Chagas Disease Clinical Research

Platform

Newsletter

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Women at the center

How a Colombian woman's experience living with Chagas disease led to the creation of a patient association

Chagas in London

Disease screening brings together health promotion and the celebration of Latin American culture

Country in focus: Guatemala

Implementing a new model of care and advancing the decentralization of diagnosis

Joining forces for a Chagas-free future

María-Jesús Pinazo, MD, PhD (DNDi Latin America)

Although historical neglect continues to pose significant obstacles, the landscape of Chagas disease has begun to improve, and this has renewed the optimism of researchers, healthcare professionals, affected individuals, and entire communities. Scientists are working more closely together on the development of new treatments and biomarkers; diagnosis is becoming increasingly accessible thanks to the expansion of rapid testing and strategies to reach remote communities; and we are seeing better organized patients sharing information about the disease with their communities, leaving behind outdated and stigmatizing beliefs. In this issue, we bring together initiatives and perspectives that demonstrate that, even in the face of persistent challenges, there are reasons to cultivate hope for a future without Chagas.

The cover of this magazine is a portrait of this change. Gloria Yate lives with Chagas disease, and this year she created an **association for patients and families affected by the disease in Colombia**. Community associations play a vital role in amplifying the voices of affected individuals and in helping advocate for public policies, promote health education, and improve living conditions. In this context, we also feature a successful initiative from London, in which **cultural events aimed at the Latin American community** become entry points for the diagnosis of Chagas disease. Through this initiative, more than 100 people were diagnosed and referred for specialized care to receive timely treatment and follow-up.

And speaking of access to care, for the first time the concept of treatment gap is being used to **monitor and evaluate progress in the care of people with Chagas disease**. The indicator, implemented by DNDi and collaborators, is based on the number of people diagnosed and treated within the same period and territory. In Colombia, the data are encouraging: the treatment gap was reduced from 77% to 48%. **Rapid tests are an essential tool** in this process. Similar progress has been made in Guatemala, where efforts to expand access to diagnosis have brought testing closer to the most remote communities where people with Chagas disease live.

In research and development, biomarker studies are advancing and could pave the way for **assessing treatment effectiveness in months rather than decades**. This would benefit both clinical practice and the development of new drugs by shortening the time needed to confirm treatment outcomes. At the same time, initiatives aimed at children, such as those carried out by the Argentine group PEDCHAGAS, reinforce the need to **develop therapeutic regimens that are more suitable for the pediatric population**, with essential attributes tailored to children's needs.

Having treatments and new therapeutic strategies available is fundamental, but insufficient if they do not reach the affected people in a timely manner. Regulatory approval is only a "gateway" and does not guarantee that medicines will reach patients. As we emphasize throughout this bulletin, opening that door is necessary, but so is **putting in place regulatory mechanisms and implementation strategies** that accelerate access to medications and bring innovation closer to those living with the disease.

We hope that this issue also helps you renew your optimism and strengthen your belief in a near future without Chagas. o

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Cover photo: Marcelo Bartolomé - DNDi

Regulatory mechanisms as allies in advancing new drugs for Chagas disease

Olumoroti Olowonyo (DNDi)

Photo: Mateus Santos-DNDi

Henrique Nassu in the Chemistry laboratory at the University of São Paulo (USP)

New drugs are needed for the treatment of Chagas disease. The available medications (benznidazole and nifurtimox) have limitations regarding efficacy and safety, besides long treatment regimens. These limitations often result in poor tolerability, reduced patient adherence, and premature treatment discontinuation.

However, the development of new and effective treatments for Chagas disease poses multiple challenges. One of the main obstacles is demonstrating the efficacy of these medications through clinical trials to establish a positive benefit-risk balance that supports their use, which is required for approval by regulatory authorities.

Assessing the efficacy of treatments for Chagas disease is particularly challenging due to the disease's pathophysiology, especially during the chronic phase. At this stage, it is difficult to measure the absence of parasites in the body using direct blood tests, since the parasites are usually found deep within the tissues. Obtaining tissue samples from affected organs (e.g., heart or colon) is an invasive procedure and is therefore not performed routinely. Serological markers have been used as alternative indicators of parasite elimination; however, their accuracy as surrogate markers capable of predicting clinical benefit has not yet been established.

To support the development of new drugs for the treatment of people living with Chagas disease, drug developers have regulatory mechanisms that facilitate approval and early access to treatment.

One of these mechanisms is the **biomarker qualification pathway**. Its objective is to obtain formal regulatory acceptance of a biomarker that is reliable, validated, and suitable for use as a surrogate endpoint in clinical trials for Chagas disease. This allows researchers and drug developers to design clinical trials using a biomarker qualified by the regulatory authority.

