Reviewer’s report

Title: Critical appraisal of AMSTAR: challenges, limitations, and potential solutions from the perspective of an assessor

Version: 4 Date: 2 May 2015

Reviewer: Francesco Chiappelli

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Minor Essential Revisions

This is a cogently written discussion of the content validity of the AMSTAR instrument. The author is correct in addressing this timely and critical question because the AMSTAR is the prevalently used tool for assessing the quality of systematic reviews, which are key in our present days of the pursuit of the best evidence base presented in systematic reviews, and because any tool of measurement in research must be confirmed for its validity and reliability. Therefore, the intent of the author to establish the content validity of the AMSTAR is both timely and very important to the field.

However, the author makes a very simple and dismissive statement about how the AMSTAR is scored (yes, no, cannot tell, does not apply), avoiding the very argument that this, more than anything, is the fundamental weakness of the AMSTAR: its qualitatively scoring based on the opinions of the reader rather than established criteria of excellence. This is a weakness of the AMSTAR because it precludes any and all attempts at establishing reliability of the tool and replicability of measurement (cf., "precision" and "consistency" in AHRQ's assessment of the risk of bias).

Therefore, a revision of the AMSTAR has recently been published, which does not alter the content validity of the original AMSTAR, but provides a quantitative scoring for each of the 11 questions based on the methodological criteria of systematic reviews discussed in the Cochrane, AHRQ and PCORO methodological handbooks.

In brief, this paper now under review should at least mention the above discussion when discussing the scoring process of the AMSTAR. At best (for the continuing enhancement and progress of the field), the discussion of content validity ought to have been on the R-AMSTAR, rather than the AMSTAR.

Level of interest: An exceptional article

Quality of written English: Acceptable

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