

After 100 years, time to break silence on Chagas disease

For more on the MSF campaign see <http://www.chagas-break-the-silence.com>

For more on the history of Chagas disease see *História, Ciências, Saúde—Manguinhos* 2009; 16 (suppl 1): 13–34

On the centenary of the discovery of Chagas disease, the same concerns remain about inaction over the disease as raised by Carlos Chagas. On July 9, Médecins Sans Frontières (MSF) announced a campaign that urges governments to admit the true impact of Chagas disease and take immediate action to increase the number of people diagnosed and treated.

In May, a resolution on Chagas disease was due to be voted on by health ministers at the World Health Assembly (WHA), but was postponed for a year as the meeting was cut short due to influenza H1N1. "At the 100th anniversary of Chagas discovery, we had expected that the WHA would adopt a resolution where all affected countries agree to integrate care of acute and chronic Chagas patients into their primary health-care systems and to invest more in research", says Roger Teck, director of operations of MSF Spain. But this delay "should not be used as an excuse for inaction", urges Teck. Governments of countries with endemic Chagas disease should develop and implement better national and international protocols.

History can inform current debates on Chagas disease and other neglected tropical diseases and disease of poverty, says Simone Kropf, historian and researcher at the Oswaldo Cruz

Institute (Rio de Janeiro, Brazil). By 1909, Chagas, a young researcher at the Oswaldo Cruz Institute, had made the "triple discovery" of the vector (a blood-sucking triatomine bug, known as *barbeiro*, barber bug, or kissing bug), the pathogen (*Trypanosoma cruzi*), and the human disease that now bears his name. Throughout Chagas life "he strongly demanded that the Brazilian government fought this and other endemic diseases that affected the population of rural areas", Kropf explains. Chagas viewed the disease as a threat to progress of the country. "He drew attention, for example, to the importance of fighting the vectors through improvements in housing conditions of these populations, emphasising that it was a disease deeply related to poor living conditions in the interior of the country".

The disease has remained strongly linked with poverty in rural areas, and programmes to tackle Chagas have generally focused on vector control for disease prevention. But a decade of MSF experience in Honduras, Nicaragua, Guatemala, and Bolivia has shown that early diagnosis and treatment is possible and effective, while treatment of patients up to age 50 years can prevent worsening of cardiomyopathy and other complications. "In endemic countries, governments should do active screening, diagnose, and treat many more patients at primary care level", said Gemma Ortiz, senior advocacy officer for Chagas disease in MSF.

The anniversary of Chagas disease discovery was "a celebration that was not a celebration", says Ortiz. The impact of the top parasitic killer in Latin America continues to be "more actively silenced than dealt with", she says. Governments under-represent the impact, and worldwide prevalence is unknown, with estimates ranging from 10 million to 18 million cases. Failure to diagnose and treat patients undermines vector-

control programmes by leading to reinfestation, Ortiz notes. For example, in Brazil, which has been declared free of Chagas disease, reinfestation has been reported in the Amazon region. The MSF campaign *Chagas disease—it's time to break the silence* declares that even existing treatments are usually not available to patients.

"In general, there is also a lack of interest in new treatments and diagnostics", says Ortiz, with half of all research funding on Chagas disease spent on basic science. One exception is the Drugs for Neglected Diseases initiative (DNDi). DNDi is working on a paediatric formulation of an existing drug, benznidazole. Progress on new treatments could be enhanced by an agreement with Merck announced in June, which will contribute to early development programmes for drug candidates for neglected tropical diseases. The DNDi notes that drugs for these diseases are often decades old, have substantial toxicities, and can be difficult to give, especially in resource-poor settings. Between 1975 and 2004, only 1.3% of new drugs were specifically developed for neglected diseases, even though these diseases account for 11.4% of the global disease burden, and carry a worldwide cost greater than road traffic accidents or tuberculosis. Also in June, the UK Department for International Development announced a further 5 years of major funding for DNDi to address this imbalance between investment in medical research and global disease burden.

100 years ago, Chagas "indivisibly joined academic research and social and political commitment to point the deep relationship between disease and poverty and to propose solutions to them", says Kropf. Now, says Ortiz, it is time for governments of endemic countries to take urgent action, and for patients to speak out about the current lack of diagnosis and treatment.

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Rhodnius prolixus is the second most important triatomine vector of the Chagas parasite