Expedited regulatory designations, such as "PRIME" or "Breakthrough Therapy," support the development of innovative medicines by enabling an active and enhanced dialogue with regulatory authorities throughout the process. Drug developers can engage with regulators early in the development process to discuss the evidence needed for future marketing authorization applications.

Accelerated assessment mechanisms allow for a faster review of marketing authorization applications compared to standard timelines. They are reserved for drugs of major interest to public health or considered a significant therapeutic innovation. The goal is to enable earlier approval and access for patients. Conditional approval is a regulatory pathway that allows for the early prescription of medicines for patients with unmet medical needs, based on incomplete clinical data, with the commitment that the developer will provide complete clinical data within an agreed timeframe following authorization.

Given the numerous challenges inherent in drug development for Chagas disease, it is essential that researchers and pharmaceutical companies collaborate with regulatory authorities from the early stages of development to identify and utilize available regulatory mechanisms that can shorten the time to marketing authorization and facilitate early patient access. ○

Therapeutic response biomarkers and the future of research

Priscila S. G. Farani, PhD (University of Texas)

One of the greatest challenges in Chagas disease research remains the lack of reliable biomarkers to predict therapeutic outcomes and to enable timely clinical decisions in patient management. For decades, research groups have sought meaningful connections between parasite clearance, host biological responses, and specific *Trypanosoma cruzi* markers. Yet, most candidate biomarkers have fallen short, largely because conventional serological endpoints typically require 10 to 20 years of follow-up before any meaningful correlation with treatment success or failure can be established, an unacceptably long period for both clinicians and patients.

Molecular biomarkers, by contrast, offer a different timescale. They respond early and rapidly, capturing a snapshot of the host's biological state long before classical protein-based markers show measurable shifts in expression. For this reason, our group has focused on transcriptomic biomarkers identified through next-generation sequencing.

Our approach is also novel in design: rather than building on targets already established in the literature, we are leveraging **serum samples from well-characterized clinical trials** such as Biomarcha[1], BENDITA[2], and TESEO[3] to profile patients undergoing Benznidazole or Nifurtimox treatment. These cohorts (groups of patients monitored over a defined period) provide a uniquely valuable window into treatment response across diverse clinical contexts.

By integrating microRNA (small molecules that help regulate gene activity) and gene expression (the way genes are activated or deactivated in cells) data with established therapeutic outcomes (serology and parasite clearance), in addition to applying a machine learning framework to interrogate these datasets, we aim to identify and rigorously validate a **panel of biomarkers capable of genuinely predicting therapeutic response.**

A validated panel of this kind would mark a significant step toward optimized treatment decisions for Chagas disease patients, equipping clinicians to assess effectiveness within months rather than decades. It could also **accelerate the evaluation of new drug candidates** by shortening the timeline required to confirm efficacy, an essential advance for a disease that has waited far too long for better therapeutic tools.

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Photo: J.R. Hernandez

Dr. Priscila Farani working on an RNA extraction from patient blood samples, in the Farani Molecular Diagnosis Laboratory at the University of Texas at El Paso.

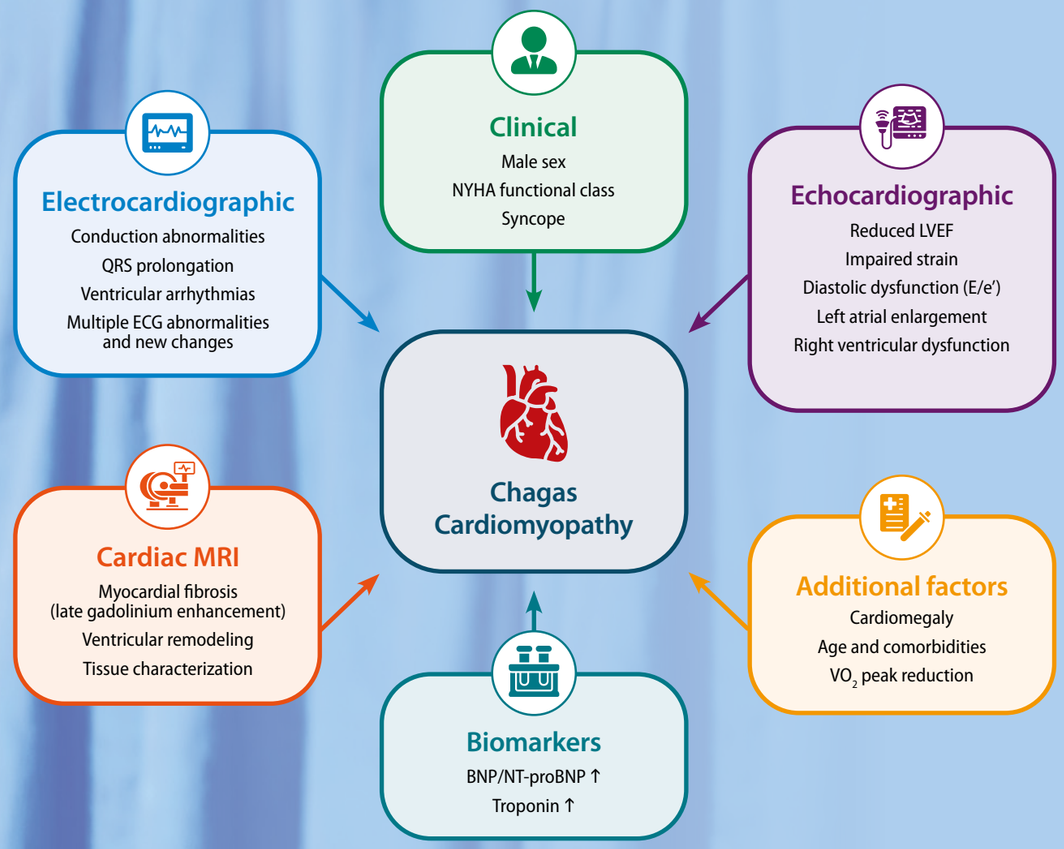
The role of prognostic indicators in Chagas cardiomyopathy

