Reviewer’s report

Title: The researchers' role in knowledge translation: a realist evaluation of the development and implementation of diagnostic pathways for cancer in two UK localities

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Reviewer: Janet Harris

Reviewer’s report:

This is a very interesting project with some important reflection on the role of researchers in promoting knowledge translation when collaborating alongside local leaders and groups. The methodology is stated to be case study and realist evaluation, so I reviewed the article with this in mind. I can see elements of case study in that different data sources are used and there are 2 sites for cross-case analysis. Preliminary CMOs have been developed but as you note they don't lead to a programme theory. The comments I'm offering here are hopefully some suggestions for further refinement of the concepts you've identified so that the quotes and the proportional statements are more closely related. Of course, some of my suggestions for alternative concepts might incorrect, as I'm not familiar with your data. But hopefully they will at least indicate where there's a bit of confusion for the naive reader.

CMO 1: Quotes support the stability of group composition but it would be good to know what mechanisms were triggered by stable composition and continuity. For example, did people have a higher degree of trust? more partnership synergy from previous successful implementation of change?

I'm wondering if group composition is actually a separate element e.g. Changing pathways is more likely to be successful when people who are responsible for different parts of the pathway have a positive history of working together and relationships which enable them to actively contribute their different perspectives on issues at various points in the pathway.

Line 219 It would be helpful to have group identity described more clearly as inter professional identity, to reflect the quote which describes collaboration across different sectors in health.

Different perceptions of who was missing: does this reflect the fact that people in site 2 hadn't agreed the types of people/roles that were important to changing a pathway?

Is separation from the research team seen as desirable? What is the role of the research team - is it to provide information packs and then withdraw, or is there a further role in remaining within the group to assist with translation of knowledge in the pack. Was there any explicit discussion of this during the project?

CMO 2: The concept of autonomous and proactive working isn't related to the quotes, so I wonder whether different quotes need to be selected or whether he CMOs need to be revised. For example, alongside trust, the first quote says that commitment from a recognised, credible
local leader is important. This to me would translate into a CMO that said leadership commitment from someone who is locally recognised and trusted inspires people to proactively develop a revised pathway. The second quote says clearly that facilitating working across boundaries is key in achieving change across a pathway. So this would seem to be a CMO saying that if leaders have successfully modelled inter-professional working in the past, the group has trust in the leadership and the skills to facilitate change in practice across a pathway.

It would be interesting to hear your reflections on why the research team moved into the vacuum. Were there no other local leaders? Did the reference group ask/agree that this should happen...what was the process?

CMO 3: Was clear understanding and agreement related to who was leading on the project? I'm wondering if the trusted leads in site 2 enabled people to understand and accept the information pack as relevant, in a way that the research team in site 1 could not. Which part of the pathway was site 1 focusing on and why was it wrong? Which evidence was contested?

Line 275 Does this refer to the legitimacy of the evidence being questioned or the entire project? The first quote seems to refer to feasibility of completing the project rather than legitimacy, and the second quote (line 284) seems to be questioning feasibility of changing practice was feasible

Was the document compiled solely by the research team, or did other stakeholders in each site have input?

Summary of results: There are some really interesting observations here that are introduced for the first time. And some great words/phrases that helped me understand what went earlier. For example, independence e.g. not representing any organisational interests; momentum; independence and credibility of the research team; adversarial; 'their' point of the pathway; key positions not filled. Could some of this be moved to the earlier sections? Lines 384 - 394 describing researchers' roles would also be really useful if placed earlier in the article. In realist evaluation, I'd say that these observations are part of the insight gained during data analysis. In the Discussion section, I'd expect to see a brief reiteration of these rather than seeing them for the first time.

You note that elucidating the underlying programme theory was difficult. I think it can be done with some further analysis of the concepts in the CMOs and more information on the mechanisms that were triggered (see notes above). If you haven't looked for candidate theories yet, I'd suggest that this be the next step, as you may find it much easier to develop your programme theory by seeing how your concepts have been used in other places. You refer to some concepts - such as partnership working, interdisciplinary communication, leading on change - that could be used to identify candidate theories that may be a good fit for your findings. Another possible fit in terms of a candidate theory might be normalisation process theory.

The article does need to end with a description of the emerging theory, which would be phrased something like: "In settings where the context is characterised by x, xx, xxx information compiled by researchers on containing national and local evidence can be successfully
implemented by local stakeholders is [list key elements]. Conversely in settings where the context is characterised fragmentation, reorganisation etc etc etc acceptance of research information will be constrained by x, xx, xxx....

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