

First large-scale survey of Chagas disease in US confirms that the 'silent killer' is a major public health challenge

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The triatomine bug, known as the 'kissing bug,' is found from the Southern United States to southern Argentina. Credit: Fabio Nascimento-DNDi

A study of almost 5,000 Latin American-born residents of Los Angeles

County found that 1.24% tested positive for Chagas disease, a parasitic infection that can cause life-threatening heart damage if not treated early. Chagas disease is one of the leading causes of heart failure in Latin America.

This is the first epidemiological study to back up the Centers for Disease Control and Prevention's (CDC) estimate that approximately 300,000 people are living with this disease in the United States. The parasite that causes Chagas disease, *Trypanosoma cruzi*, is transmitted mainly by the bite of the triatomine bug, which is found throughout the Americas. Roughly 30% of those infected will develop serious cardiac, digestive, or neurological disorders. The disease is not generally transmitted from person-to-person.

"Less than 1% with the infection are receiving treatment for Chagas disease," said Dr Sheba Meymandi, Director of the Center of Excellence for Chagas Disease (CECD) at Olive View-UCLA Medical Center and the study's main author. "Without treatment many Chagas patients are at risk of a "silent death" due to [heart failure](#). Our study demonstrates the need for similar research in other states, and underscores the critical importance of early detection and treatment to tackle this public health challenge in the US."

The study was coordinated by the CECD - the first and only center of excellence for the diagnosis and [treatment](#) of Chagas disease in the US. Previous estimates were based on World Health Organization (WHO) estimates of prevalence in Latin American countries, immigration data, and data from US blood donations. This study was supported by the Drugs for Neglected Diseases initiative (DNDi) and Doctors Without Borders/Médecins Sans Frontières (MSF).

The CECD provides free screening for Chagas disease in the Los Angeles community. From April 2008 to May 2014, the organization

participated in 89 health fairs to screen people at risk of Chagas disease. Out of the 4,755 residents that were screened, there were 59 confirmed cases of Chagas disease (1.2%). The study suggests that around 30,000 people in the Los Angeles area are infected - backing up the CDC's nation-wide estimates of 300,000.

"Although this study concentrated on Latin American-born residents of Los Angeles, Chagas disease has also been in the U.S. for centuries," said Colin Forsyth, an epidemiologist from DNDi and MSF working in support of the CECD. "The bugs that transmit Chagas disease live in 27 states - the whole southern half of the country, and we know they sometimes infect people, but we need further research to determine how often this takes place."

An estimated 5.7 million people are infected with Chagas disease worldwide, including 21 Latin American countries. The only drugs that successfully kill *Trypanosoma cruzi* parasites are benznidazole and nifurtimox, both more than 40 years old. Presently, neither drug is registered for use in the US by the Food and Drug Administration (FDA).

Boosting access to these drugs and developing newer, better treatments will be critical to any Chagas disease response. For more on DNDi's efforts to develop improved treatments and formulations for Chagas [disease](#) please [click here](#).

Provided by Drugs for Neglected Diseases Initiative

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