Author’s response to reviews

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

Authors:

Kathleen Conte (kathleen.conte@sydney.edu.au; kpconte@gmail.com)
Abeera Shahid (abeera.shahid@outlook.com)
Sisse Groen (sisse.gron@sydney.edu.au)
Victoria Loblay (victoria.loblay@sydney.edu.au)
Amanda Green (amanda.green@moh.health.nsw.gov.au)
Christine Innes-Hughes (christine.innesHughes@health.nsw.gov.au)
Andrew Milat (amilad@doh.health.nsw.gov.au)
Lina Persson (lpers@doh.health.nsw.gov.au)
Mandy Williams (mandy.williams@health.nsw.gov.au)
Sarah Thackway (sthac@doh.health.nsw.gov.au)
Jo Mitchell (jmitc@doh.health.nsw.gov.au)
Penelope Hawe (penelope.hawe@sydney.edu.au)

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Author’s response to reviews:

Dear Editors and Reviewers,

Thank you for the careful review and feedback, and this opportunity to edit and respond to the reviewer’s comments. We have taken the opportunity to make several key substantive revisions. First, we have modified our title to better position and clarify the contributions of our paper. Second, we have completed major revisions to our methods section, thereby more thoroughly explaining and detailing the scope of our approach and the theoretical paradigms which guided our study. Most of the reviewer’s other comments stem from this lack of clarity, and we believe
the paper is enhanced as a result of these revisions. In this letter, we detail our specific revisions and responses to the reviewers point by point. We believe these revisions meet all of your concerns. We also provide a track changes version of the manuscript in which new/revised content is indicated.

1. Responses to Reviewer 1

1.1. If you collected it, I would suggest elaborating more on users' opinions on PHIMS - What do they like about it? What is burdensome?

Author’s Response: Participants’ opinions on PHIMS were highly varied and they themselves had mixed feelings about the usefulness of PHIMS. Another paper is exploring users’ opinions and experiences in more depth, but it is beyond the scope of this paper to fully illustrate this complexity. But on page 11, we now include some data to illustrate that complex relationship dynamic between PHIMS and other tools in practice as reproduced below:

The following excerpt illustrates an example of how PHIMS is used alongside other tools in practice:

The [practitioner] says I have probably seen how [they] all use their own separate Excel spreadsheet to monitor their sites. To her, “that kind of indicates that really that PHIMS doesn’t do everything that we want it to do cause we do keep just a separate [system], I think probably just so it has the most important information that we have so we can just look at it at a glance…without this spreadsheet I would feel a little bit lost with what I’m doing”.

1.2. Then in the discussion I would talk about how you might go about distinguishing which functions are universal or similar enough that they should be incorporated into future iterations of PHIMS, and which are better handled individually with informal knowledge management tools by each of the LHDs.

Author’s Response: On Page 18, we state:

We are unable to fully appreciate whether the use of informal tools constitute a threat to PHIMS use and sustainability. Future questions to ask are perhaps: are informal tools a problem; whose problem are they; and if they are not a problem now, when might they become one? Our responsibility is to promote the dialogue to address these issues.

We believe that our research points to a need for more feedback, dialogue, and consideration of these questions. As such, it is outside the role of this research team (and this research) to suggest universal functions for PHIMS or other future standardised systems. Instead, our findings invite consideration for future IT designers, commissioners, and users.
2. Responses to Reviewer 2

2.1. 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.

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.

Author’s Response: We respond to these comments in more detail below.

2.2. 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.

Author’s Response: We are aware of and cite the extensive literature about IT systems in clinical practice in our introduction. But in health promotion contexts, the use of IT systems for monitoring practice are extremely new, and very little has been published on what these systems are, let alone how they are impacting practice (1). To our knowledge, this is the only study of a working IT system that is specifically used for monitoring implementation of population-level health promotion programs. In addition, to our knowledge ‘hidden’ work in health promotion has not been previously studied. We now clarify this on page 5, reproduced below:

The seemingly mundane tasks that often go unnoticed or unrecognized likely underlie the success of implementation endeavors. We set out to understand the extent to which this may also be the case in the delivery of population-level prevention programs. To our understanding, our study is the first of its type. There is little documentation of IT systems in population-health contexts, and what does exist suggests that these systems fail more often than succeed (1) To our knowledge, PHIMS is rare in that it enjoys sustained use and was recently expanded to include health issues beyond obesity. Studying PHIMS in depth provides an opportunity to observe the knowledge gathered, used and generated by practitioners in the day-to-day implementation of a
scaled-up program. It is a unique opportunity to explore any unseen work that exists alongside PHIMS use. Insights will be valuable for IT design and uncovering previously undiscerned dynamics of implementation.

2.3. 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

Author’s Response: We thank the review for this important point. We have taken this opportunity to make several major revisions to expand on our methods, beginning on page 7. We clarify our conceptualisation of the field as broader than individual sites and more thoroughly describe our extended ethnographic activities that involved ongoing contact with the field.

2.4. Also the COREQ checklist that you use is geared more to interview and focus group studies - the SRQR checklist is better suited to ethnography.

