Author’s response to reviews

Title: How do organisations implement research impact assessment (RIA) principles and good practice? A narrative review and exploratory study of four international research funding and administrative organisations

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Author’s response to reviews:

Reviewer 1
Review of: "How do research organisations implement research impact assessment (RIA) principles and good practice? A narrative review and exploratory study of four international funders. HRPS-D-19-00165

Thank you for giving me the opportunity to review this interesting work. The paper deals with an important and timely issue. However, I have some concerns regarding the different sections. I will elaborate on these issues below.

Response: We thank the reviewer for these supportive and detailed comments, and provide an itemised summary of responses (R1, R2, etc.) below.

General comments

1. Please use line spacing (1.5-2) and line numbering independent from page numbering. The text is difficult to read and comment as it is now.

R1. Spacing now at 1.5 with continuous line numbering added.

2. Please go through the manuscript searching for spelling and formatting errors. Some such errors are present.

R2. Spellchecked and we hope to have corrected these in full.

Background

1. The following meaning in the background (page 4, lines 35-39) does not make sense, please reconsider the phrasing "methodological approaches": "The International School on Research Impact Assessment (ISRIA) was set up by research and funding organisations who recognised a need for research impact strategies and associated assessment efforts to be given an explicit practitioner focus, while remaining grounded in robust, methodical approaches."

R3. We have amended the second part of this sentence to read: ‘…based on principles of good practice
and the application of robust and repeatable evaluation methods’, to clarify the central role of good evaluation practices in RIA.

2. The following paragraph is lacking references (page 5, lines 13-20), please add references: "Many research organisations globally now attempt to set expectations around 'impact' - encouraging researchers to consider impact early in their planning, and requesting evidence of contributions to impact - in an attempt to maximise the benefits of their research investments, as well as provide accountability. However constituent organisations appear to vary in the levels of guidance they provide and their organisational approaches to supporting, evaluating and evidencing impact."

3. On page 4 lines 54-61 you write that "Essentially, RIA involves funders asking researchers to identify the impact of grants awarded (or proxy indicators representative of progress towards impact), and then using this information to conduct their own assessments, analyses and evaluations. While many definitions of impact abound, national RIA exercises tend to define research impact as a change or benefit demonstrably realised beyond academia, as a result of research activity/ies (6). This short description of RIA does not problematize RIA in a sufficient manner. I suggest you to describe impact in a problematizing manner and discuss how to evaluate impact.

R4. We thank the reviewer for these comments and have rewritten much of the Background section to more clearly situate the problem of RIA in terms of funder roles and responsibilities. In particular we have included references that we hope clarify the issue in terms of a wider challenge of RIA being dominated by a governance-led or bureaucratic agenda, and studies highlighting funders’ roles in applying evidence to their own operations. Indeed, the reviewer’s own research exploring funding managers’ roles has been extremely informative, and was not something we had been aware of until this point. In citing this and other relevant works we thus hope to have made a more specific case for the need for this study and its particular focus on research funding organisations.

Methods

1. On page 7 lines 9-14 you write that "Studies of particular interest were those reporting on observational/participatory/operational/action research from the perspective of research organisations undertaking impact assessment." Did you exclude studies reporting on interviews with research organisations? Why?

R5. We didn’t exclude these – merely an omission on our part (though in effect we found so few studies meeting our inclusion criteria that it made no difference) – and added interviews to the list.

2. In the methods section, I cannot see the timeframe for your search and a possible motivation to the selected timeframe. Please add this information.

R6. We used OVID to carry out and aggregate results of these searches across a number of databases and had set timeframes to the maximum allowable. Constituent search timeframes thus varied across the different databases, but we have included numbers of years in parentheses following the name of each database.
3. In the methods section, I cannot see any details on the narrative literature review process and how data, from the review, was analyzed. These two parts are usually one paragraph each. Please add these paragraphs.

R7. We have extensively re-written both this and relevant areas of the results section – please see below (R11) for further details.