Maria do Carmo Pereira Nunes, MD, PhD (Universidade Federal de Minas Gerais)

Lourdes Mónica Cruz, 37, during a medical appointment. She discovered she had Chagas disease in 2015, while pregnant.

Photo: Felipe Abondano-DNDi

Key indicators associated with disease progression and mortality



Prognostic assessment in Chagas cardiomyopathy encompasses a broad spectrum of demographic, clinical, electrocardiographic, imaging, and biomarker-derived parameters. Despite major advances in cardiac imaging and molecular profiling, symptom burden, particularly as assessed by New York Heart Association (NYHA) functional class, remains one of the most powerful and consistent predictors of prognosis in Chagas cardiomyopathy.

Electrocardiography is an important tool for initial prognostic evaluation. Several ECG abnormalities correlate closely with disease severity and mortality risk, including conduction disturbances, prolonged QRS duration, and ventricular arrhythmias. In addition, the emergence of new ECG abnormalities frequently signals disease progression. Twenty-four-hour Holter monitoring further identifies non-sustained ventricular tachycardia, which is independently associated with sudden cardiac death.

Among structural and functional markers, **left ventricular ejection fraction** (LVEF) represents the cornerstone of prognostic assessment in Chagas cardiomyopathy. Multiple studies have consistently demonstrated that reduced LVEF is one of the strongest predictors of mortality. More recently, **cardiac magnetic resonance** (CMR) has substantially refined prognostic evaluation by enabling detailed tissue characterization and quantification of myocardial fibrosis. Current staging systems for Chagas cardiomyopathy rely on LVEF, with mortality increasing markedly from stages A to D.

Beyond LVEF, several echocardiographic parameters provide incremental prognostic information. Segmental wall motion abnormalities, often representing early manifestations of myocardial injury, are associated with disease progression and adverse outcomes. **Myocardial deformation imaging** has further improved the detection of subclinical dysfunction, with impaired global longitudinal strain consistently associated with worse prognosis. Similarly, indices of diastolic dysfunction, including elevated E/e' ratio (*a parameter used to noninvasively estimate left ventricular filling pressures*), left atrial enlargement, and right ventricular dysfunction, have been independently linked to increased mortality.

Biomarkers also play an important role in risk stratification. Elevated levels of BNP or NT-proBNP and high-sensitivity troponin are strongly associated with ventricular dysfunction and adverse outcomes. Additional prognostic factors include cardiomegaly, reduced peak oxygen consumption (VO_2 peak), QT interval dispersion, age, and comorbidities. Integrating these parameters into routine clinical practice allows earlier identification of high-risk patients, supports therapeutic decision-making, and may ultimately improve clinical outcomes in Chagas cardiomyopathy.

Bernabe Villazon Mojica, a patient from "old Machin" that is living with Chagas disease, with her baby.

Photo: Neil Brandvold-DNDi

The importance of developing pediatric formulations for neglected diseases: focus on Chagas disease

Jaime Altcheh, MD, PhD (Multidisciplinary Institute of Pediatric Research CONICET-GCBA, Ricardo Gutiérrez Children's Hospital)

The development of pediatric formulations is one of the most urgent challenges in the treatment of neglected diseases, including Chagas disease. Historically, pharmaceutical development has focused on medications designed for adults, often requiring the adaptation of tablets or the creation of artisanal preparations that limit safety, efficacy, and patient adherence. Pediatric formulations are designed to meet children's distinct physiological, metabolic, and developmental needs. They enable precise dosing and help prevent toxicity from unsuitable excipients, including certain preservatives, solvents, or alcohol-based vehicles that can cause adverse effects, particularly in breastfeeding infants and young children. Given that children exhibit significant differences in the absorption, distribution, metabolism, and elimination of drugs due to ongoing organ maturation, simply reducing the adult dose is neither safe nor effective.

Consequently, regulatory agencies like the European Medicines Agency (EMA) and the United States Food and Drug Administration (FDA) currently emphasize the imperative need to **incorporate specific plans for pediatric formulations from the earliest stages of drug development.** In Chagas disease, where congenital transmission is a major route of infection affecting newborns, etiological treatment relied for decades on adult formulations of benznidazole[1] and nifurtimox[2]. In pediatric practice, this necessitated crushing tablets without accurate dosing or any guarantee of stability or suitability for use in children. The introduction of dispersible pediatric formulations of these drugs represented a transcendental breakthrough.

The PEDCHAGAS group, coordinated by the Parasitology and Chagas Service of the Ricardo Gutiérrez Children's Hospital, has been an international pioneer, **validating therapeutic regimens tailored to neonates and breastfeeding infants through clinical and pharmacokinetic studies**. The group has contributed significantly to the development of safer and more effective pediatric therapeutic strategies for *Trypanossoma cruzi* infection. Its research has shown that early treatment makes it possible to achieve very high cure rates while preventing the disease progression to chronic cardiac or digestive forms. Furthermore, etiological treatment for girls and women of childbearing age is key to preventing future cases of congenital Chagas disease.

Recently, a "Target Product Profile" (TPP)[3] was prepared in collaboration with international experts to guide the development of new formulations, prioritizing attributes like dispersibility, palatability, dose flexibility, and stability in tropical climates. Despite the progress, challenges persist due to low commercial profitability and insufficient investment in research. Therefore, collaboration between academic institutions, international organizations, and the pharmaceutical industry is essential to promote therapeutic solutions tailored to the needs of children.

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Treatment gap in Chagas disease: evidence from implementation experiences in Latin America

Andrea Marchiol, MD (DNDi Latin America)

Rafael Herazo Tapia, a physician at DNDi, tests a patient for Chagas disease during a community health visit.

Photo: DNDi

It is often stated that only 1% of patients who require etiological treatment for *Trypanossoma cruzi* infection receive it, but there are no recent data to confirm or refute this figure. Advances in Chagas disease control have focused primarily on health promotion and prevention strategies. Patient care was historically neglected and only gained momentum over the last decade, when evidence became well established that etiological treatment in women of childbearing age significantly reduces congenital transmission, leading to a reassessment of earlier views that questioned its benefits.

However, the etiological treatment of Chagas disease remains an outstanding debt.

DNDi projects in partnership with other organizations in the region demonstrate that organizing care and formalizing comprehensive pathways—including intercultural, clinical, and maternal-perinatal aspects—enable concrete progress and significantly impact the care of people living with Chagas disease. For this reason, DNDi has developed the **4D access strategy: diagnosis of the situation, design of the care pathway, delivery through pilot projects, and, finally, demonstration of impact**. This last phase is becoming increasingly relevant in monitoring and evaluation, as it demonstrates the impact—or lack thereof—of interventions.

For the first time in our contexts, monitoring and evaluation processes for Chagas disease include the calculation and analysis of the treatment gap, a concept already used in other chronic diseases and mental health. This indicator is defined as the difference between people who have been diagnosed and should receive treatment and those who actually receive it. Generally, treatment is prioritized for asymptomatic patients (~70%); however, the indication may be extended to cases with mild cardiac involvement, meaning that up to 85% of people living with the infection may be eligible for treatment.

As part of DNDi's Chagas program, we have analyzed the **treatment gap** in Colombia, Guatemala, and Bolivia, with a national focus in Colombia and a subnational focus in the other two countries, covering intervention periods of approximately a decade and linking their evolution to key implementation milestones.

Based on official data, the treatment gap in Colombia decreased from 77% to 48% between 2012 and 2022. This reduction is mainly associated with healthcare policies, such as the implementation of care pathways, new diagnostic algorithms, and maternal-perinatal care, and could fall below 15% by 2030 if these efforts in patient care are sustained and follow the same trend.

In Guatemala (Jutiapa, 2015–2025), the gap also fell from 19.3% to less than 6%, driven by the elimination of the main intradomiciliary vector and the establishment of a specialized clinic for people with *T. cruzi* infection in Comapa, which has strengthened patient care in an area with a high disease burden.

By contrast, in the Bolivian *department* of Tarija, the treatment gap increased from 25.5% to 53% between 2015 and 2025. Amid a complex set of circumstances, the reduction in external support for interventions focused on patient care may have substantially affected diagnostic and treatment coverage.

These cases illustrate the monitoring of the treatment gap and its associated outcomes, and help relate these outcomes to key milestones, ranging from the implementation—or absence—of public policies to extraordinary events with significant impact. They also help guide future interventions aimed at narrowing this gap. Incorporating the treatment gap into program evaluation is key to identifying and addressing critical bottlenecks.

Country in focus: Guatemala

Transformations and opportunities to expand timely access to care for people affected by Chagas disease

Rafael Herazo Tapia, MD (DNDi Latin America)

Guatemala, along with El Salvador and Honduras, is among the Central American countries with the highest prevalence of Chagas disease[1]. Against this backdrop, the country continues to face the challenge of strengthening control, prevention, and care efforts for people affected by the disease.

For more than two decades, a range of institutions have been implementing initiatives to address Chagas disease in Guatemala. The Japan International Cooperation Agency (JICA), the National Chagas Programme, the University of San Carlos, the Universidad del Valle, and other institutions have contributed to important advances, particularly in vector control.

In 2018, the **Alianzas Project**[2], funded by the International Development Research Centre (IDRC), was launched. Led locally by the University of San Carlos and implemented with the participation of national and international partners—including DNDi and Fundación Mundo Sano—the project aimed to contribute to eliminating Chagas disease as a public health problem through a multidimensional approach. This included actions to expand access to diagnosis and treatment in the department of Jutiapa.

Within this framework, DNDi and the Ministry of Health successfully validated the **serological diagnostic algorithm for *Trypanosoma cruzi* infection and advanced the decentralization of diagnosis** in the departments of Jalapa and Quiché, expanding diagnostic coverage and supporting the implementation of the Pan American Health Organization's (PAHO) ETMI Plus strategy.

In terms of access to treatment, Guatemala has stood out since 2019 for implementing a model of care known as the **Chagas Clinic**[3], currently located in the municipality of Comapa (Jutiapa), where partners such as DNDi and IBERMED provide technical support. This sustainable model has been integrated into routine local health services and is primarily led by nursing professionals. The initiative has achieved treatment initiation rates above 75% and treatment completion rates above 90%. As a result, it has helped **reduce the treatment gap**, that is the proportion of people diagnosed with *T. cruzi* infection who do not receive antiparasitic treatment—**from 15.4% in 2018 to 5.8% in 2025.**

Today, new opportunities are emerging to further expand timely access to care for people affected by Chagas disease in Guatemala. Recently, PAHO published the first generic protocol for the diagnostic evaluation of rapid diagnostic tests for Chagas disease[4–5], with the aim of supporting and accelerating efforts to simplify diagnosis across the region. By the time this newsletter is published, Guatemala's National Health Laboratory will likely have already begun validating these rapid tests in the country.

The progress achieved in Guatemala over the past two decades now needs to be consolidated, while opportunities to continue expanding access to timely, quality care should remain a national priority. Cooperation projects led by DNDi, IBERMED, Fundación Mundo Sano, and other partners were designed to strengthen this shared objective and continue to contribute to expanding access to care for people affected by Chagas disease. ○

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Does drug registration improve access to treatment?

F. J. Sancho Mas (Global Chagas Coalition)

Maria Alejandra Montano, a nurse with the Dusawaki IPSI, speaks to Nicolas Antonio Nieves Diaz at a community center in "new Machin".

Photo: Neil Brandvold-DNDi

The registration of medicines for Chagas disease is often presented as a major step toward improving patient access. But is registering benznidazole or nifurtimox really enough to ensure they reach those who need them? It is not that simple.

First of all, registration is important because it provides the **legal basis for a medicine to be routinely purchased, distributed, and prescribed** within healthcare systems. Without registration, countries depend on exceptional mechanisms: special imports, donations, or case-by-case authorizations. Some of these mechanisms, including procurement through the PAHO Strategic Fund, present important challenges, while donations and pooled procurement cannot be relied upon indefinitely. So, if a medication is registered, does that solve the problem? Not necessarily. An international analysis by Mendes et al. (2022)[1] showed that, even in countries in the Americas where benznidazole and nifurtimox are registered, primary care services often face shortages due to problems with supply, demand forecasting, or internal distribution.

Outside endemic areas, the U.S.[2] provides a particularly illustrative example. Following the FDA approval of benznidazole in 2017, the use of the medication increased, but significant barriers related to medical awareness, healthcare system navigation, and underdiagnosis persisted. The study by Yoshioka et al. (2020)[3] concluded that regulatory approval was only an intermediate step in the complex process of expanding access. On the other hand, in Spain, only nifurtimox is currently registered, while benznidazole is still undergoing registration. Based on the experience of the Global Chagas Coalition, access to benznidazole through hospital channels remains limited until it obtains the same registration status as nifurtimox. Ensuring that both medicines are available is essential so that, if adverse effects occur, patients can switch treatment without being left untreated.

