Reviewer's report

Title: 'Is it worth doing?' Measuring the impact of patient and public involvement on research.

Version: 1 Date: 8 June 2015

Reviewer: Krysia Dziedzic

Reviewer's report:

This is a very thoughtful and stimulating interpretation of how we address impact of PPI in research. It cites key papers in the field as illustration.

There were a couple of elements that could be further refined and a few minor points of clarification which I hope will be helpful.

It was unclear as to whether the lay summary had been proof read by a lay person.

Minor essential revisions

Title: the term ‘worth’ in the title is a little misleading so suggest delete the question in the title or have a clear definition of ‘worth’ and use this consistently throughout.

‘Context’ is key to the manuscript so this needs explaining more fully. For example what theoretical frameworks that describe context would be helpful to us? What are the different levels at which context might impact e.g. policy (e.g. INVOLVE, NIHR, Senior Investigators); organisation (e.g. Clinical Trials Units; Research Centres/Institutes; local PPI structures; Research Design Service; regional leadership); professional level (e.g. do interdisciplinary teams fare better than uni-disciplinary teams?); individual level (researchers and PPI members); and the overall fit with the intervention. Only certain components of context are illustrated. Consider disentangling the different levels to highlight gaps in evidence and our understanding.

The manuscript illustrates the multidimensionality of PPI. It is possible that unidimensional strategies are as effective as multidimensional approaches e.g. PPI in an advisory group or steering group may be as effective as having both. Do such questions need to be tested? Is ‘How it works’ vs ‘what it achieves’ an either/or? Are these simply different questions and given the paucity of evidence are both not equally important?

Existing evidence is hampered by retrospective PPI data collection and data on PPI are poorly recorded. Standard recording of PPI in research would give a more accurate account of PPI for example using agreed quality indicators. Such PPI-and-researcher generated indicators could ‘measure components of PPI practice to assess the quality, and therefore any change in quality, of any research evidence generated.’ Percentage achievement could then be audited.
On the one hand the author suggests that elements of PPI impact e.g. refining recruitment strategies, could easily be undertaken and measured in real time, but on the other hand lists reasons why we don’t design complex multi-layered studies to do this. Could this be addressed together as one paragraph? Consider using the MRC complex interventions framework as a signpost for researchers.

Internal vs external validity of quantitative studies was confusing. The study has to be internally valid before external validity and generalisability of the findings can be considered. Here is where a theoretical framework might be useful. Suggest add a statement on this.

The conclusion could be more targeted to the manuscript findings.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'