

Direct economic impact of Chagas disease treatment

Ezequiel J. Zaidel  and Álvaro Sosa Liprandi

Ther Adv Infect Dis

2022, Vol. 9: 1–3

DOI: 10.1177/
20499361221118227

© The Author(s), 2022.
Article reuse guidelines:
[sagepub.com/journals-](https://sagepub.com/journals-permissions)
permissions

To the Editor,

In this letter, we express our concern about the direct economic impact of the treatment of Chagas disease (CD).

Several years ago, this disease was classified into an acute phase, a chronic phase with no proven pathology, and a chronic phase with cardiac (and less frequently intestinal or neurological) involvement.¹ All patients surviving the acute phase, which is usually unnoticed, go on to a chronic stage with no evident pathology on imaging studies.

The treatment during those phases consists of an antiparasitic regimen, which has a maximum duration of 60 days and a cost of approximately US\$70, estimated from local currency in the country where more CD patients live, Argentina, in 2022² and from a cost analysis from Mexico³ and direct cost in the United States.⁴ The treatment is provided once in a lifetime, and the states or health providers usually finance it partially or totally. Around 5 million subjects are in this situation globally, but less than 1% has access to appropriate diagnosis and treatment. Currently, the efficacy of treatment with a lower dose or shorter time is being evaluated, and that may provide even lower costs. At the other extreme are approximately 100,000 subjects living with chronic Chagas heart disease. In them, the treatments are drugs for chronic heart failure, drugs used during hospitalizations for acute heart failure, antiarrhythmic and antithrombotic drugs, and implantable cardiac devices.

Some of the most recently introduced drugs in heart failure therapy have shown similar efficacy in subjects with and without CD and are currently routinely recommended, increasing

even more the costs of this disease.⁵ The monthly cost of treating subjects with heart disease is well over US\$70 and is long-term rather than one-time (as an example, the annual cost of only one of the heart failure drugs is US\$1800).⁶ Within that cost, some variables are less frequent but involve extraordinary expenditures; such is the case of hospitalizations, surgeries, and even heart transplantation. Two different publications evaluated those costs in Mexico and Europe.^{3,7}

Since it is estimated that about 30% of patients will develop cardiac involvement, screening should be intensified, mainly in endemic countries as well as in non-endemic countries, in immigrants from endemic areas. Different barriers prevent appropriate access to diagnosis and treatment and were described for endemic and non-endemic countries.⁸

The COVID-19 pandemic has been especially difficult for patients with CD since they are an underdiagnosed risk group, and the negative economic impact of the pandemic particularly affected those with fewer resources, making access to care even more difficult.⁹

Leaving aside the medical, psychological, and social benefits, and without performing more complex cost-effectiveness analyses, it seems obvious that diagnosing and treating CD in the acute and chronic phases without demonstrable pathology is profitable. In Figure 1, we describe the economic differences in CD treatments according to the phase of the disease.

Health authorities should take this into account to increase disease awareness and early diagnosis, as currently this disease is considered the most ‘neglected of the neglected’ tropical diseases.¹⁰

Correspondence to:

Ezequiel J. Zaidel
Cardiology Department,
Sanatorio Güemes,
Acuña de Figueroa 1228,
C1180AAX, Buenos Aires,
Argentina

Pharmacology
Department, Faculty of
Medicine, University of
Buenos Aires. Paraguay
2155 C1121ABG, Buenos
Aires, Argentina.
ezaidel@fsg.edu.ar

Álvaro Sosa Liprandi
Cardiology Department,
Sanatorio Güemes, Buenos
Aires, Argentina

