**Reviewer’s report**

**Title:** Pilot randomized controlled trial of a complex intervention for diabetes self-management supported by volunteers, technology, and interprofessional primary health care teams

**Version:** 0  **Date:** 22 May 2019

**Reviewer:** Sarah Scobie

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Evaluation of interventions for self-management of chronic diseases is an important area of health services research. A trial of a multi-faceted intervention could potentially add to understanding in this field.

Overall the intervention itself, the evaluation methods are described well. One omission was that Figure 1 was not included in the document.

The areas in which the paper was weakest was in relation to it being a pilot study, and it was not clear that the study had always been planned as a pilot study (as opposed to a study for which recruitment was challenging and therefore resulted in small numbers of cases).

In terms of the quality of the paper as a report of a pilot study, the following need to be noted:

* The objectives of the pilot need to be described much earlier in the paper, eg in the background. These don't appear until page 13, line 50-51.

* As well as the objectives stated, as a pilot study additional objectives could usefully be considered, eg acceptability of the intervention and completion rates (of the intervention not just outcome measures; acceptability of randomisation; time required to undertake a full trial (based on recruitment and power); piloting bespoke data collection methods; any risks or safety issues arising from the pilot.

* The study reports p values, but it is not clear that the study is powered to identify a difference, and indeed, estimating sample size needed for this is part of the purpose of the study: confidence intervals would be more appropriate.

In terms of the discussion of the results:

* This would ideally start with the extent to which the objectives of the pilot (as discussed above) have been addressed.
One challenge with multi-faceted interventions is that they can be difficult to implement in a standardised way. It would be useful to cover this point in the discussion, particularly in terms of whether the intervention is scalable - would it be possible to implement consistently across a wider group of patients and using a larger number of volunteers?

Retention rates: although 35 people completed overall (out of 49), only 15/26 of the intervention group completed -this should be noted in the discussion, which only refers to the overall retention.

Recruitment challenge: this could usefully be discussed further, to tease out the reasons for this, eg is this to do with lack of relevance of the intervention to the study population, or concerns over randomisation/taking part in research? Were there differences between the physicians involved and what might be done to improve recruitment in a full trial?

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