Author's response to reviews

Title: Understanding the modifiable health systems barriers to hypertension management in Malaysia: a multi-method health systems appraisal approach

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Author's response to reviews: see over
Thank you for the very helpful comments. We hope that we have addressed all the comments, setting out the changes made below or, where we disagree, our rationale for doing so. We have highlighted the specific substantive changes in the revised paper in yellow (we did not mark the typo corrections or the revisions to the results section to shorten it). In fact, almost all the changes were very straightforward, involving correcting typos and providing more clarity.

Reviewer 1

This manuscript used a mixed-method approach to better understand the modifiable health systems barriers to hypertension management in Malaysia. The main purpose was to inform the design of a complex pragmatic trial (HOPE-4) but the methods and messages from this work are useful for other countries and studies as well. The authors should be applauded for carefully conducting such a study, which is much needed but usually not done in other trials. In general, the paper is well written with a sound methodology and clear theoretical framework for this type of studies. However, there are major and minor revisions needed to make it suitable for publication.

Thank you

Major:

1. Line 208: Table 2 is helpful, but more details are needed in this section on how the interviewees were selected, who conducted the interviews (trialists or independent interviewers), length of interviews etc.

   Good point. We have added this information in the text. Details of the interviewers were in the previous section but we have now expanded this information.

2. Line 228: details need to be provided for how the triangulation was done.

   Another good point. We have reworded this, clarifying that we were triangulating the findings from the interviews with the other sources and adding a citation to the method we used (from the text by O’Donaghue & Punch).

3. This reviewer finds the RESULTs section to be confusing to read with results from other studies and published data sources (eg. Lines 282-3; 375-7) together with results from the field interviews. It would be better to report them separately;

   This is a difficult one. We have tried to revise the paper accordingly but found that it introduced a great deal of repetition, thereby lengthening the paper (which we are urged to avoid, as noted below). We have gone through the text and, where it seemed appropriate, moved some material (including the sections noted above) into the discussion. However, as we were using the other material to triangulate our findings – see point above – the various sources are inextricably linked. For this reason we we did not feel that we could fully split the material from the different sources as we were in danger of disrupting the flow of the narrative but we have addressed this concern to the extent that we felt possible.

4. The methods section and discussion sections are better written (concise and clear) while the results section is less clear, usually a compilation of statements and rather long; there is a disconnect in the framework and the description of results too.
First, thank you for your comments on the methods and discussion. With regard to the results, we are not sure we fully agree. As noted in the previous point, this is a multi-method assessment drawing on diverse sources and synthesising them. Hence, the material is brought together in a way that is different from that in a traditional IMRD format. In fact, and especially since the revisions we have made, there it does follow the framework, first describing the patient pathway and then the settings, before moving into the synthesis which takes the framework headings of each type of resources. We do feel that the quotations are justified. They illustrate the issues well and it is common to use this approach in qualitative research. In terms of the structure, we felt that we had to describe the subject of our work before analysing it. However, we hope that the revisions we have made do address the concern about length.

5. Tables: tables 3 and 4 are not suitable as tables, better to be appendices if authors feel necessary to have such information. Table 5 is good (but only an adaptation of previous paper); if the Results section can summarize findings relevant to Malaysia from the study (esp. the field interviews) into a tabular format like Table 5, it will make the paper more reader-friendly.

We have moved the table to an appendix.

6. The paper is TOO long and has too many tables and figures even if the journal does not have specific requirements.

We agree that the paper is long, but we also note that reviewer 2 has identified additional material that we could have added. As noted above, we have moved two tables and a section of the results to an appendix. In this way we have reduced the results section by a quarter and the entire paper by over 800 words. However, for a largely qualitative paper, just under 7,000 words, where it is now, would be quite usual.

Minor

1. Use of acronyms bothersome: too many, lack of definitions before first use for some (eg, line 111), and inconsistent use throughout the manuscript.

We have minimised the use of acronyms and ensured that they are defined when first used.

2. Line 254: remove the before there.

Corrected

3. Line 314: not clear who are they: MO?

Clarified – medical officer, now spelt out in full throughout the paper

4. Line 315: “take their word” quotes not clear (who said what about whose word)?

Revised to clarify that it is the word of the patient

5. Line 429: revise use of ( ).

Corrected

6. Line 641: within and without the health system: choice of term “without” better to be “outside” or external to.

Changed to “outside”
Reviewer 2

This well written paper presents findings from a comprehensive whole systems appraisal to collect data to inform the development of an intervention to improve hypertension management in Malaysia. This is a thorough and labour intensive approach to health systems planning and development and the case for such an approach is well made. The paper necessarily presents a somewhat condensed overview of the current picture of hypertension management in Malaysia that takes into account multiple levels, including economic, epidemiological, health service organisation, clinical governance, social and cultural. The paper hints at but does not spell out how these factors might underpin or inform the design of a novel approach to pharmacological management of hypertension. It will be interesting to learn how the intervention that is developed will address the extremely complex picture, and the extent to which it focuses solely on getting people to take tablets as prescribed.

Thank you. As the reviewer notes, there is more that could be added but, as the first reviewer also notes, the paper is already long. With respect to the trial design, we propose submitting a paper elsewhere describing the trial protocol. On balance, we believe that this will be the right place to describe how this study has contributed to the trial design.

The authors highlight the existence of traditional health beliefs that dissuade people from adhering to treatment when asymptomatic (as in the case, usually, of hypertension). We recently published a review of qualitative research that argues that this idea is found across the world and thus the particularity suggested here might be over stated. Malaysians’ understanding of hypertension, and their subsequent self-management of the condition, sound similar to other accounts in the literature. We have therefore argued that improving adherence might be achieved through improved understanding of and engagement with patients’ ideas about causality, experiences of symptoms, and concerns about drug side effects, regardless of setting. (see Marshall, Wolfe, McKevitt, BMJ 2012;345:e3953.) This would required sustained and multiple efforts to convince patients that the biomedical explanatory model of hypertension is worth accepting.

We are extremely grateful to the reviewer for drawing our attention to the excellent systematic review. As he notes, our findings are consistent with some reported in that review, although we were interested to note that there are also some apparent specificities, perhaps reflecting the fact that the review contained only one study (from Thailand) from south or east Asia. We have now referenced the review and added some corresponding text.

We learn much from this paper about the situation in Malaysia, although the authors argue that this particular case has wider application. Thus I wondered if the authors’ intent was methodological rather than descriptive; and if that is the case it would have been helpful to read a more explicit account of the practice of undertaking this type of systems wide appraisal.

Thank you again. The reviewer clearly recognises our quandary, as we had such a lot of material. We felt that it was most appropriate to use it to illustrate that it is possible to develop a contextually relevant complex health systems intervention prior to evaluating it in a trial. However, we recognise that, in doing so, we have provided a detailed assessment of key aspects of the Malaysian health system. As we note, this paper builds
on our earlier work in several post-Soviet countries and, in parallel, we are currently revising (post review, with minor revisions) a paper describing our use of the same approach in Colombia. We are also developing the approach for use with diabetes in the UK. We see these papers as the foundation on which we can construct a paper that combines these experiences, while also showing how we are testing the reliability and validity of the approach, something that goes beyond what we have done here.

Figures 2 and 3 would benefit from a title.

Their apparent absence is an artefact of the submission process, whereby they must be uploaded as image files. Thus, we can see why they were missed by the reviewer. The titles are listed just before the references and we assume will be linked during typesetting.

A couple of typos: page 2, line 72; page 13, line 543

These have been corrected