4. On page 7 lines 32-34 you write "The second stage involved an enquiry of a convenience sample of representatives from four large regional and national public research". Do you mean public research organisations?

R8. We do, and have amended accordingly.

5. In Table 1 it would be worthwhile to see whether the funders focus on basic or applied research or both. Please add this information.

R9. None of the organisations whose representatives we interviewed made this distinction in terms of areas of ‘translational’ focus – our reflection is that all four support (or advise on, in the case of AQuAS) activities across all stages of the translational pathway, to some or other degree. That said (and in light of Reviewer 2, general comments re. CSIRO) we appreciate some further description of the breadth and/or remit of the organisations would be helpful, and have thus added a further column in Table 1 to describe this, which we hope is informative.

6. On page 8 line 60 and onwards you write "As we hypothesised that there is limited research on research funding organisations themselves (as opposed to the organisations conducting research, types of constituent research they fund, or the health systems this research is conducted in), the methods we set out are by their nature exploratory, with a focus on inductive analysis, led primarily by interviewees' responses. Hypothesised is probably not a correct term with qualitative research. Also, I cannot see this part clearly in your background. You write very little about research funding organisations and their activities in the background. I am not convinced that there is limited research on funding organisations themselves based on your background. If you clarify your background regarding limited research on research funding organisations this paragraph could make more sense. However, I would change the word hypothesized. Another concern I have regarding this paragraph is that you seem to give a little attention to your review. Why did you conduct this review if it is not part of your analysis? Please reconsider this part of the paragraph.

R10. We have extensively re-written both this and relevant areas of the results section – please see below (R11) for further details.

Results

1. It would be helpful if you could show your five included cases in a table with some important variables concerning their activities.
2. On page 9 lines 12-15 you write "Given this, we have presented our findings under three broad headings relating to the structures, processes and outcomes relevant to organisations' various RIA activities." This statement is not completely correct. You have not followed this structure with your reporting from the review. Please rephrase.

3. On page 9 lines 31-32 you write "Of these, only one funder proposed and then subsequently reported back on their experiences of adopting a methodical approach to RIA (21) (22)." Although you write "only one funder" you still refer to two references, numbers 21 and 22. Which one of these are you talking about?

4. In the results section you note that only five papers met your inclusion criteria (on page 9 lines 43-44) but at the same time you claim on page 10 lines 47-48: "the only paper strictly meeting our inclusion criteria". What do you mean? It is unclear how many papers met your inclusion criteria. Please clarify. Also, I find the results a bit confusing since you have also described some of the other papers (n=124) in your search. I am not completely sure why you do this. Please consider whether these parts contribute to your aim and in that case how. I think that they could be left out.

5. What was the purpose and aim with the narrative review? Please clarify this briefly in the opening paragraph in the results section.

6. The paragraph on page 10 lines 22-55 is too long and difficult to follow. Also, you blend two references 21 and 22 in this paragraph, and at the same time claim that number 22 was the only one meeting your inclusion criteria. This paragraph needs clarification.

7. On page 12 lines 7-8 you write " , as well as the theory, design, results and application of discrete RIA studies." What do you mean with application of discrete RIA studies? Please clarify.

[per comments 1-7 here, and comments 3 and 6 in prev. section]

R11. We thank the reviewer for these helpful and detailed comments, and have extensively re-written relevant sections of the Results and the Methods section to provide:

- a clearer link between the overall aims of our study, and the purpose and findings from the narrative literature review as situated within this;

- a more logical sequence, including appropriate description as part of relevant sections of the the methods, to describe the use of Donabedian’s three domains of focus as an organising framework, and how we used this to structure findings from both the narrative review and the interviews;

- a summary table of the five included studies from the narrative review, with an indication of the extent to which each reported against each of the three Donabedian domains of focus;

- a greatly reduced (i.e. few short sentences) description of the nature and focus of the 124 studies that did not meet our inclusion criteria.

