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: 26 May 2017

Reviewer: Dawn Lobban

Reviewer’s report:

Thank you for the opportunity to review this interesting manuscript.

Given the importance of lay summaries to facilitate understanding of research, this paper attempts to address an important question regarding how best to optimise the summaries.

Major comments

1. The study compares the value of providing authors with additional guidance versus professional medical writing input. However, only one medical writer was involved and there is no information regarding the level of relevant experience that this medical writer had. Writing lay summaries is a skill that is not a core part of all medical writing roles, with many trained to write for expert audiences only. Furthermore, it can take a number of years to become a fully trained writer. I would recommend that the background of training and experience that the medical writer had is detailed in the paper as this is key to the results. Ideally, the study would have involved a team of experienced medical writers trained in lay summaries.

2. The manuscript abstract concludes that both interventions improved the quality. However, only the readability was significantly affected by the interventions, but not the ease of understanding. Quality can not be assessed on readability alone, but needs to be based on an accurate understanding. Although ease of understanding was measured, no significant overall group differences were found. Furthermore, the level of understanding was never checked. Indeed the authors themselves raise the fact that some reader comments suggested a level of confusion, despite the reader rating the summary as ‘understood all’ It may well be that one of the interventions was significantly better at explaining the real meaning, but the reader was not aware of this as they did not realise they had misunderstood the summary. A further independent test of their level of understanding (rather than relying on self scores) would have improved the robustness of the data. This limitation needs to be clearer in the discussion.

Minor comments

1. Within the methodology, there is use of a number of terms that appear interchangeable when referring to the group who reviewed the summaries which can make it difficult to follow (public reviewers, contributers, raters, participants, readers, patient public group). Defining the group up
front and then consistently using the same language would improve the readability of the manuscript.

**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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