In conclusion, does drug registration improve access to treatment for people affected by Chagas disease? The answer is "Yes, but...". Of course, it facilitates public procurement, inclusion in treatment guidelines, and reliable supply. Initiatives promoted by the WHO, such as the *Collaborative Registration Procedure*[4], seek to accelerate regulatory processes and reduce delays across countries. But real access requires more than registration. It requires **early diagnosis, trained professionals, efficient supply chains, and sustained funding**. Ultimately, registration is not the final goal, but a gateway.

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[4] WHO Collaborative Registration Procedure: https://www.who.int/teams/regulation-prequalification/regulation-and-safety/facilitated-product-introduction/collaborative-registration-procedure

Community-based actions for Chagas disease screening in London

Natalie El Kheir, PhD (London School of Hygiene & Tropical Medicine)

Around 300,000 people living in the UK were born in countries where Chagas is endemic, yet until recently there was little evidence to guide screening policy or service delivery. The Translating Epidemiology to Screening for *Trypanosoma cruzi* (TEST)[1] studies were established to address this gap. Between 2021 and 2025, 1,333 people at risk of Chagas disease were screened across community settings, primary care, antenatal services and HIV clinics in London. Overall, 6.5% were found to have *T. cruzi* infection, although prevalence varied considerably between settings.

One of the most successful approaches was **community-based screening**. Among 581 people screened at community events, 84 (around 15%) were diagnosed with Chagas disease and linked into specialist care. Working alongside Latin American charities, community leaders, businesses and artists, screening events became welcoming community spaces that combined **health promotion with cultural celebration**. Point of care tests provided results within minutes, helping overcome barriers associated with conventional healthcare settings and reaching communities with a high burden of disease.

The research also highlighted opportunities to tackle congenital Chagas disease. Analysis of national birth data estimated that targeted antenatal screening in England and Wales could identify around 186 women with *T. cruzi* infection and eight congenital infections annually.

Screening of 351 Latin American people receiving HIV care in London identified only one confirmed case of Chagas disease. Complementing this work, a comprehensive systematic review of HIV– *T. cruzi* co-infection highlighted the high mortality associated with reactivation disease and reinforced the importance of screening people at risk.

This work demonstrates that neglect is not inevitable. More than 100 people have now been diagnosed and linked to specialist care in London, the first UK Chagas cohort study has been established, and the evidence generated has helped secure funding for a charity-led Chagas screening service delivered by the Indoamerican Refugee and Migrant Organisation (IRMO) in two of London's boroughs with the largest Latin American communities (Southwark and Lambeth). Initiatives like these are hoped to sustain improved access to diagnosis, treatment and long-term care for London's community affected by Chagas.

[1] **Elkheir N.** *The TEST Studies: Translating Epidemiology to Screening for Trypanosoma cruzi (Chagas disease)* [tesis doctoral]. London: London School of Hygiene & Tropical Medicine; 2025. Disponible en: https://researchonline.lshtm.ac.uk/id/eprint/4678075/.

Photo: Pamela Gomez Jimenez

Musical band, Del Titicaca, playing at the first Chagas screening event in London, in 2021.

