Reviewer's report

Title: Development and formative evaluation of the e-Health Implementation Toolkit (e-HIT).

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Reviewer: Marie-Pierre Gagnon

Reviewer's report:

This manuscript describes the development and formative evaluation of the E-Health Implementation Toolkit (e-HIT). As a « software » paper, it addresses a novel tool that builds upon both theoretical and empirical knowledge. As the authors state, this is probably the first tool of its kind, specifically aimed at senior managers who are to implement an e-health initiative. The complete information provided about the e-HIT and the fact that it is freely and easily available are in line with the journal's requirements for such papers.

The manuscript clearly describes the problem that the tool is designed to address by providing evidence from a systematic review of reviews and a multiple case study. The description of the implementation is limited by the fact that the e-HIT seems to be still in its validation phase. A two-step formative evaluation is reported, but no summative evaluation of the performance, advantages and limitations of the e-HIT has been done.

Given the relatively early stage of development of this toolkit, the formative evaluation is appropriate and useful to inform future implementers or other researchers interested in using the tool in their work.

Although the manuscript represents an important and original contribution to the field of e-health implementation, and would not require major revisions, there are a couple of issues that the authors would need to address. They are presented below in the order that they appear in the text.

Minor essential revisions:

On page 4, reference would be needed for “poor permeability of the managerial/research interface”

On page 5, it would be useful to provide more information about the context in which the e-HIT was developed. Was it explicitly commissioned by the funding body? Was it based on a need expressed by senior managers? Who were the key players involved in its conception (researchers, managers, policy-makers, etc.)?

On page 6, authors assert that the “NPM predicts that the degree of normalisation...”. I am not sure that the NPM is a prediction model (in the statistical sense) such as the Theory of Planned Bahaviour, for instance.

On page 7, in the sentence “We searched MEDLINE... for reviews of reviews...”. I think that the authors searched for reviews.
On page 12, regarding the second step of the formative evaluation, the e-HIT was sent to implementers who participated in the qualitative study who were asked to “comment on the likely usefulness if the e-HIT, make suggestions for improvement, and whether it adequately reflected their own experiences”. How were these questions presented? On which basis were these questions selected? Is there any underlying theoretical foundation (e.g. the link with the NPM components)?

How many implementers (from the 23 solicited) have provided feedback?

In the toolkit itself, Introduction section, the links to the three case studies are not working.

Discretionary revisions
The authors refer a lot to the citation #12 that is the research report containing results from the review of reviews and the case studies. This reference does not have an url link and it would be very difficult to access it for international readers. If possible, put a link to the report or cite also the scientific papers (if they are published or accepted).

Although the limitations of the study are clearly reported, it would be interesting to specify which steps would be needed to further validate the tool. For instance, a factor analysis could be performed to check if the three components are really distinct or if there are other possible dimensions. Another avenue could be validating the tool in a different country (in the USA, for instance) to see if it is transferable as it is or if it needs to be adapted.

Other limitations that pertain to the e-HIT itself could also be reported, such as the fact that it is not an “intelligent system” using decision rules to make a diagnostic of the implementation. It is based on the judgement of the implementer which could give only a partial view of the situation. The development of an “interdisciplinary” e-HIT where implementers, decision-makers (payers), clinicians and researchers (evaluators) could each provide their view with functions to calculate mean scores and to identify discrepancies…. There are still many possible developments for this tool and perhaps the authors could provide a link for readers to make suggestions.

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