Reviewer’s report

Title: Understanding Plain English Summaries: A Comparison of two Approaches to Improve the Quality of Plain English Summaries in Research Reports.

Version: 0 Date: 29 Mar 2017

Reviewer: Annabelle South

Reviewer’s report:

The issue of ensuring patients and the public can access and understand information about medical research is important. The authors are to be commended for conducting this study, and for testing an approach to improving the quality of plain English summaries that is feasible and could be rolled out at scale (providing brief guidance for authors). However, there are some important issues that I believe need addressing in order to strengthen the manuscript.

1) For the primary outcome, the authors report that the percentage of PES rated "Understood All" was highest for independently-edited versions (74%), followed by author revised (62%), versus 59% for original versions, but that there was no statistically significant difference. Was the sample size sufficient to detect a difference? The methods section gives no details on how the sample size was determined (this should be covered). If the sample size was determined by pragmatic considerations without consideration of statistical factors, this needs to be discussed as a limitation of the study.

2) The results and conclusion of the abstract seem overly positive - your primary outcome does not justify this, and you need to acknowledge this.

3) Please specify the experience / training the medical writer had in writing in Plain English in your methods section.

4) I think it would be clearer to report your primary outcome before your secondary outcome in both the methods and results section.

5) It would be interesting to see a breakdown of readability statistics that go into calculating the FRE score. Did the guidance for authors improve some of these aspects and not others? That could give an idea on whether the guidance needs to be strengthened in any specific aspect. It would also be interesting to see statistics on items that affect readability that aren't included in the calculation of the FRE score, for example proportion of passive voice sentences. This may help to provide insight into why an improvement in the FRE score did not translate to a significant improvement in understandability.

6) You have chosen reported comprehension as your primary outcome measure, rather than testing that comprehension. People may believe that they understand something, but actually misunderstand. In your discussion of limitations, perhaps you could reflect on whether testing
comprehension in addition to asking readers to rate comprehension might strengthen any future studies on this topic, and why you chose not to do that in this study.

7) As a sensitivity analysis, would your conclusions be any different if you used a different readability formula?

8) I'm not sure that your sentence on the role of specialist writers (page 7) really does justice to their role.

9) Some researchers and medical professionals I have spoken to are worried that making summaries Plain English is 'dumbing down' or 'patronising'. Did you have any comments on the revised versions where raters reported this? If not, it would be helpful to say you had no complaints about this.

10) It would be interesting to compare the three different versions of a single summary, to see the sorts of changes that were made (although I understand this may be difficult)

11) The use of commas is a bit random in places.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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