Reviewer's report

Title: Design and implementation of a mobile health electronic data capture platform that functions in fully-disconnected settings: a pilot study in rural Liberia

Version: 0 Date: 30 Oct 2019

Reviewer: Ting Song

Reviewer's report:

Thank you for asking me to review the manuscript "Design and implementation of a mobile health electronic data capture platform that functions in fully-disconnected settings: a pilot study in rural Liberia". This paper presents a design and field implementation of an open-source fork of Open Data Kit Collect that allows for offline Bluetooth-based bidirectional data transfer. The paper is well written, easy to read and understand, and comprehensive.

Specific Comments

Abstract:

1. It is good to see some rich background information and a clear knowledge gap. But it should be linked back to your research topic. For example, "..., few tools exist that can be used indefinitely in fully-disconnected settings, where a user will never have access to the internet or a cell network". And then?

2. The content in the Results part is describing the method/implementation of software development. Suggest renaming this part and summarizing your findings to write up another part.

Background:

3. Para 2. Line 1: Suggest reconsidering the term "highest-need settings". "Need" means a situation when something is necessary or must be done. But here, the high-need seems to result from the inconsistent network connectivity and poor access. Just as we cannot say that the better the Internet connection, the fewer care patients needed.

4. There is a logical leap between Para. 3 and 4. The research gap is well identified. The aim is clear. But what is the connection between them? Suggest adding something to make it more coherent.
Implementation

5. What are the selection criteria of the participants? How were they recruited?

6. The description of the application development is clear. But still, suggest adding some figures, such as the overall architecture design, mechanism of the new system, screen dumps of the user interface, etc. to make it easier for the audience to see the difference more visually and easily. Also, it would be nice to use a table to compare the original and the new system, which is more intuitive.

7. Please provide more details about how to use the device when it is inside a case. In addition, how to use the solar panel on rainy days.

8. In the pilot phase, how were seven CHWs and one supervisor selected and recruited?

9. The description of the focus group discussion is not clear, need more detailed information to support.

10. Since the results are generated from an interview, it would be nice to add some original manuscripts said by the participants to make the findings more convincible.

11. Again, suggest using some tables to summarize the findings.

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.

Not relevant to this manuscript
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal