Reviewer's report

Title: Brazilian Study in Multiple Sclerosis: a cross-sectional study to assess the humanistic and economic impacts of disease.

Version: 4  Date: 6 October 2015

Reviewer: Fernanda Queirós

Reviewer's report:

The paper has significantly improved. However, there are still some issues to be addressed in order to have a sound manuscript. Please, when submitting the revised manuscript, include a point-by-point response to reviewers (indicating which changes you made, and where in the manuscript, to address the reviewer's concern or explaining why you didn't change what was asked) and a tracked-change copy.

Major Compulsory Revisions

1. Your background section does not address "adverse impact on quality of life and significant economic burden for patients."

2. Your primary objective is still confusing. What do you call "humanistic impact"? It needs a brief explanation because your background section, focused on the economic impact, does not clarify this humanistic aspect of your study. You may list the variables that represent "the humanistic and economic impacts of MS from the Brazilian household and healthcare system perspectives". Listing the variables may help to clarify what you investigated.

3. Your background does not make it clear why you investigated the secondary objectives (the impact of fatigue on daily living of MS patients and to determine utility scores). Please, review this.

4. You kept using the term "burden of disease" at the Discussion section, although you changed the term to "humanistic impact" at the introduction. Review again your objectives to help you define which term you will use throughout the entire paper. Again, as I already stated above, make sure your introduction offers a complete overview of all areas you covered in your objectives/results. It needs to be clear when reading your paper that your results are direct answers for your objectives.

5. At the Discussion you state "When the direct cost was stratified among disability levels, our findings corroborate results found by studies conducted worldwide which have shown that increasing on costs are directly proportional to increasing on disability level". However, at the Conclusion you say "When total costs were analyzed, the disease severity seemed not to influence." What you said in your Conclusion is also what one sees at your Table 3. You did not discuss why the overall costs with the disease do not vary by disability level. Review that because your Discussion section is, somehow, misleading the readers. Why would the costs vary at the 3 different Cost's category and not on
the total cost? You need to answer this question at the Discussion.

6. Conclusion is better than in the first draft. However, it is confusing and need to be reviewed for clarity, after you review your discussion section.

Minor Essential Revisions

7. You need a transition from your second to third paragraph in the introduction. In the second you're talking about the costs associated with the disease worldwide and then, in the third, jump to describe the Brazilian health system. You may need to give some numbers from the articles "7, 26-28" to help transitioning to the Brazilian health system.

8. p. 4, line 134: measures of HRQL - spell HQLR (first time it appears in the text).

9. You did a good job clarifying the measure of utility. You can improve the writing, though, making clear why you used Health-related Quality of life to, later, transform its score in the utility score.

10. "Once costs with DMTs influenced the interpretation of total costs among the severity groups and some of the assessed costs were funded by patients, data was stratified in three different categories: A, direct medical costs funded by the health system, excluding active drugs for MS; B, drugs for MS funded by the health system; and, C, direct medical and non-medical costs funded by patients (Table 3)." This explanation should come before the results described in the section "Costs".

11. Review the notes of your tables in order to make the format uniform. For instance, at Table 3, an asterisk (*) appears twice at the notes, but only once in the table. At this same table, why some of the values are in bold? You need to explain at the notes.

12. Figure 1 and 2: The labeling of the X axis is different across figures, although they are presenting the same categories. Review these. Use notes anytime you have abbreviations in graphs, figures or tables.

Discretionary Revisions

None.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.