Reviewer's report

Title: Methods and Metrics Challenges of Delivery System Research

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Reviewer: Nick Sevdalis

Reviewer's report:

The paper presents 5 challenges that researchers dealing with what is termed “delivery system research” – i.e., research on the delivery and evaluation of organisation-wide interventions. Each challenge is described and some recommendations follow. The article is generally well written and should be of interest to the audience of the Journal.

MAJOR REVISIONS

First of all, although I empathise with most of the challenges that the authors identified, I was often unclear regarding the contribution of this manuscript to the wider discussion of these challenges. I think a better structure is required to ensure that the work does not look like a simple list of problems – otherwise there is a risk that many readers will find the paper just common sense. I would advise the authors to present their work as a systems-based framework to interventions evaluation (or something similar) and also use a pictorial representation of their proposed framework (i.e. some sort of figure). Table 1 is not very useful, in my view.

Secondly, although the authors claim that they offer recommendations, some of them are only present in the summary section. I other parts of the manuscript, the writing seems more aimed at increasing awareness of issues rather than offering solutions – for example, the discussion of what to do about the fidelity challenge (p 11) does not really answer the question, other than to say that researchers ought to be aware of it (which I am sure is something that most researcher would agree with anyway).

Thirdly, related to the point above, I feel the authors ought to expand and slightly change the Conclusion section. They are offering very useful recommendations here in relation to research funding and also research design – these are truly useful for researchers, policy makers and funders alike. I therefore feel the section should be called Recommendations and Conclusions and the recommendations element of it beefed up. The problems that arise from short-term funding and lack of integration of qualitative with quantitative approaches could be fleshed out in this section in some more detail – I think if the authors think of their work as a framework and present it like one the paper would be very useful in informing not only the design of the research but the scope and scale of such projects.

MINOR REVISIONS
Fourthly, the authors offer a good discussion of various statistical and modelling approaches in relation to intervention context, but much less in way of qualitative analysis (pp 7-8). The assumption that organisational context can be measured and quantified is quite a stringent one – and I would argue that even if this is true sometimes it is not practical or feasible. More therefore should be said regarding qualitative approaches to context analysis and how to integrate it with quantitative data.

Finally, I think the sustainability issues (pp 9-12) fit in better with the time aspect discussed by the authors (pp 12-16). The issue of intervention fidelity, which I think is of paramount importance, can stand alone, whereas sustainability really reflects a time dimension to the intervention and also its evaluation (which the authors introduce and describe as the time element).

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

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I declare that I have no competing interests