The Chagas Initiative aims to increase access to effective diagnosis and treatment for patients with Chagas disease, both in 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. Both in Spain and Bolivia, the Initiative undertakes research and advocacy projects, treats patients infected with Chagas and trains health professionals in the diagnosis and treatment 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 17 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 insect vector Triatoma infestans 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 patients 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 known why certain patients develop symptoms while others do not and there are no indicators to show who is going to 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 veterinary industry. 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, far fewer than 1% of people living with Chagas in the world receive treatment.
Estimated Cases of Chagas

- **Endemic Areas**: 6 - 7 millones
- **North America**: > 300,000
- **Europe**: 68,000 - 170,000
- **Japan**: > 3,000
- **Australia**: > 1,500

Less than 1% of people living with Chagas disease receive treatment

Between 48,000 and 87,000 people affected by Chagas live in Spain
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.

- **Clinical trials for new drug** candidates in collaboration with other organisations such as DNDi and Fundación CEDES.

- **Identification and development of biomarkers** for therapeutic efficacy in treated patients and for early detection of cardiac damage in patients with Chagas disease.

The global financial cost of Chagas disease exceeds US $7 billion annually.
A stronger international political commitment and a significantly larger financial investment are needed for the scaling up of existing treatment and for the development of new diagnosis tools and new drugs to treat Chagas disease.

In Spain, ISGlobal advocates for early detection of infection in pregnant women and newborns and quality care for patients living with the disease. Based on the high effectiveness of the treatment in newborns, the institution pushes for the establishment of a national vertical transmission control program, as currently few regions in Spain conduct 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. The institution also coordinates the Ibero-American NHEPACHA network, which aims to share experiences, develop research strategies on Chagas biomarkers and train researchers.

The Chagas Disease Coalition is an international alliance set up in 2012. It stimulates research and innovation and pushes for more access to diagnosis and treatment for Chagas patients. The Coalition includes ISGlobal, the Drugs for Neglected Diseases initiative (DNDi), the Mundo Sano Foundation, the Sabin Vaccine Institute, CEDES Foundation, the Sabin Vaccine Institute, the Texas Children’s Hospital Center for Vaccine Development, and the National School of Tropical Medicine at Baylor College of Medicine, among others.
Health staff’s lack of knowledge and experience in treating Chagas disease is one of the barriers that prevent people infected with the disease from getting properly diagnosed and treated. Therefore one of the Initiative’s key priorities is training healthcare professionals in both Bolivia and Spain. Activities in this field 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 Bolivian and Spanish researchers and clinical staff.

- **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.
Platform for the Integral Care of Patients with Chagas Disease

In 2009, ISGlobal, the Fundación CEADES, the Universidad Autónoma Juan Misael Saracho of Tarija, the Universidad Mayor de San Simón in Cochabamba, together with the Spanish Agency for International Development Cooperation (AECID) and the Bolivian National Chagas Programme set up the Platform for the Integral Care of Patients with Chagas disease. The Platform offers a model of care adapted to the national health policies and strategies of both Spain and Bolivia which includes the medical care of patients and the training of health professionals and researchers in both countries.

In Bolivia, the Platform has set up seven health care centres to provide diagnosis and treatment mainly to adult patients, as well as to undertake vector control initiatives and educational activities regarding basic aspects of Chagas disease. There are five centres in Cochabamba, one in Tarija and another one in Sucre.

Platform Centres

The centres operate with the same protocol as the one at Hospital Clinic’s International Health Service in Barcelona, so patients who relocate from Bolivia to Spain and vice versa, can continue their treatment and follow up care in either country. So far, over 26,000 patients have been attended to in the centres in Bolivia and over 2,850 Barcelona’s Hospital Clinic.

The health care model for the integral treatment of patients with Chagas disease has been extended to ten coordinated centres in the regions of Cochabamba, Chuquisaca and Tarija. The Platform supports the Chagas National Programme in adapting the Platform’s protocols to the first, second, and third level health structures of the Bolivian National Health System. ISGlobal’s collaborative work with Bolivian professionals and institutions has helped strengthen the capacities of the Spanish health system in the diagnosis and treatment of Chagas patients in Spain, where it is estimated there are between 48,000 and 87,000 people living with the disease.
ISGlobal’s mission is to promote health equity through excellence in research and the translation and application of knowledge. Our vision is a world in which all people can enjoy good health.

ISGlobal Initiatives

- Antibiotic Resistance Initiative
- Chagas Initiative
- Malaria Elimination Initiative
- Maternal, Child and Reproductive Health Initiative
- Urban Planning, Environment and Health Initiative