Author’s response to reviews

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

Authors:

Jon Banks (Jon.Banks@Bristol.ac.uk)
Lesley Wye (Lesley.Wye@Bristol.ac.uk)
Nicola Hall (n.hall@Sunderland.ac.uk)
James Rooney (james.rooney2@nhs.net)
Fiona Walter (fmw22@medschl.cam.ac.uk)
Willie Hamilton (W.Hamilton@Exeter.ac.uk)
Ardiana Gjini (a.gjini@nhs.net)
Greg Rubin (g.p.rubin@durham.ac.uk)

Version: 1 Date: 13 Nov 2017

Author’s response to reviews:

Reviewer reports:

Reviewer #1: Thank you for asking me to review this manuscript. I am no content expert, though some of what has been described in this manuscript is familiar to me as a clinically active NHS GP. As such, I will restrict my comments to issues related to the application of the realist evaluation approach by the authors.

General comments:

REPORTING - My expectation is that this manuscript is reported using the RAMESES II reporting standards for realist evaluations which were published in June 2016.


Please would the authors review and revise their manuscript having looked through these reporting standards to make sure that each item is reported (or if not relevant / applicable an explanation is provided as to why).
We have rewritten and reorganised the paper to incorporate the RAMESES II reporting standards.

Rameses 1, 2 – the title and abstract indicate this is a realist evaluation.

Rameses 3, 4, 5, 7, 8, 9 are within the background section – rationale for research, programme theory, evaluation questions, rationale for realist evaluation, environment surrounding evaluation and description of initiative being evaluated.

Rameses 6, 10, 11, 12, 13 are within the methods section – ethical approval, evaluation design, data collection methods, recruitment and data analysis.

Rameses 14, 15 are in the results section which gives details of participants, an overview of outcomes of the initiative and the main findings of the realist evaluation.

Rameses 16, 17, 18, 19 are contained with the Discussion section of the paper and includes a: summary of results, comparison with literature as part of our ‘implications of findings sub heading’, strengths and weaknesses and conclusion and recommendations.

Rameses 6, 20 are covered in the declarations section where we give more details about ethical approval and a conflict of interest statement.

Specific comments:

Line 63:

Realist evaluation is not a method it is an approach in that it is a way of analysing data using the logic of analysis developed by Pawson and Tilley and Pawson (Realistic Evaluation, Pawson R and Tilley N. 1997, London: Sage).

We have now framed our realist evaluation as an approach used to evaluate the development of cancer pathways in two localities rather than a prescribed method (see P3. lines33-34, P4. line 52, P4. Lines 66-70).

Lines 67 to 68:

Reference is made her to "the intervention".

What intervention do you mean?

The pathway or the implementation process or perhaps the programme theory of the implementation of cancer pathways?

We have substantially re-written the paper so that we are explicit that we are evaluating ‘an initiative to develop and implement cancer referral pathways from primary to secondary care in two English localities’ (see P.3, lines 33-34).
Lines 70 to 71:

Are you suggesting that the two sites were in effect a convenience sample?

Need to justify using such a process as site selection is likely to have an influence on the exact contextual mix and thus possibly the mechanisms that are 'triggered'.

We have clarified the process of selection which was that the two sites were selected as part of the original Discovery research programme initiative and so we were limited, these were the only sites involved and as such their selection for evaluation was axiomatic. The rationale for their selection as part of the initiative is detailed in (see P.5, lines 84-97).

Lines 77 to 78:

Please can you explain why your research question is so narrow - in effect with only an interest in 'what enables?'.

There is not necessarily anything wrong in such a narrow focus, but it would be important to understand why you did not think it was important to understand why, or for whom, or to what extent.

We agree, our research question did not fully reflect the goals of our evaluation as was written and we have provided a much broader research question which sought to identify and assess the full range of contexts and mechanisms that both enabled and hindered the development of pathways (see P.4. lines 61-65) and below,

(a) How do the people that make up the reference groups respond to academic research and how do they work with the Discovery research team who initiated the process? (b) To what extent new pathways draw on academic research? (c) How successful are the reference groups in getting the local pathways implemented? (d) What contextual factors help or hinder this process?

Line 88:

Who are these reference groups? A brief explanation of your use of this term would help to orientate readers.

These were groups composed of local stakeholders who had the remit to develop and implement pathways and we have given a brief description on P.4, line 51 and more detail on P.5, lines 86-97.

Lines 89 to 93:

Please would you provide more details on how you the analysis of the accounts led to the develop of draft CMOs and the programme theory.
In the new version of the paper we have given more details about this process and feel that we have been much clearer in the methods section, see pages 6-8

Lines 109 to 118:

My feeling is the process of analysis needs additional explanation and justification.

You appear to have codes based on CMOs and your programme theory. However, the data is then organised into codes.

Why was this done as you already have codes that relate to data that provide you with information on Cs, Ms and Os - in other words a realist explanation of what caused and outcome under what circumstances.

Why did you need to organise the codes into themes?

You could, for example, have used the relevant data from the interviews to confirm, refute or refine aspects of your CMO configurations that are embedded within your programme theory.

When did you do above and beyond compare the themes and CMO configurations?

What do you mean by "consistent" on line 116?

As above we have rewritten the methods section to explain how we got from programme theory, through to draft CMOs and then on to final CMOs. Briefly, the documentary data informed our topic guide and our thinking around draft CMOs and then analysis of the interview data provided the basis for the development of the final CMOs and refined programme theory.

By consistent we meant that our developing CMOs were based on results from our data, particularly the interview data. This has now been rewritten, ‘data analysis continued, until the final CMOs and revised programme theory were agreed’ (See P.8, lines 159-161).

Line 179:

Do you mean mechanisms here in the realist sense or do you mean processes?

We meant ‘processes’ here and the text has been amended, see P.9, line 186.

Figure 1, line 195:

This figure is informative, but it does not seem to exactly relate to the contents of CMO1 to 5.

In addition, I would urge you to reconsider if all the mechanisms listing in this figure. For example, I could not see from the data you provided, how a simpler health economy (as a context) would 'trigger' easier negotiations (is this really a mechanism) to produce effective implementation.
Overall my feeling is that it may be better to make sure that the contents of Figure 1 exactly matches the text in each CMO and that each part of the CMO is clearly labelled as being a context (C), mechanism (M) or outcome (O).

The reader then does not have to keep looking at the Figure to work out what is functioning as what.

We have amended all the CMOs so that each one clearly indicates and delineates contexts, mechanisms and outcomes. We have removed the original CMO 4 about a simple health care economy as we have reflected following the reviews and do not feel this really works as a CMO. We have redrawn the figure to reflect the above changes, which is now presented in the discussion section (see P.15 and supplementary file).

Overall comments on CMO 1 to 5 presented in the 'Results' section:

Along with 'labelling' the CMOs (see comment above), I felt that if you were going to provide data to support your inferences about what was within the CMO configuration, you might want to revisit the data provided. Reading some of these data did not immediately enable me to think 'yes, I can see how this data supports your inferences'.

For example:

- Lines 219 to 226: This appears to be important illustrative data provided to support the inference that strong group identity is a mechanism in CMO1.

However, it does not quite do so for me as the inference that I would come to as being the mechanism would be more a sense of shared purpose.

If this is what you mean by "strong group identity" then fine, but if it is not, it may be worth providing another illustrative section of text.

As noted above we have adjusted the CMOs to be in line with the data and the results and also to fully reflect contexts, mechanisms and outcomes. It was our intention that 'strong group identity' would reflect shared purpose but we accept that this is not clear and have amended accordingly (see P. lines 197-199).

- Lines 227 to 230: I'm not quite sure this is very convincing. People may be missing or might come and go to the groups, but those that do turn up might still have had a history of working successfully together.

We accept this point, and have amended in the rewritten paper to clarify that the group in site 1 did not have enough continuity or stability to gain the momentum or shared purpose that existed in site 2, and site 2 had worked together as a whole group previously successfully (see P.9, lines 212-217).
Of course I realise that space is limited in any journal manuscript, but it would probably go a long way towards providing the transparency needed to reassure readers that your inferences are plausible, if you provided more data. As a balance you might consider providing the most pertinent texts in the main manuscript and have additional files with all the detail for each CMO in turn?

Our aim was to write this up as a complete piece within the confines of the word limit. We feel that the written text is much better aligned with the data quotes and we can supply data in additional files as necessary

Summary of results section: Lines 333 to 358.

