Author’s response to reviews

Title: Embedding implementation research to enhance health policy and systems: a multi-country analysis from ten settings in Latin America and the Caribbean

Authors:

Etienne V. Langlois (langloise@who.int)
Arielle Mancuso (amancuso@who.int)
Vanessa Elias (eliasvan@paho.org)
Ludovic Reveiz (reveizl@paho.org)

Version: 1 Date: 17 Jul 2019

Author’s response to reviews:

Many thanks to the external peer-reviewers and HARP’s editors for the relevant and interesting feedback on the manuscript. We have acted on the recommendations and modified the paper to address the comments accordingly. The edits appear in track change mode in the updated manuscript herein, and we highlight the amendments and responses to the reviewers’ comments below.

Reviewer #1

This is a well written paper on an important topic. I have several suggestions for minor changes:

- Clarify in the abstract and possibly the title that this paper deals with 10 projects funded through one funding initiative, and in the methods section clarify if and how these projects were selected from a larger pool

Thanks for the useful suggestion. We have modified the abstract, title and methods section to account for this suggestion. The new wording is the following:

Title:

Embedding implementation research to enhance health policy and systems: a multi-country analysis from ten settings in Latin America and the Caribbean
Abstract:

(…) The approach was tested in ten settings in Latin America and the Caribbean, supported under a common funding and capacity strengthening initiative.

Methods:

The approach was tested in ten settings in Latin America and the Caribbean, supported under a common funding and capacity strengthening initiative. The embedded implementation research teams were selected after an open competitive call for proposals managed by the Alliance and PAHO.

- Given that the % figures come from a survey of only 8 people, or all of the projects (n=10), please present numbers rather than percentages - this is throughout, including Figure 1.
This has been modified throughout the results section, including Figure 1. The number of respondents have been included.

- Give greater emphasis to the long recognition in many field of forms of embedded research (eg research uptake, policy engagement, and participatory action research literature)

This is an important issue. We reference the literature on co-production of research in the paper, but we agree that a more explicit mention of these different approaches is important. We have now included an additional narrative in this regard in the discussion, along with relevant references:

“There is an increasing empirical base to support the co-production of research within the health sector, including the engagement of patients, communities, healthcare providers and health systems decision-makers [16, 28-35]. The approach of embedding research into policy and practice also builds on the experience and methods put forth by the field of participatory action research. In addition, co-production of research has been spearheaded in other sectors including environment, education and social welfare [36], speaking to its potential to advance the Sustainable Development Goals.”

It's not always clear where the results are coming from - ie which of the methods. For eg with para 2 under findings, it's unclear whether these are from document review or from interview or drawing across all (table 2 draws on all reports and interviews?).
The results from the document review have been included as their own section. A sentence to clarify the source of the results for Table 1 has been incorporated:

“The characteristics of the embedded implementation research projects are provided in Table 1 that presents the validated results from the document review and a summary is provided below.”

Clarify if and how the quality of implementation research (especially reported impacts) were judged.

Add a subheading on limitations of the study at the top of page 15 which discusses this, and make a note that the approach to examining the embedded approach, was also a limitation to understanding and complexity.

The reported outcomes and impacts were triangulated using different data sources, including document reviews, questionnaires and interviews, and validated through a reflexive process with researchers and decision-makers. We did not assess the quality of implementation studies using standardized tools. We added this fact as a limitation of the study, i.e.:

“A limitation of this multi-country analysis is the absence of critical appraisal of the implementation studies using validated tools”.

Limitations are now included as an explicit sub-section of the discussion, as suggested. We agree with reviewer 1 about the limitations of the study in unpacking and understanding complex root causes of health systems dysfunctions leading to poor implementation and the new limitations section includes explicit wording in this regard.

- I suggest the term of 'proof-of-concept' is removed, for some of the above reasons

We removed mentions of “proof-of-concept” from the manuscript.