Faculty of Medicine,
University of Buenos Aires,
Buenos Aires, Argentina

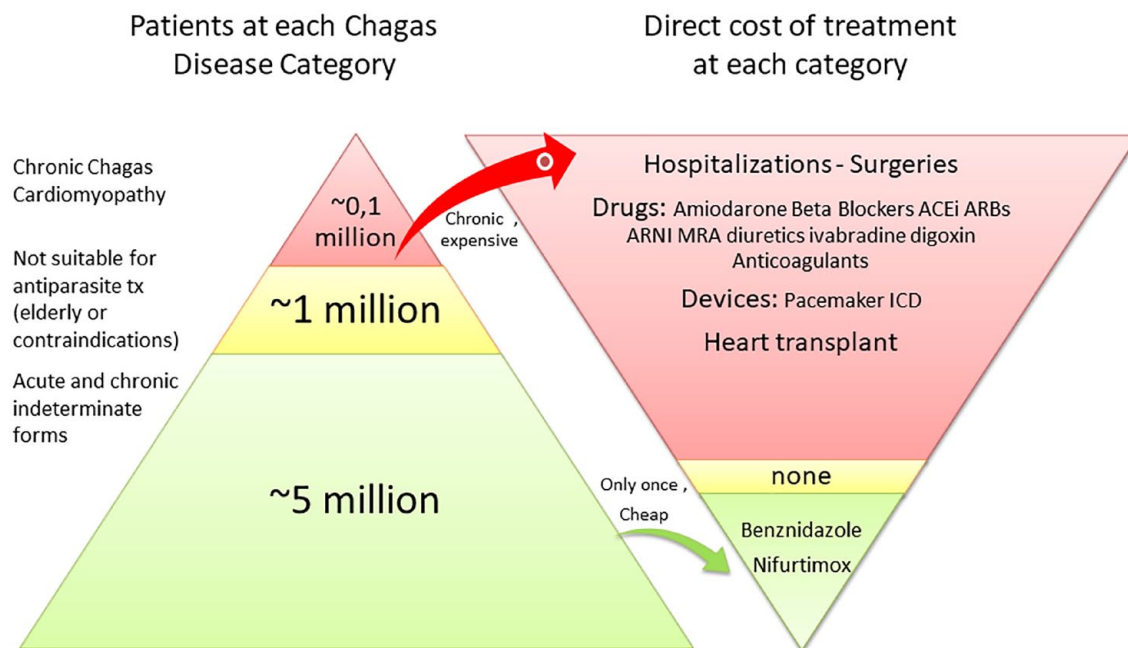


Figure 1. Comparison of patients at each stage of Chagas disease and direct treatment cost.

Declarations

Ethics approval and consent to participate

This letter did not require an ethical board approval because it did not contain human or animal trials.

Consent for publication

Not applicable.

Author contributions

Ezequiel J. Zaidel: Conceptualization; Investigation; Methodology; Writing – original draft; Writing – review & editing.

Álvaro Sosa Liprandi: Conceptualization; Supervision; Validation.

Acknowledgements

None.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Competing interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Availability of data and materials

Not applicable.

ORCID iD


Ezequiel J. Zaidel  <https://orcid.org/0000-0001-8349-7507>

References

1. Echeverría LE, Marcus R, Novick G, *et al.* WHF IASC roadmap on Chagas disease. *Glob Heart* 2020; 15: 26.
2. <http://alfabeta.net/precio/abarax.html> (accessed May 2022).
3. Bartsch SM, Avelis CM, Asti L, *et al.* The economic value of identifying and treating Chagas disease patients earlier and the impact on *Trypanosoma cruzi* transmission. *PLoS Negl Trop Dis* 2018; 12: e0006809.
4. <https://www.singlecare.com/es/medicamento/benznidazole> (accessed May 2022).
5. Nunes MCP, Beaton A, Acquatella H, *et al.* Chagas cardiomyopathy: an update of current clinical knowledge and management: a scientific statement from the American Heart Association. *Circulation* 2018; 138: e169–e209.
6. Requena-Méndez A, Bussion S, Aldasoro E, *et al.* Cost-effectiveness of Chagas disease screening

- in Latin American migrants at primary health-care centres in Europe: a Markov model analysis. *Lancet Glob Health* 2017; 5: e439–e447.
7. <https://nomenclator.org/med/entresto-24mg-26mg-comprimidos-recubiertos> (accessed May 2022).
 8. Miranda-Arboleda AF, Zaidel EJ, Marcus R, *et al.* Roadblocks in Chagas disease care in endemic and nonendemic countries: Argentina, Colombia, Spain, and the United States. The NET-Heart project. *PLoS Negl Trop Dis* 2021; 15: e0009954.
 9. Zaidel EJ, Forsyth CJ, Novick G, *et al.* COVID-19: implications for people with Chagas disease. *Glob Heart* 2020; 15: 69.
 10. Zaidel EJ and Sosa Liprandi Á. Neglected of the neglected: crude reality of Chagas disease [Desatendida de las desatendidas: cruda realidad de la enfermedad de Chagas]. *Medicina (B Aires)* 2021; 81: 675–676.

Visit SAGE journals online
[journals.sagepub.com/
home/tai](https://journals.sagepub.com/home/tai)

 SAGE journals