Author’s Response: By referring to other examples of the use of SRQR in Implementation Science (see (2, 3)) and the guidelines themselves, we understand that SRQR checklist is meant to guide the content in the paper - the checklist is only used to identify where to find relevant information in the paper. After reviewing other Implementation Science articles (see (4, 5)), we chose to use the COREQ checklist to meet the journal guidelines because it allows for adding additional information beyond what is in the main text of the article. Regarding this and Reviewer’s point 2.14 (below), we have reviewed and revised our paper to ensure it follows the SRQR guidelines (as cited now on page 8) but have retained the COREQ checklist as additional file 1 because of the additional information it provides.

2.5. 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...”.

Author’s Response: Our revision of the methods now describes our ethnographic approach in detail and better links our approach with the underlying theoretical basis. We now explain how we engaged with theory throughout the entire study as described in item 2.7 below.

Regarding reflexivity, by retaining the COREQ checklist we provide detailed information about the background of the ethnographers and their orientation to this research. We also add more
information on page 8 about their preparation prior to entering the field and have also clarified in the tables that the excerpts presented are from first-person fieldnotes from ethnographers. See our revised methods section, and some key points reproduced from page 8 below:

Three researchers (KC, SG, and VL) undertook ethnographic fieldwork across a period of 12 months (August 2016-2017). One (KC), conducted preparatory work for one year prior to entering the field in which she conducted exploratory interviews with project partners, undertook training in PHIMS, and met with multiple sites to design the fieldwork approach. Consistent with a focused ethnographic approach (19), the team of ethnographers immersed themselves in this data, undertook a 3-day intensive collaborative site visit, and engaged in extensive theoretical readings prior to independently entering the field. Each independent field visit was followed by a group debrief and reflexive discussions of the fieldwork experiences.

2.6. Also there needs to be some discussion about the study's limitations.

Author’s Response: We have added a ‘limitations’ heading in the discussion section to direct readers to our discussion of the limitations of this study. We now also discuss the limitations of our methods in drawing cross-site comparisons in response to Reviewer’s points 1.2 and 2.10. See further a further explanation of this in item 2.10 below.

2.7. 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.

Author’s Response: On page 8 we have added information about our use of theory as a sensitising concept, and explain how we engaged with theory throughout the entire project. This is an important characteristic of focused ethnography (6, 7) as we now describe in our methods. As the reviewer notes, in our protocol paper we outlined multiple theories that we drew on to inform the overall study and which guided our data collection approach. However for this analysis, we adopted a more grounded approach to answer a specific research question (as we describe in our methods). Therefore, our use of the word ‘tools’ was pragmatic and applied, to describe what we saw and examine the functions they play. The novelty of our findings is that we identify tools and their functions alongside standardised monitoring systems in health
promotion – this has not been done before and deserves attention. To further interrogate their meaning requires a subsequent study. Note that we have now removed the reference to Suchman in the introduction, as this may have understandably confused the reviewer that this work was directing our approach. We also now draw more explicitly on theory in our discussion of findings. See response to 2.8.

2.8. 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.

Author’s Response: Thank you for this helpful suggestion. We now reference this paper on page 17, where we draw on Complexity theory in the discussion of our findings:

Some may argue that the use of informal tools alongside PHIMS could indicate that PHIMS is not fulfilling its intended purpose well enough. This position reflects an implementation science perspective in which the process of scale and spread is conceptualized as sequential and structured. In this perspective, IT systems enable standardization and replication of core components across sites. But our findings are better interpreted through a complexity lens (26). Complexity theory posits that complex systems (made up of things, people and process) are dynamic – constantly adapting in response to changes in context. That practitioners are using alternate systems with, and sometimes instead of, PHIMS is an example of users adapting and modifying technologies in unexpected and unpredictable ways.

2.9. 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…? …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.
Author’s Response: As described in point 2.7 above, we now more explicitly explain the use of theory in our methods and incorporate it into our discussion section.

Regarding the reviewer’s suggestion of a cross-site comparison, while we agree this would be interesting, our focussed but short-term ethnographic approach precludes such an analysis. This is because our degree of access varied across sites so that we were unable to consistently (likely reliably) draw conclusions about the contextual or individual-level factors that mediated the use of informal tools. Also, our fieldwork reflects a ‘point-in-time’, so we cannot accurately comment on the degree to which these tools preceded PHIMS. We more fully describe our methods, and also, explain how this design constitutes a limitation of this study (See page 18)

2.10. 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.

Author’s Response: As more fully explained in point 2.11 above, we agree that this statement may be confusing. We have removed it, and revised the contributions section like so:

Nimble technologies are needed to respond to emerging knowledge produced by self-organizing systems at scale

2.11. 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.

Author’s Response: We have integrated a few more quotes into the results section to provide better context for the fieldnotes (as described in response to reviewer 1.2 above). Given the word limit and in keeping with other recent examples in this journal (i.e. (8) and (9)) we have elected to keep the in-depth extracts illustrating the functions in the table.

2.12. Discussion: Check the SRQR guidelines for writing a discussion.

Author’s Response: We have done so, also, see response to 2.4 above.
References cited in this response:


