**Reviewer’s report**

**Title:** Implementation Findings from a Hybrid III Implementation-Effectiveness Trial of the Diabetes Prevention Program (DPP) in the Veterans Health Administration (VHA)

**Version:** 0  **Date:** 26 Apr 2017

**Reviewer:** Peter Bower

**Reviewer's report:**

This is a comprehensive assessment of the implementation of the DPP in 3 Veterans (VHA) sites, using a variety of forms of data collection in a hybrid intervention-effectiveness trial.

There are some useful insights in this important clinical and policy area and the paper makes a suitable contribution to the literature.

The paper begins with a review of two major studies in this area, highlighting variation in delivery and exploring drivers of DPP delivery. A core finding is that 'reach' is identified as an important driver of performance.

The hybrid effectiveness-implementation design might be described briefly. Although familiar to many readers, this paper may attract those outside the implementation science field, so some context would be useful.

The use of the hybrid design has advantages and disadvantages and I would be interested in the views of the authors as to the latter when the focus is on the process of implementation. The title of the paper might need changing to reflect that fact that the analysis is focussed on comparison of the DPP in the context of a trial, and an existing weight loss intervention, rather than a context lacking any existing services of this type. That would seem important to interpretation.

I was also interested in the degree to which it was possible to distinguish issues related to the implementation of the DPP, and those which related to the issues related to taking part in a trial - for example, barriers to recruitment that led to low levels of recruitment? The authors found that many patients did not meet the pre-diabetes criteria, but was the confirmation of prediabetes only required in the trial, or is that part of routine DPP delivery? Are these analytic distinctions easy to make?

I struggled a little with the interpretation of the fidelity differences. Is it something inherent in DPP that makes it easier to deliver in a way that leads to high ratings? Or does it relate to more pragmatic differences (such as the training for the DPP being more recent)? I was not clear what that meant for implementation.
Table 3 is useful and the advice seems sensible, although there was no attempt to provide any indicator of importance or weighting. The advice also seemed to focus quite a lot on 'targeted information' to various groups and I was not clear on the evidence that these were effective strategies to overcome some of these barriers. For example, is there evidence that such information can overcome some of the inertia among clinicians - which seems to be related to their experience of the effects of these interventions in routine populations? Could some of this advice be extended in depth and specificity? What sort of process meets the criteria discussed under Reach? What are the likely cost implications?

I do not understand the comment made about weight loss being significant for DPP clients, but not significantly different between arms. Does the first statement relate to significant change over time within one arm? I am slightly wary of that being used as an indicator of something relevant, as it is not really legitimate in the context of a trial.

Minor issues

A short definition of the RE AIM dimensions on page 11 might be useful.

On page 19, was the positive quote about experience in DPP unmatched by similar comments for MOVE?

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