New horizons in Chagas research

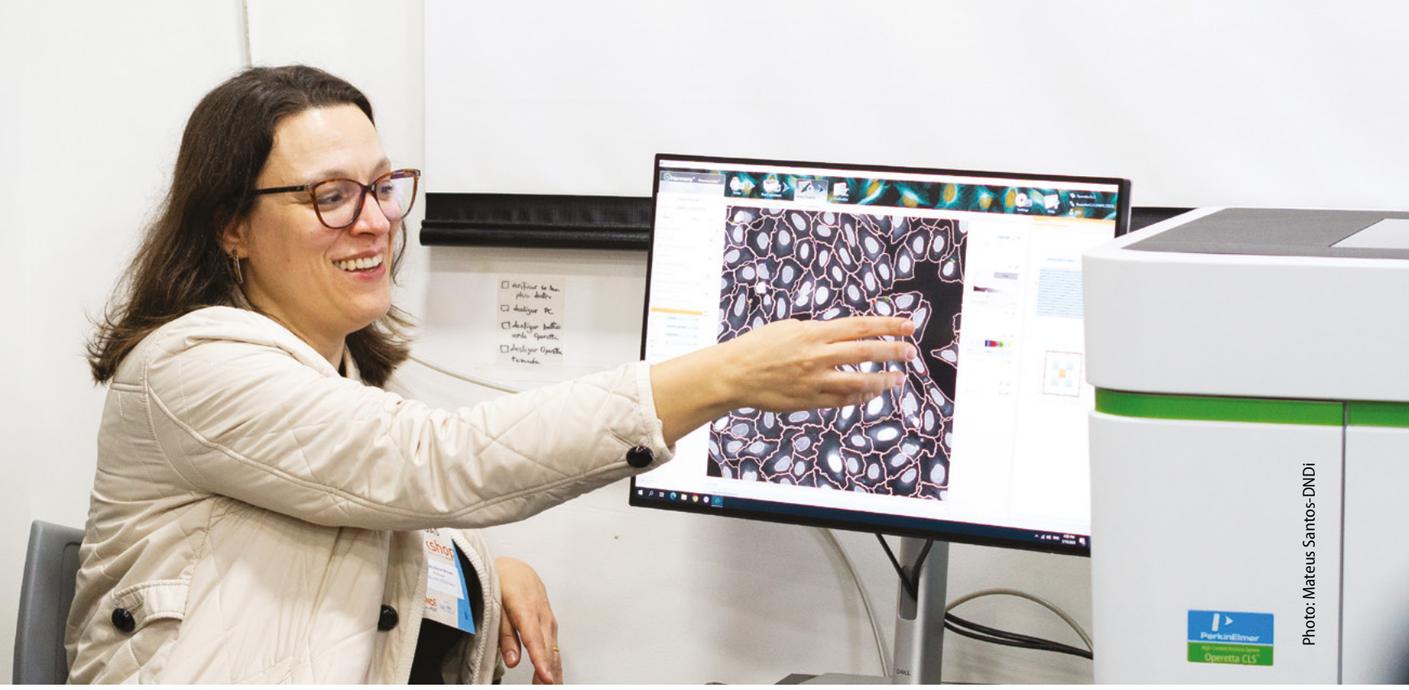


Photo: Mateus Santos-DNDi

In an interview for the **Chagas Clinical Research Platform newsletter**, Dr. Carolina Borsoi, professor in the Department of Clinical and Toxicological Analyses at the School of Pharmaceutical Sciences of the University of São Paulo (USP), explains why the high genetic variability of *Trypanosoma cruzi* calls for the development of more accurate study models, as well as stronger multidisciplinary collaboration and greater investment. Borsoi highlights the potential of new experimental models and the discovery of compounds with sterilizing activity that promise to be safer than current treatments.

What are the main challenges in better understanding *T. cruzi* and developing more effective tools against Chagas disease?

Despite all the significant efforts and research into the biology and genetics of *T. cruzi*, we still do not adequately understand which genetic and phenotypic factors of the parasite determine the progression of Chagas disease. Furthermore, we know very little about how the genetic characteristics of affected people influence this progression. Continuous investment in research in these areas is necessary, and advancing our knowledge depends on the development of new *in vitro* and *in vivo* models that can better replicate the complexities and nuances of Chagas disease, as well as more basic research involving patients living with the disease.

> **...we still do not adequately understand which genetic and phenotypic factors of the parasite determine the progression of Chagas disease.**
>
> Carolina Borsoi, PhD

How does the parasite's genetic variability affect drug development and our understanding of disease progression?

The variability and genetic adaptability of *T. cruzi* hinder research and innovation precisely because they increase complexity and, consequently, the number of parameters and factors that must be considered for the development of new drugs and biomarkers for Chagas disease. For example, the validation of new therapeutic targets, an essential step in the development of new drugs, can be hindered by the number of DNA sequence variations present in the target across different parasite populations. Therefore, strategies for developing new drugs for Chagas disease must include efficacy studies in different disease models that consider the genetic variability of *T. cruzi*. Similarly, our knowledge of the correlation between parasite genetics and the clinical progression of the disease is still limited, and cutting-edge experimental models are helping us better understand these processes.

For many years, Chagas disease received little investment in research and development. Is there greater interest, collaboration, or new approaches driving this field today?

Research into new drugs for neglected diseases experienced an increase in interest and investment in the 2000s and 2010s, with numerous notable initiatives. Today, although investment continues, it is more fragmented and subject to greater international competition for funding sources. This context has made collaborative research increasingly important.

Which recent advances in Chagas disease research do you consider most promising?

The field has made considerable progress over the last 15 years, with the development of new, more relevant experimental models from a pathophysiological point of view, both *in vitro* and *in vivo*. These models have advanced our understanding of the basic biology of *T. cruzi* and supported the development of new drugs and biomarkers for Chagas disease. I believe one of the most promising advances is the discovery of new drugs with sterilizing activity, capable of eliminating the parasite from the host in experimental models through novel mechanisms of action. These drugs have so far proven to be safer than existing therapeutic options.

Building collaborative networks is important. Could you share examples of how collaboration between organizations has driven discoveries or strengthened scientific capabilities in this field?