We hope that this addresses these and other related points and provides a more coherent and logical flow to the narrative and presentation of results.
8. To increase rigour and transparency please label the interview quotes somehow, e.g., funder 1 respondent A, B etc. Also, I think you should indicate the funder and respondent when you write for instance "one interviewee noted" so that the reader can understand which interviewees said what and from which funders.

R12. While we entirely agree that labelling would increase transparency, part of our application for King’s College London’s minimal risk ethical approvals processes stated that we would anonymise participants’ responses to the best degree possible. Given the small number of organisations in our convenience sample (n=4) and the fact that identifying which responses were part of group (n=2) vs. individual (n=2) interviews, we decided not to label quotes, to minimise the likelihood that any single interviewee could be identified. We hope that the rigour of the study is not compromised unduly by this decision?

9. Check the spelling on Donabedian.

R13. Noted and updated, with thanks.

Discussion

1. In the discussion section page 21 lines 13-14 you write "We noted in our findings that funder maturity and readiness for RIA varies considerably even across the four funders we examined". Since you have not indicated funders and respondents in the results section the reader cannot verify this claim. Please indicate the funders and respondents in the results section.

R14. We have amended this to clarify that differing levels of ‘maturity and readiness for RIA’ was a more general reflection on aspects relating to organisational setup – see Discussion line XXXX onwards.

2. The following paragraph is missing a reference: "This sentiment is echoed and expanded upon by Trochim and colleagues. They recognise that setting out the implications of RIA can support policy and action as well as 'clarify conceptual concerns and engage thinking' amongst researchers. They encourage funders to work collaboratively with local groups in their approaches to evaluation. In their view, the role of funders in this area is to provide general guidance, not explicit requirements - to allow scope for local ownership and contextually-relevant planning of evaluation activities to take place. Nonetheless, they encourage funders developing written evaluation policies or guidance to ensure that these address important topics over and above management and methods: such as goals, roles, participation - as well as the use, dissemination and meta-evaluation of such policies." Page 24 lines 14-26

R15. Appropriate reference added here, with thanks.

Reviewer 2

Thank you for the opportunity to review your draft manuscript. I found the addition to the literature regarding the practicality of RIA application versus the theory insightful. The emphasis upon the
funding organisations also represents an important distinction. The following feedback is intended, and hopefully found to be, constructive.

Response: Thank you for these supportive comments, and for the feedback which is very constructive. We have edited a number of areas in response to both reviewers’ comments, and provide itemised responses (R16 onwards) to your specific comments below.

General comments:

The emphasis upon the funding organisations' perspective represents one of the key novelties and yet the paper generally could draw more on how this perspective differentiates or informs upon the issues identified/discussed. Many of the points regarding the reality of implementing RIA apply broadly to research organisations within the research ecosystem.

The Discussion should explicitly address the stated Aim of the research.

While interesting, the Discussion could link more explicitly to the results. There is a lack of clarity regarding how the explicit themes identified, link into the points raised in the discussion.

R16. We have restructured the discussion section to more clearly link our recommendations to the three overarching domains of focus presented in the results (i.e. structure, process, outcome) – which we hope provides further conceptual clarity, as well as linking to our specific aim of describing funders’ experiences to a greater extent than was observed in the scientific literature alone.

Health only comprises one component of the portfolio of research conducted by the CSIRO. Consequently, their RIA framework has been developed to address the broader range of research, albeit highly translational. There is no comment or insight regarding how this may/may not have informed on their RIA approach compared to the health-focussed funders.

R17. In line with comments from Reviewer 1 we have added a further descriptor of each of the interviewed organisations, in terms of the range of research they fund. None made explicit reference to breadth as having informed their approach to RIA (NB. Alberta Innovates also funds a range of research) though in one of the quotes we do highlight the role of those working in other disciplines (e.g. social science) as a way to ensure that the burden of RIA is not borne solely by those in receipt of programme funding.