Reviewer #2: Thank you for this opportunity to review this paper on embedded implementation approaches in 10 countries through the iPIER program. The cluster of work on embedded research is critically important and currently very topical in health policy and systems research, and intervention. The authors are well known in this area, and well positioned to provide insight into the lessons from these interventions. The manuscript is well written and well edited. I provide some comments in the spirit of supporting the strengthening of this publication.

Across the intro, discussion, and conclusion, the authors do not appear to really engage with the current publication and thinking (especially in 2017 and 2018) on embedded HPSR. While this is
not a review article, so fair enough, I believe this article would be greatly enriched by some fuller explanation of the thinking behind (their particular) framing of embedded implementation (and how it compares to the recent progress in work on embedded 'health systems research' vs embedded 'health system strengthening' intervention). Some of the key findings are well supported in the broader literature, and would be better substantiated by connection to this. At this time, the paper seems strangely disconnected from the broader thinking and work on embedded research and local research translation that has occurred in the last couple of years.

Many thanks for the insightful feedback and suggestion to account for the most recent developments in embedded health policy and systems research, knowledge uptake/translation and how this relates to health systems strengthening endeavors. There is a lot of interest in science about co-production approaches, with decision-makers (the focus of this study) but also with other stakeholders including patients and providers. This is true for the health sector, but also in other areas such as social welfare, environment, etc. We agree that the literature is swiftly expanding especially in health policy and systems research. To account for this evolution, we have included additional wording and references in the introduction, discussion and conclusion, including the following:

“There is an increasing empirical base to support the co-production of research within the health sector, including the engagement of patients, communities, healthcare providers and health systems decision-makers [16, 28-35]. The approach of embedding research into policy and practice also builds on the experience and methods put forth by the field of participatory action research. In addition, co-production of research has been spearheaded in other sectors including environment, education and social welfare [36], speaking to its potential to advance the Sustainable Development Goals.”

We refer here to important publications – including reviews – on the issues of stakeholder engagement, health systems decision-making and co-production of health policy and systems research, including the following publications from 2017-2018 and 2019:


Regarding the question on embedded research vs. embedded health systems interventions, the idea for the iPIER programme was to support existing and already active policies, programmes and interventions using implementation research embedded in real world decision-making. As such, the focus was not on developing an external intervention to enhance the performance of health systems, but rather to use empirical tools and findings to enhance the implementation of interventions or policies already in place. We have now clarified the focus of the iPEIR scheme in the manuscript.

We have also provided additional information on our approach and methods to embedded implementation research.

In addition, a key question for embedded research is its appropriateness in different circumstances, i.e. when and how to (or not to) embed research in policy and practice. This is a contemporary debate in embedded HPSR and we have accounted for this reflection in the conclusion section.

We also highlight the key knowledge gaps in the field of embedded research, linking to the ongoing work to strengthen this approach in health policy and systems research, and beyond.

Introduction: I would suggest that it would be extremely helpful if the authors clearly referenced their existing publications on this issue and project - some of which overlaps with this publication (such as the Alliance reports on this same project, the Rev Panam Salud Publica Overview etc). I believe it would enhance this argument (not detract from it), if the reader were aware of this collection of related publication on same and similar projects.

Thanks for the suggestion to reference existing work on embedded implementation research in the region.

When introducing the initiative Improving Programme Implementation through Embedded Research (iPIER) in the manuscript, we link this to the special supplement introduction:

We agree that referencing the supplement’s overview paper is an excellent idea and we have now added this reference along with the additional information on the iPIER model, i.e. the following citation:

Tran, N., et al., Embedding research to improve program implementation in Latin America and the Caribbean. Rev Panam Salud Publica, 2017. 41: p. e75.

