Reviewer’s report

Title: Capturing implementation knowledge: Applying focused ethnography to study how implementers generate and manage knowledge in the scale up of obesity prevention programs

Version: 1 Date: 21 May 2019

Reviewer: Clare Coultas

Reviewer's report:

This is an interesting study which provides practice-based evidence on strategies for knowledge management in using an e-monitoring system in the implementation of a large-scale prevention intervention. It is also important in terms of highlighting the contributions of ethnography to implementation science, however I would suggest that the paper does not fully extend the scope of this methodology. Because of this, the paper's contribution to the literature is also unclear, and so I am recommending that the paper needs substantial revisions before its of publishable quality. I hope that the points that follow can be constructive in supporting these revisions.

1. Contribution to the Literature: it is already well established that 'hidden work' often underlies intervention/implementation success so your saying that 'part of the success… may be the unreported…' (p.2) isn't particularly novel. Nor does your data in its current form really illustrate 'novel ways for improving scale-up design and efficiency' (p.2), although as I will outline below, this could be a case of your not having fully developed the analytical potentials of your data. I'm also not clear about what the gap in 'the literature' (which literature?) is, as the sentence "there remains limited studies on the intersection of research and practice-based knowledge in practice" (p.3) is unclear. You need to outline more explicitly what the literature is and what the gaps are. I'm not saying that your paper doesn't make a contribution, but rather that that will depend on how you develop your analysis.

2. Methodology: Describing the study as a '12 month multi-site ethnography' (p.2 line18) when only 1-5 days was spent in each location is a bit of a misrepresentation. Also the COREQ checklist that you use is geared more to interview and focus group studies - the SRQR checklist is better suited to ethnography. In both your protocol and this paper you engage very little with literature on ethnography as a method, and particularly on rapid ethnographies (see Vindrola-Padros C and Vindrola-Padros B. Quick and Dirty? A Systematic Review of the Use of Rapid Ethnographies in Healthcare Organisation and Delivery. BMJ Qual Saf 2018;27:321-330), therefore some discussion on reflexivity is needed - the ethnographer's voice can be heard in places e.g. p.24 line 58: "She still has a lot of work to do…". Also there needs to be some discussion about the study's
limitations. You also talk about drawing on sociological, institutional and practice theories, however these are not identifiable in this paper. For instance, you base your analysis on 'tools': in institutional theory tools can be understood to represent context (e.g. see Lehn et al. 2018, 'Implementation between text and work—a qualitative study of a readmission prevention program targeting elderly patients' in Implementation Science journal), so what would this mean for your case study? Your final sentence in the conclusion about the tension between flexibility and standardization is interesting, however in order to get there from your description of informal tool use, you need to more explicitly draw on theory. Another interesting avenue of thinking that you mention but do not develop is Suchman's work on human-machine interfaces. The following paper might be of use in terms of thinking about how the theory you draw on shapes your approach to understanding scale-up and so needs to be explicit: Greenhalgh, T. and Papoutsi. Spreading and scaling up innovation and improvement. BMJ 2019;365:l2068.

3. Developing your analysis: In addition to going back to theory and exploring how it contributes to your understandings of your data, my instinct is that there is still more that you could do in analysing differences/similarities between the sites, particularly as you identify local relationships as important in your working hypothesis (p.2 line19). Whilst I appreciate why you tracked the tools for an initial analysis, I think you're missing an opportunity not also presenting an analysis by each site, e.g. what were the range of informal tools used in each site, how many of them were designed by the individual or by the team, were the team-designed ones built on knowledge management systems that were used prior to PHIMS, when there were team-designed tools (e.g. the shared database) did individuals also have their own tools, were the individual-designed tools ways of working that those individuals had always used or had they been developed to run alongside the PHIMS specifically etc…? As you say in your statement on contributions to the literature, understanding 'contextual dynamics [can] offer novel ways to improve scale-up design and efficiency' (p.2 line58), yet you do not actually provide information on contextual dynamics - on the relationships between the different tools used, and the particularities of each local context. You also talk in the conclusion about looking at team work: there is a wide literature on this in organizational psychology, so drawing on that literature might enable you to develop your analysis of how the different dynamics of each local team contribute to the types of tools they use, and what this means (i.e. were there differences in terms of outcomes between the different sites or in the use of PHIMS?) etc.

4. Presenting your results: I appreciate why you put the quotes in the table (word count) however it is very labour intensive for the reader. In reworking the article, you could have a table that describes the functions of each informal technology, and then present your higher-level analysis (see points 2 and 3 above) integrating quotes.
5. **Discussion**: Check the SRQR guidelines for writing a discussion.

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