Reviewer's report

Title: Evidence summaries (decision boxes) to prepare clinicians for shared decision making with patients: a mixed methods implementation study

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Reviewer: Per Olav Vandvik

Reviewer's report:

This is a very nice and well written paper reporting a well-conducted study applying mixed methods to understand how to implement decision boxes as tools for clinicians. The results are encouraging both for the Dbox and for clinicians reported willingness to use best current research evidence and engage in shared decision making. As stated by the authors it is important to test their real life usefulness in further studies and randomized trials. This will definitely be easier after this study on factors influencing implementation.

I have the following comments to be considered by the authors:

1. The paper is a very long read and includes many tables and 3 figures. I would think the editorial office in Implementation Science have an opinion on this, which goes beyond my capacity as reviewer.

2. Authors state in the paper that the objective with the Dboxes is to prepare clinicians for SDM ("professional training tool in SDM", page 16) but also state in abstract and introduction that they fulfill need for point of care decision making. This seems a bit too bold of a statement given the limited empirical evidence to support their use. I remain a bit confused about the anticipated role of the Dboxes, throughout the manuscript, although the findings of this study helped me as it will help the creators to clarify this issue. Maybe it would be good to separate what was the initial objective with Dboxes versus the revised objectives after this study (e.g. decision aids to be used in practice)?

3. Generalizability of findings should be further discussed as authors conclude that clinicians value these tools. How representative are the recruited health professionals for the target audience? What about non-responders to the invitation or the questionnaires. Are findings applicable to specialist health care. I think this issue could warrant a discussion under limitation of findings.

4. I would recommend including a figure showing what one of the Dboxes looks like. I found it pretty abstract to read about this tool without knowing what it looks like. When I found it through the internet I wonder to what extent the design is optimized and shown to be acceptable for use point of care. The same goes for the decision aid the authors state they have developed, which could perhaps be shown as a supplementary file.

5. Although indirectly touched on several places in the manuscript it would be good to place Dboxes in context of clinical practice guidelines. This would fit well with several observations made by authors on the basis of comments from
clinicians: Dboxes would be most appropriate in the face of situations where trustworthy guidelines should issue weak recommendations (e.g. fine balance between benefits and harms). Authors could refer to the following paper: van der Weijden T, Boivin A, Burgers J, Schunemann HJ, Elwyn G. Clinical practice guidelines and patient decision aids. An inevitable relationship. Journal of clinical epidemiology 2012;65(6):584-9.

6. In some tables abbreviations are used (e.g. TPB) and should be written fully first time.

7. The qualitative study and interviews seemed to be soundly conducted but there is always a challenge in the interpretation of information: were steps taken to keep the observer and those who performed the analysis unbiased (i.e. not part of the research group or influenced by first author/ project leader)?

8. What is the implication of the limited response rate to the questionnaires sent to clinicians? Could the 39% of unreturned introduce selection- or information-bias in the results? Could clinicians have reported less overall satisfaction if they returned more questionnaires?

9. Some statements made by clinicians suggest that they actually used the Dboxes in their practice. Some more information about this real life use would be helpful.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I am head of the MAGIC research and innovation program (www.magicproject.org) which - among other tools for decision support - creates decision aids linked to recommendations in trustworthy guidelines. MAGIC is a non-profit initiative and I do not have any financial gains from our projects.

Our decision aids can be seen as competitive to Dboxes. I do not consider that my review is influenced by this potential conflict of interest.