Reviewer’s report

Title: Implementation of a cystic fibrosis lung transplant referral patient decision aid in routine clinical practice: An observational study

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Reviewer: Chirk Jenn Ng

Reviewer’s report:

This study aimed to evaluate the effectiveness of the implementation strategy based on the Knowledge to Action Framework by tailoring the intervention to address the barriers identified.

However, there are multiple components in the intervention and each component was not evaluated objectively. This makes it difficult to assess whether the increase in uptake is truly due to the effectiveness of the intervention (if so, which component) or it is by chance, as there is no control group in this study.

There was no objective documentation of how exactly the PDA was used in the CF Clinics (e.g. giving to patient, discussion, follow up, etc). There might be potential confounders e.g. it might be the frequent contact that serves as a reminder rather than the intervention itself. In addition, the self-reporting of the implementation outcome was not validated using an objective method, which reduce the credibility of the results.

The barriers survey before and after the intervention has a small sample size which limits the generalizability.

Major Compulsory Revisions

- Page 7. The authors need to explain the intervention in more details e.g. the training workshop: what is the content and delivery and how it address the knowledge and skill barriers? E-Learning module - how does it differ from the workshop? Conference call - what it a structured process? How does each component address the barriers? In addition, was each of these components evaluated, if so how and what are the results? If not, why not? How do the researchers determine which component actually works (or not)?

- It is important to describe in more details how ‘barriers’ as well as ‘evidence on effective interventions’ were used to design the intervention. It is also important to incorporate these systematically into Table 1.

- Page 9. The reporting of the survey is descriptive and it is uncertain how the authors came to the conclusion about the barriers. Was it based on the quantitative data (Table 2)? If so, please state clearly in the results.

- Page 9. The sample size is too small to make any generalization. Are the authors trying to evaluate the effectiveness of the intervention in reducing the
HCPs' perceived barriers? If so, the number would be too small and a formal sample size calculation is needed.

Minor Essential Revisions

- Page 4, 2nd paragraph - I am unclear about the message the author is trying to put across in this paragraph. Is it to identify barriers to implement SDM, HCP training or PDA? I would think the latter is the focus of this paper. Perhaps the author should elaborate more on reference 17 and inform the readers how effective (or ineffective) these interventions are. This would justify the reason for conducting this study.

- Page 5. 'Sustained uptake was defined as 80% use of our PDA'. Is this at the end of 1 year, 2 year or perhaps it should be the trend rather than absolute %?

- The researchers used a questionnaire to survey the barriers faced by the HCP in the CF clinics. However, there might be issues that are unique to the CF clinics/HCP e.g. patient-related or disease-related factors which might not be covered in the questionnaire. Did the authors conduct an exploratory study e.g. by interviewing the HCPs or patients to identify factors that might influence the uptake of PDA in the particular setting? The researchers have conducted an RCT in Canada - did they identify any unique barriers when they delivered the intervention? I think these experiences would help to identify barriers more appropriately than a questionnaire survey.

- Were all clinics, including those which did not participate, have access to the PDAs?

- The authors used % throughout the manuscript, which might be misleading as the number is small. It might be better to use numbers instead.

- The authors need to define 'using PDA'. Does it mean giving it to patient? HCP discussing it with them? How do the participants decide whether PDA has been used?

- Is this intervention using the 'referral model' as stated in Page 4? If not, how does it differ from the referral model?

- Page 12. The reason for non-participation should be explored further (e.g. using a qualitative method) before making recommendations such as policy change.

- Page 13. Without objective measurements of the HCP knowledge, skills, etc., I would be cautious to state that this study 'validate KAF'.

- Page 13. It is inappropriate to compare the study findings with RCTs as there are potential confounders in a before-and-after study.

- Page 14. As mentioned above, the lack of objective measurements of the outcomes of each component of the intervention, the lack of control group and potential reporting bias, make it difficult to ascertain the real reason for the
increase in uptake.

- Page 14. The recommendation for health policy change is not based on the findings from this study.

- Page 16. Table 1. It is unclear how each component overcomes the barrier. Perhaps the authors should have some footnote/remarks to explain this.

- Page 17. Using mean and SD is inappropriate for small numbers. Range would suffice. Similarly, the number is too small to break into categories. The term 'sex/gender' is missing.

- Page 19 and 20. Table 4 and 5 are not presented in the standard manner. Suggest Pre and post intervention as columns and items in rows. It is doubtful how meaningful the p value is in view of small sample size. 'Neutral' category is difficult to interpret and there are three dropouts which may sway the results when the number is small.

Discretionary Revisions

- Why do patients 'having to relocate'? May not be clear to some of the readers who are not familiar with lung transplant or the healthcare setting.

- Page 13. Explain what is a 'third generation knowledge'

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests