Reviewer's report

Title: Comprehensive economic evaluation of thermotherapy for the treatment of cutaneous leishmaniasis in Colombia

Version: 0 Date: 22 Sep 2017

Reviewer: Guilherme Loureiro Werneck

Reviewer's report:

The manuscript "Comprehensive economic evaluation of thermotherapy for the treatment of cutaneous leishmaniasis in Colombia" is interesting, well-conducted and important for informing public health actions for controlling cutaneous leishmaniasis in Colombia. As the authors correctly state, the incorporation of new technologies for diagnostic, treatment and control of infectious diseases needs not only the assessment of the effectiveness of the new proposed strategy but also cost-effectiveness analyses. Here authors evaluate the cost-effectiveness of thermotherapy against the standard treatment (antimonials) for treating cutaneous leishmaniasis. This is a very important assessment since treatment with antimonials, although effective, has the drawback of being long and toxic, sometimes leading to the death of the patient. Despite all of these issues, there are some points that deserve corrections or better explanations.

1) As the authors state, cost-effectiveness analyses have not been used that much in cutaneous leishmaniasis, so need to explain a bit further the measures you used. For instance, "effectiveness" is not defined in the text, although it seems to be used as the total of DALYs averted or total of patients cured. Please include this definition in the text.

2) One of the critical points in cost-effectiveness analysis is assessing the costs. Here, costs were defined very roughly without a more detailed description of each component. For instance, authors assume a cost of US$14.04 for each thermotherapy (apart from health personnel). How did you get this value? In other recent publication of the same group it was estimated as US$22.55. Did you assume that it covers the price of buying the machine and the depreciation with time? These are just examples of information and assumptions that are lacking and should be provided in more detailed in the text.

3) Line 52, Page 9: authors say that models assumptions "represent the characteristics of the majority of patients in the country". Can you please give us a rough estimate of the percentage of patients that meet that assumptions?
4) I think Table 3 is a bit confusing, at least for those not initiated in cost-effectiveness analysis. Please verify and explain the values of effectiveness and for "patients cured" and DALYs and check if these numbers are consistent with those in Table 2. If not and even so these are correct, please make sure to explain how these Tables connect with each other. The way it is showed it seems that you pay more for each patient cured with termotherapy, is it correct??

Minor points

- Authors say that they considered 8,113 cases (line 55, page 5), but the numbers from Table 2 sum up to 8,086 for termotherapy and 8,112 for Glucantime, please explain.

- Definition of DALY (line 38, page 6) seems incomplete because here it only considers premature death, a better definition would something like "One DALY corresponds to one year of healthy life lost due to ill-health, disability or premature death."

- Table 3: is IC = 218,610 instead of 218,935? And IC/IE -10,530 instead of -10,534? Please check.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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