Direct economic impact of Chagas disease treatment

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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.5,6 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

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