The search for health solutions, and in particular the development of new drugs, requires efforts from multiple disciplines; therefore, a multidisciplinary and collaborative approach is essential, especially in a context of limited funding. At the same time, multidisciplinary collaborative networks play a key role in training highly qualified human resources, which I find particularly rewarding and consider one of academia's core missions. In this regard, I would highlight the consortia coordinated by DNDi dedicated to the discovery and development of new drugs for neglected diseases, including Chagas disease.

Can we conclude from your answers that the landscape of Chagas disease is likely to change in the coming years?

Without a doubt. Research efforts, including the discovery and development of new drugs and new biomarkers to evaluate therapeutic efficacy and disease progression, will have a positive impact on the landscape of Chagas disease and bring innovations that will benefit patients.

Protecting future generations

Gloria Yate (Apachafi)

Photo: Ana Rezende-DNDi

I am Gloria Yate, a Colombian woman born and raised in a small rural community in the *department* of Tolima. I grew up in a very modest house with mud walls and a palm-thatched roof, which I shared with my mom, my seven siblings, and hundreds of insects known as 'pitos' that crawled along the walls.

The 'pitos' bit ourselves frequently, but we never thought much of it. We thought they were just mosquitoes. I did not know that those "guests" would shape much of my life. Today I have Chagas disease and work to support otherpeople living with Chagas disease and their families across the country.

It was years later, when I was around 40 years old, that the problems began. I suffered from constant fevers, body aches, severe tonsil inflammation, and heart problems. Doctors ran electrocardiograms and told me there was "something unusual," but they didn't know what it was.

It wasn't until I tried to donate blood one day and was turned away without any explanation that I finally began to understand what was going on. I thought I had AIDS, but an internist decided to investigate further and referred me to the National Institute of Health for a specific test to detect Chagas disease. It was the first time I had ever heard of that disease, and I tested positive.

Today, I also believe that moving to Bogotá at the age of 12 in search of better opportunities probably saved my life. Had I remained in the rural area of Tolima, where I grew up, it is very likely that I would never have been diagnosed and might not be here today to tell this story.

After discovering the disease, another challenge began, this time related to the treatment. I was prescribed nifurtimox for 30 days, and the side effects were severe. I was in pain and felt weak. Even though I completed the treatment, my heart problems persisted, so years later I underwent surgery to have a pacemaker implanted.

During my treatment, I learned more about Chagas. My father, for example, died of a heart attack and we never knew whether it was related to Chagas. So I encouraged my siblings to get tested, and in the end, five of them tested positive.

These experiences inspired me to help other people living with Chagas. When I see this year's World Chagas Disease Day slogan: **"Women at the center: protecting the next generation from Chagas disease,"** I feel that it also speaks to my own story. That is why I am part of DNDi's Latin American Community Advisory Committee and helped create Apachafi, an association for people and families affected by this disease. I do not want other people to spend so many years without knowing what they have or ending up in a hospital when it is already too late.

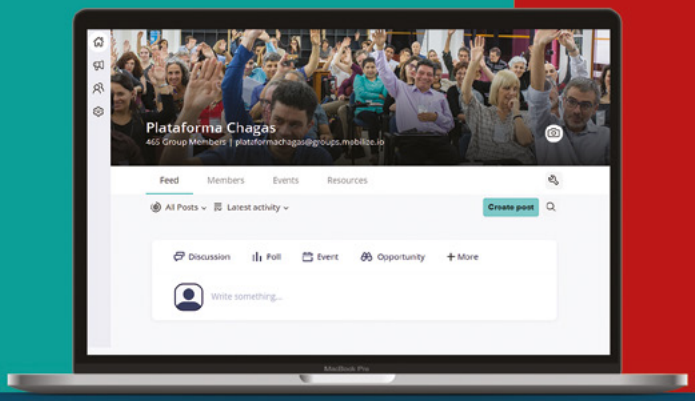
Many of us women spend our lives caring for our children, our families, and our communities, even when we are sick ourselves. I myself have often been afraid for my children and thought about how many people were going through the same thing without information, without a diagnosis, and without support, and **I do not want them to walk this path alone**.

I have learned that our voices can indeed help, and that sharing our story can also save lives.

Join more **than 500 members** of the Chagas Platform!

Connect with an international community of **researchers**, **healthcare professionals**, and **patient representatives** dedicated to **advancing clinical research on Chagas disease**.

On the webforum, **you can** follow the latest developments in the field, participate in technical discussions, share documents and scientific articles, promote events, ask questions, and expand your professional network.



The Platform brings together members from **more than 150 institutions** across **24 countries, working together** to accelerate the **development of new treatments** for **Chagas disease**.

Register using the **link** or the **QR code**

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