Reviewer’s report

Title: Novel open-source electronic medical records system for palliative care in low-resource settings

Version: 1  Date: 15 June 2013

Reviewer: Arif H. Kamal

Reviewer’s report:

Thank you for allowing me to review your manuscript on developing a palliative care electronic medical record for low resource countries. The authors should be commended for taking on such an important and worthwhile task and for approaching its development and testing with such rigor. Overall, this is a well-written manuscript which clearly conveys a message of thoughtfulness and success with methods.

There are a few areas that I believe if addressed would aid the reader in more clearly understanding your message. For your consideration:

1. The core message of why DataPall was developed still remains a bit fuzzy to me. Is it about organizing administrative data, creating a patient registry (the authors use the term database but registry may be more appropriate), aid in clinical decision making, tracking the same set of common data elements across locations, obtaining funding? All of the above? Whatever the answer, I think it should be explicitly stated from the outset (e.g. DataPall was developed to 1). Blah blah blah; 2). Blah blah blah). I would caution the authors in overstating the aim of its development, since it doesn’t seem to have any capabilities for clinical decision support and has not yet been proven to provide data for conducting research or building the evidence base. Research-level data and clinical-level data are not necessarily the same. Several experiences in the US echo that there are important challenges applying clinical data for robust research. The so-called rapid learning health care system proposed by the Institute of Medicine aims to do exactly that, but its development is still in its infancy. Maybe if the authors alluded to what types of research or evidence base development they have in mind this would help the readers.

2. We know that the largest barrier to implementation of any new health information technology solution is not understanding and conforming to the inherent workflow of a clinical environment. I would like to see the authors refer to the natural workflow of a busy clinic/hospital in Malawi and cite (maybe within Table 1) what challenges/opportunities existed and how these were addressed. As it reads now, this is a large missing piece of the story.

3. I think it would be helpful to refer to either current (e.g. St. Gabriel's hospital) or future planned feasibility/pilot studies. How will the authors define success as institutions continue to use DataPall? Are those users currently being evaluated for levels of satisfaction, barriers to use, and logistical issues?
4. Regarding how the manuscript is organized, there seems to be a lot of mixing between methods, results, and discussion throughout the whole paper. For example, the first sentence of the second paragraph of the results puts your findings into context based on historical experiences. This should be in the discussion to demonstrate the importance of your findings. This is not data that was collected in this protocol and should not be reported in the results. Another example: the challenges because of language barriers are presented in the last paragraph of the Results section. This should be in the discussion.

5. I am not sure it is statistically prudent to use “mean” for such a small sample size of 10 and 7 participants. I would suggest reporting and performing analysis on the data assuming it is non-parametric.

6. As is usually presented in a manuscript, I would like to see the authors review the findings of their study in the first paragraph of the Discussion section.

7. For the SUS, how does one define success? What do other papers shows? Is the SUS you found good, bad, or in the middle? This should be discussed.

8. The Methods section should also explicitly state what statistical analyses will be performed.

9. The second paragraph of the Background seems unnecessary. True, more palliative care is needed in Africa. Your project doesn’t address that which makes this paragraph seem largely interesting to read, but not related to your methods or aim.

10. I would like to see a little bit more discussion about core informatics principles throughout the manuscript. The authors could refer to data standardization (can different sites customize data elements?), data governance, element interoperability, or data security. Though this may seem a bit complex for the average reader, it remains important for the reader to understand that these principles were remembered throughout the development of DataPall.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.