In this section it is again unclear that the analysis undertaken used the realist logic of analysis developed by Pawson and Tilley.

The results are more descriptive than explanatory of outcomes and it is also unclear how any of these findings (in the form of CMO configurations or not) fit into the programme theory provided in lines 94 to 97.

No attempt appears to have been made to refine this programme theory.

The revised programme theory now reads:

‘A respected, independent, well-connected leader who models partnership-working and facilitates a local, stable group with a strong identity that agree about the legitimacy of the project aims, process and data, working with a research team who take a minor, non-directive role (context) can empower local teams to become sufficiently autonomous (mechanism) to develop and implement research-based pathways (outcome)’ (see P.15, lines 340-344).

Strengths and limitations section.

This section may need to be revised once the result section has been revised.

Overall, we do not see the changes that we have made to the results section impact on the strengths and limitations of the paper.

Conclusion section

This section is likely to need revision once the result section has been revised.

For example, the conclusion that ownership is important is interesting, but it is not at present clear in this manuscript how such a claim can be supported by the data.
We feel that the current conclusion based around a new programme theory is now consistent with the rewritten results section of the paper.

Reviewer #2: 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?

We have rewritten CMO 1 to provide a clearer focus on mechanism, specifically we have highlighted a ‘shared purpose’ as the mechanism which we appreciate was not previously explicit (see P.9, lines 197-199).

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.

This is very credible but we still feel that our data are consistent with stability, composition of group and previous working relationships all feeding into the creation of a shared purpose which we have captured in a rewritten CMO1 (see P.9, lines 197-199).

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?

We think perhaps you mean site 1. We agree that the inter-professional aspect of the group identity has not been reflected in our original version and this has now been amended (P.11 lines 229-234).

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?
Yes, the intention was for the researchers to supply the information packs and then withdraw, which is now stated in the ‘background’ P.4 lines 50-51 and picked up again extensively in the discussion section see P.17, lines 385-401).

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 the 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.

We recognise the point being made here. We have modified the CMO to:

Respected, independent and well-connected local leaders who model partnership-working across organisational boundaries (context) foster engagement from reference group members (mechanism) who are proactive in pathway design and development (see P11, lines 235-237).

We have interpreted the quote in the CMO2 section from participant 006 where the participant talks about how the leader showed them “how to do it” so that they could “take it forward”, as evidence of linking leadership to proactive working (see p.11, lines247-251).

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?

We did not feel there was sufficient space to cover all these points in the paper but based on the researcher’s reflective log it was a partly unconscious process that was driven by the research team’s desire to make the initiative work. In terms of other local leaders, the site 1 leader had already had a major role in the Discovery research team and it would have been difficult to invite someone else on board. Moreover, the question of leadership emerged in the interviews and analysis post-hoc; it was not felt to be an issue at the time. Thus, the possibility of finding another local leader was never raised.

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.

This is helpful. We have added this observation to the discussion section with the following sentence:

‘Possibly because these leaders were trusted, this helped the reference group to understand and accept the legitimacy of the information pack in a way that the research team in site 1 could not’. (see P.15-16, lines 351-353).
Which part of the pathway was site 1 focusing on and why was it wrong? Which evidence was contested?

We did not detail this through lack of space but for the secondary care members of the reference group in site 1 there was a feeling that the focus should have been on raising public awareness to get more symptomatic people to present to primary care, hence the reference to a social marketing campaign in the quote rather than changing the processes for getting people from primary to secondary care

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?

The legitimacy of the evidence presented and the entire project were both challenged. We have amended this to make it clearer (P.13, lines 279-290). The document was compiled solely by the research team and we have clarified this (P.5, line 103)

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.

We accept these points and we feel that the text around the CMOs and within the text in the rewritten paper are much more consistent between the results and discussion sections. We have moved an edited section describing the researchers’ actions to the introduction section as suggested (see P.6, line 119).

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....

Yes, we agree. We have now developed a revised programme theory interweaving in concepts from change management within the discussion section of the paper that says:

‘A respected, independent, well-connected leader who models partnership-working and facilitates a local, stable group with a strong identity that agree about the legitimacy of the project aims, process and data, working with a research team who take a minor, non-directive role (context) can empower local teams to become sufficiently autonomous (mechanism) to develop and implement research-based pathways (outcome)’ (see P.15, lines 340-344).