Synchronisation with other assessment systems is noted, but the point appears insufficiently emphasised given the importance for researchers. I presume the process of conducting the UK's REF, for example, both shapes and prioritises the thinking of researchers and the information available for other funding IAs. Related points are made at different parts of the text i.e. Results L39 (isolation); Discussion L10 (conflict of commitment)

R18. I am not sure that any of the funders we spoke to had entirely ‘solved’ the issue of data compatibility and portability! This feels more like a work in progress and indeed the subject of further RIA/impact policy-related experiments currently being undertaken – we would be happy to share further information on this if of interest.
Specific comments:

Results - The second paragraph could be clearer with respect to the presentation of the five examples (that met the criteria). Possibly shift the introduction to the 124 to following the five examples. I had to read a few times to comprehend a simple structural point. Similarly, the key themes have subheadings, but the five examples do not, which does not assist the reader with a view to the structure of the paper and their respective progression.

Results L19 (sorry no page numbers provided) - I'm not sure if this should be 'key themes' or categories of studies. Potential to distinguish from subsequent themes. What is the point of introducing these three categories first? To illustrate the mix found (but these categories do not total 124)?

R19. In line with these and comments from Reviewer 1, we have extensively re-written the parts of the Methods and Results section that relate to the narrative literature review and use of the Donabedian domains of focus (see R11) – we hope these changes improve the narrative flow and presentation of results throughout.

Results L54 (Automating) - 'facilitated readiness'? Readiness or actual conduct of...?

R20. A case of our using two words when one will do… amended accordingly.

Results L23 (Paragraph) - I can see how it has emerged, but the quote does not explicitly support the preceding point

R21. Unfortunately as we had not line numbered the draft text (now amended, per R1) it’s not clear to which quote this refers. If not a major issue then we hope this can be edited at proofing stage?

Discussion - L53 - Can you state 'what works'? The paper is really a summary of 'what is currently happening', there is no explicit assessment of what works.

R22. We agree and have amended and softened various summary statements to more accurately reflect the exploratory and descriptive nature of our findings.

Discussion L31 - ...successful funders... Successful? In what respect? How measured? Subjective assessment. In implementing RIA? In producing a ROI? In increasing ROI? In assessing the process of implementation? Recommend removing successful and adjusting; or explicitly specifying meaning.

R23. We agree and have removed the word ‘successful’, as well as moved this statement to the concluding remarks.

Discussion L4 - '4. Recognise Benefits: a focus...' I presume that the authors mean recognise the benefits of the process of conducting RIA, rather than societal/enviro/health/economic benefits as commonly examined by RIA? Recommend clarification

Discussion L4 - '4. Recognise Benefits:' Comment re whole section - One of the benefits that is identified in the results, but not included in this Discussion 'factor', relates to the education, capacity and cultural change that conduct of the process brings to the researchers/research community. This point illustrates how the Discussion could link more explicitly to the results.

R24. We had meant the benefits of conducting RIA, and go on to make the distinction between
proximal and distal benefits. We have also added a line on the capacity-building aspects noted, as they relate to our delivery of training for NIHR.

Limitations - While noting the limitations of the convenience sample, the text should address how this may affect the results/insights i.e. i. speaking to the IA engaged; ii. speaking to organisations educated in the ISRIA orthodoxy.

R25. This is an important point and we have added some sentences to reflect the potential for varying levels of organisational capacity/capability in this section.

In the abstract, the discussion has been melded into the Conclusion. Is this correct?

R26. We had been following HARPS’ author guidelines for structuring the Abstract (Background-Methods-Results-Conclusions) but if this is incorrect would be very happy to add a section, word count permitting?

Summary

The study complements some existing ideas and expands these insights/considerations. The key value of this study, acknowledging its investigative status, relates to i. the operational reality of RIA and ii. the funders’ perspective. It would benefit from a edit that focussed on the explicit aim and drew out the critical points (and culled others) relating to these novel elements. Naturally, I have focussed upon suggestions that might add value to the manuscript rather than detailing all the strengths. I hope this helps.

R27. We are very grateful for these suggestions and have edited a number of parts of the manuscript to bring the narrative more in line with reviewers’ suggestions. We look forward to any further comments.