Reviewer’s report

Title: Involving End-Users in the Design of an Audit and Feedback Intervention in the Emergency Department Setting - a Mixed Methods Study

Version: 0 Date: 09 Feb 2019

Reviewer: Noah Michael Ivers

Reviewer's report:

Thank you for the opportunity to review this interesting paper

This was a small, local study that aimed to gather end-user input to develop a dashboard to encourage efficiency/throughput in the emergency department and then sought to understand end-user perceptions of the dashboard that was designed.

I believe that the findings related to the social network analysis are - to my knowledge - relatively novel in this space and therefore represent a potentially important contribution, even if the results must be considered quite tentative due to the limitations of small sample size, incomplete response rates, and single site design. These limitations are appropriately noted in the paper. It may be the case that involvement in the design process of the Dashboard was important moreso for galvanizing support for the importance of the metrics included in the dashboard, rather than for increasing the effectiveness of said Dashboard.

The other qualitative findings are not novel. The concept that end-users need to trust the data and the specific requests they make certainly echo in the literature. What would be more interesting is laying out exactly how the designers responded to these requests. This is best addressed in Supplementary Table 2 which I think should be part of the paper, not supplementary.

I also worry that while the authors claim a UXD approach, the number of iterations is not clear. I'd encourage the authors to clarify how the design changes over the course of iterations and how they decided to stop iterating. The above-mentioned table may be used for this purpose as well, I suppose, possibly with an extra column.

The sample size could be better justified - was saturation achieved?

I'm not sure that the self-determination theory is quite right. Typically, the literature on audit and feedback initiatives such as dashboards start with the assumption that motivation is present but that awareness of a discrepancy between desired and actual processes or outcomes is limited. A&F is also only likely to be effective in scenarios when recipients are capable of addressing the undesired discrepancy once they become aware of it. Other theories that may have been more directly relevant include Feedback Intervention Theory (kluger and denisi), or Control Theory (carver and sheier).
Minor suggestions:

Be sure to define acronyms at bottom of each table.

Use consistent language (physician/provider/interviewees)

The N for figure 2 should be added

Table 1 could be just explained in text to make space for another table.

Line 419 - I would have assumed they would have had high scores on one and low on the other

Line 423 and elsewhere - I don't think you can say anything much definitive about behaviour change.

I would have liked to see the whole survey all together in a supplementary table. Hard otherwise to make sense of all the data that were collected and whether there was some or was not some cherry picking in reporting of results.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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