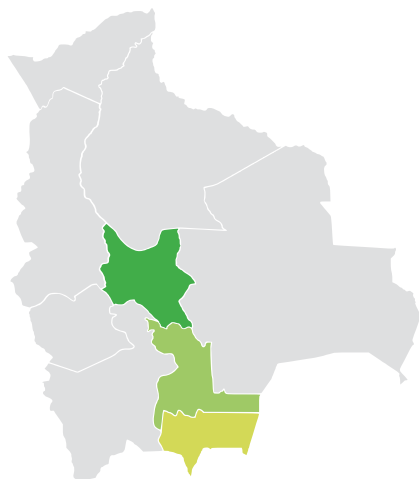
Platform for the Integral Care of Patients with Chagas Disease

The Chagas Disease Platform in Bolivia was set up in 2008 at the initiative of ISGlobal and CEADES with the aim of promoting comprehensive care for chronically affected people. Its work is based on four pillars: provision of medical care, training of health workers, research and community participation. The success of the model, implemented jointly with the CEADES Foundation and coordinated with the Bolivian Ministry of Health and the Departmental Chagas Programmes, led to the expansion, in just a few years, from 7 to 52 primary care centres in the national health system.

The Platform covers 75% of the population in the three most affected departments of the country (Cochabamba, Tarija and Chuquisaca). This scaling-up was done in a horizontal and decentralised manner, thanks to a methodology that is easy to replicate in the different centres. So far, 180,000 people have been reached, of whom more than 55,000 have been diagnosed and received treatment. In addition, a high percentage of health personnel received specific training in the management of the disease.

The Platform supports the National Chagas Programme to adapt protocols to the first, second and third level structures of the Bolivian national health system. Recently, this model is being applied in Paraguay.

10,000 people die of Chagas every year



■ Cochabamba ■ Chuquisaca ■ Tarija

ISGlobal's collaboration with Bolivian professionals and institutions has contributed to strengthening the capacities of the Spanish national health system in the diagnosis and treatment of patients with Chagas disease in Spain.

In addition, the coordination of protocols between the centres in Bolivia and Barcelona has made it possible for patients to continue receiving treatment and follow-up care in both countries when travelling back and forth.

Supporting the fight against Chagas disease in Paraguay

Since 2020, in collaboration with the Paraguayan Ministry of Public Health and Social Welfare (MSPyBS) and with the support of the Spanish Agency for International Development Cooperation (AECID), the Chagas Platform model has been implemented in Paraguay.

ISGlobal has collaborated in the development of the first Chagas disease management guidelines in the country, has promoted a Triangular Cooperation project between Bolivia, Paraguay and Spain aimed at knowledge Exchange between

professionals in those countries, and has promoted a research project on alternative diagnostic methodologies –more accessible and effective– for the detection of Chagas disease. In addition, together with the Probitas Foundation, we have collaborated with the Paraguayan health system on a project to improve access, coverage and quality of diagnosis in an area with a high incidence of Chagas disease in the country.



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