The research papers published in the special supplement of the Pan-American Journal of Public Health in 2017 are explicitly referenced and mentioned in the manuscript:


Introduction: "Traditionally, scientists and researchers have led the health research agenda, with little engagement of stakeholders and a consideration of end-users as passive audiences for research findings (3, 4)" … this comment, rapidly made, feels a little too summarised for a very complex issue that is not quite so black and white as presented here. For example, this ignores the challenges of Northern- or global institutionally-driven research agendas - and how powerless Southern LMIC health systems and researchers sometimes are to shape research agendas. This comment feels too pat and generalizing for the more complex realities relating to embedded research (which are well covered in the current literature)

We agree with reviewer 2 that this question is extremely complex and cannot be disentangled from issues of power in global health research. The comment was not intended to specifically focus on LMICs, but rather as a reflection on the lack of engagement and siloed research conducted globally without consultation of the end-users, which often leads to wastage. That being said, we agree that this sentence needs to be removed and we included instead a more nuanced appraisal of the situation, by focusing on the importance of engaging end-users.

The methods section is missing a great deal of detail that could be easily and concisely provided (note, some of this is provided much later in the results section, but that is much too late). For example, how and when was data collected? and what scope (how much); how many documents were reviewed - using what parameters?; how many surveys were sent out vs how many responses were analyzed? was this a brief survey or a full survey?; how many decision makers were interviewed? Full length interviews or brief chats? The authors talk about a small sample size - but haven't actually said what size the sample is. Also, WHEN were these things done? It seems like perhaps data collection happened in 2015 and 2016? Or has some been done more recently? Please clarify and justify (I would find it particularly interesting if more recent data collection or verification had happened, which would give some understanding of whether the embedded approach had longevity/sustainability).

Thanks for the useful suggestions. We have clarified the various components in the methods section and the additional material is listed below.

How and when was data collected?

“The multi-country analysis is based on the triangulation of data collected via three methods: i) document review, ii) electronic questionnaire and iii) in-depth interviews with decision-makers.”

“Data was extracted from the research protocol (1), routine progress reports (2), and the final technical report (1) for each project submitted to the Alliance during their implementation between 2014 and 2016 as well as a scientific paper that were published in 2017 based on the
studies [13-22]. The document review was conducted by the assessment team (AM, VE) in 2016 & 2017. Data extracted were then directly validated in writing on two occasions by the decision-makers and researchers involved in the research in 2016 & 2017.”

“Eight (8) respondents completed the survey during January 2016 for a response rate of 80%.”

“Each interview lasted approximately one hour and took place between November 2015 and April 2016.”

What scope (how much)?

“Data was extracted from the research protocol (1), routine progress reports (2), and the final technical report (1) for each project”

“Data was extracted using a data extraction form that included the headings that are provided in Table 1 & 2”.

“The survey included 28 Likert scale to assess: i) level of engagement in different stages of the embedded research; ii) extent to which their capacities to conduct and use research was strengthened; and iii) level of confidence in undertaking implementation research activities.”

A semi-structured interview guide was used that included a series of open-ended questions on the experience and perceptions of carrying out the embedded research projects. The questions for discussion during the interviews are presented in Additional file 1. The thematic areas under consideration included: i) conceptualization and conduct of the research, ii) embedded research approach, iii) uptake of research findings and resulting impact, and iv) perceptions of research.

Each interview lasted approximately one hour and took place between November 2015 and April 2016.

How many documents were reviewed - using what parameters?;

Data was extracted from the research protocol (1), routine progress reports (2), and the final technical report (1) for each project submitted to the Alliance during their implementation between 2014 and 2016 as well as a scientific paper that were published in 2017 based on the studies [13-22]. This means that 5 documents were reviewed for each study for a total of 50 documents total, representing all available project documentation from the studies.

Data was extracted using a data extraction form that included the headings that are provided in Table 1 & 2, such as research question, implementation research variables, implementation research strategies, policy/programme impact, among others.

How many surveys were sent out vs how many responses were analyzed?
Eight (8) respondents completed the survey during January 2016 for a response rate of 80%.

All survey responses were included in the analysis.

Was this a brief survey or a full survey?

The survey included 28 Likert scale to assess: i) level of engagement in different stages of the embedded research; ii) extent to which their capacities to conduct and use research was strengthened; and iii) level of confidence in undertaking implementation research activities.

How many decision makers were interviewed?

One interview with each decision-maker (N=10) was conducted by at least two members of the assessment team (AM, VE, LR) using teleconference services, at a time and place agreed upon with the respondent and in most cases, their place of work during working hours.

