Reviewer's report

Title: A systematic literature review of the assessment of treatment burden experienced by patients and their caregivers

Version: 0 Date: 02 Nov 2018

Reviewer: Kasey R. Boehmer

Reviewer's report:

Thank you for the opportunity to review this manuscript. It is an important and comprehensive review regarding the measurement of treatment burden. Overall, I found the manuscript to be of high quality and worthy of publication. Two minor concerns that should be addressed prior to publication are 1) there is a recently released multimorbidity treatment burden measure that may warrant updating the search strategy to ensure complete reporting; and 2) the introduction to could be edited to more clearly indicate the focus of this review on identifying all treatment burden measures as a way of moving towards something clinically useful. It was initially unclear to me if the authors were intending to identify measures for research or clinical practice, but the discussion nicely indicates the focus on clinical practice. Detailed edits are included below.

Background
Line 103 - Should be "Treatment burden usually adds to the symptoms and physical and psychological difficulties imposed by the condition itself."

Line 115 - can "failure" be changed to "difficulties" as it sounds more patient-friendly?

Line 117 - Minimally Disruptive Medicine should be named (in replacement or addition to person-centered care) since this definition is specifically taken from the paper that names this concept.

Lines 122 - 125 - Do you meant that have not been regularly implemented in clinical practice? I feel a bit unclear on the lead up rationale to the study, but they seem related to clinical practice implementation of treatment burden assessment.

Results

Lines 253 - 257 The ICAN Discussion Aid may be better described in the qualitative assessments of Treatment Burden since there is no scoring of the tool - it relies on conversation between patient and clinician (qualitative) to assess the treatment burden.

Line 267 - There is a new multimorbidity treatment burden quantitative measure out called the Multimorbidity Treatment Burden Questionnaire (MTBQ). It can be found here. While I realize this was released after the search strategy limits, I think it is worth updating your search strategy dates to
include this measure since it is directly related to your research questions. It can be found here: https://bmjopen.bmj.com/content/8/4/e019413

Line 271 - Please indicate what HCTD stands for, as I don't see the full naming prior to its use.

Lines 280 - 281: Is the statement related to financial burden true of non-US settings? The original TBQ needed to be modified to include this aspect of burden when it was trialed in the US population compared to its French origins. I think it would be helpful to include a statement about whether this is restricted mostly to US populations or if it is seen in specific countries, or internationally as a whole, including citations supporting whichever is the case.

Lines 287-289 Having an unpaid caregiver increased patient treatment burden is an interesting statement. It is paradoxical to what most expect (i.e., someone else to share the load would seem to reduce the patient's individual treatment burden). If this is the correct interpretation, I think it deserves calling out as paradoxical.

Discussion

Line 299 - methods should be "method."

Lines 296 - 299 - this reads clearer than your lead up to the methods in your introduction section, and your aims could be tightened to more clearly match the statements here.

Line 321 - can compliance be replaced with adherence, which is more patient-friendly, and to match the usage of adherence in the rest of the document?

Line 327 - It may be worth mentioning that the ICAN Discussion Aid is designed to take no more than 3 minutes and could be followed-up by more intensive questionnaires.

Line 336 - replace compliance with adherence

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

Yes

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.

Yes
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.

Not relevant to this manuscript

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

Acceptable

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I have no financial competing interests to this paper. I served as the primary developer of the ICAN Discussion Aid, a tool mentioned in this paper.

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