Full length interviews or brief chats?

Each interview lasted approximately one hour and took place between November 2015 and April 2016.

Also, WHEN were these things done? It seems like perhaps data collection happened in 2015 and 2016? Or has some been done more recently?

Data extracted were then directly validated in writing on two occasions by the decision-makers and researchers involved in the research in 2016 & 2017

“...We also put forth a participant validation approach by sharing the results and discussion sections of the study with the country respondents in 2018, to explore the credibility of findings and check for resonance with their experiences.”

It would be extremely helpful to understand early on (before the results) what this 'innovative model' is, what it's characteristic are, and what exactly makes it innovative (again, linking to the broader literature). It is mentioned that 'we' developed the innovative model, and for that reason, it would be useful to have some further background on who developed what, when, based on what. This is never fully unpacked - and the note on page 7 that "characteristics of the embedded implementation research projects are provided in Table 1" is not adequate for this key issue. (Also, it is not clear where Table 1 would be placed in the text? - and Table 1 does not clearly explain to the reader what this innovative model is).
Thanks for the suggestion. We have now included additional information on the features and processes of the embedded implementation research approach put forth in this scheme (before the results section), including issues around leadership of the decision-makers and their role as co-principal investigators, as well as additional description of the capacity strengthening component of this programme (protocol development workshop, data analysis workshop, continuous scientific and technical support by an expert group, etc.). We have also included additional information on the stakeholders (Alliance, PAHO, IECS, research teams), their role, and key dates and locations of capacity strengthening activities.

The presentation of results (by data collection type) feels cumbersome. The issues being (briefly) presented appear to be based on the same questions (although this is not clarified), so a synthesized results section presenting findings on particular issues would make a lot more sense to me.

Thanks for the comment. We added material in the Methods section about the issues addressed in the document review phase:

“Data was extracted using a data extraction form that included the headings that are provided in Tables 1 & 2, such as research question, implementation research variables, implementation research strategies, policy/programme impact, among others.”

The themes addressed by the survey and semi-structured interviews are also highlighted in the manuscript:

“The survey included 28 Likert scale to assess: i) level of engagement in different stages of the embedded research; ii) extent to which their capacities to conduct and use research was strengthened; and iii) level of confidence in undertaking implementation research activities.”

“A semi-structured interview guide was used that included a series of open-ended questions on the experience and perceptions of carrying out the embedded research projects throughout the research process, including facilitators and barriers. The questions for discussion during the interviews are presented in Additional file 1. The thematic areas under consideration included: i) conceptualization and conduct of the research, ii) embedded research approach, iii) uptake of research findings and resulting impact, and iv) perceptions of research.”

The study team decided to present the findings in this manner after assessing potential options and making a judgement about a straightforward and logical presentation of results that would ensure comprehensiveness, logic and clarity. We agree with reviewer 2 that a synthesis of findings is important, and the approach used in this study is to synthesize data on the different barriers and facilitators to the embedding of research in policy and practice.
The findings are interesting and relevant - although it would be useful if it was clearer who which recommendation is targeted at - for embedded research or embedded implementation? for global or local actors? for researchers or policy makers? ... and the fuzziness on whether this is about embedded research or embedded intervention (mentioned earlier) remains.

This is indeed critical. The research projects aimed at supporting existing policies, programmes and interventions using implementation research embedded in real world decision-making. We have now clarified the focus of the iPIER scheme and added the following paragraph:

“The research projects aimed at supporting existing policies, programmes and interventions using implementation research embedded in real world decision-making. As such, the focus was not on developing external interventions to enhance the performance of health systems, but rather to use empirical tools and findings to enhance the implementation of active interventions or policies already developed and prioritized by decision-makers.”

Pg 16 - I would not use the term 'paradigm shift' - you have not this far argued for a paradigm shift, and I do not feel calling for closer engagement between researchers and policymakers/users can be considered a shift of paradigmatic proportions.

Point well taken and we have amended the manuscript accordingly.