Reviewer’s report

Title: Benefits of a physician-facing tablet presentation of patient symptom data: comparing paper and electronic formats

Version: 2 Date: 3 March 2013

Reviewer: Uno Fors

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Generally, this is a manuscript covering an interesting and important issue – can technology improve the accuracy and speed of making medical decisions and diagnoses?

My main concern is about the way the study was set up – a comparison is made between a set of electronic medical data and a paper-based version of rather similar data, which then is used to try to tell which method is the best for accuracy and efficiency. But as I see it, this study mainly compares the use of structured and otherwise “refined” medical data (the computerized version) with unstructured data (the paper version). Thus, it seem to me that it would be rather obvious that the computerized data set would perform better in both time and accuracy.

Additionally, there are a number of other issues in the manuscript:

1. Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

1.1. As I have written in my introduction, my main concern is that you are comparing two different data sets - unstructured (in paper) and structured (in electronic format). This makes the value of the study less clear. I strongly suggest that the authors in much more clear statements argue about the scientific quality of such a comparison.

1.2. Page 8, second paragraph: - “A six-question task list was used to gauge how accurately and quickly participants could answer questions about a given set”. Since the iPad data set already was installed on the iPad, it would be beneficial to know how time-consuming and complex that task was.

1.3. Page 10, Task Completion Time: - “As expected, we found that participants were significantly faster…”. Please indicate how this significance was measured. for example with p = or similar figure.

1.4. Page 10, Participants: - “Forty undergraduates (25 female: 15 male)”. Please tell the reader if these were Medical undergraduates or if there also were other professions in this group.

1.5. Page 13, Discussions. – “although the students tended to be faster and more accurate than the medical professionals for both paper and iPad presentations”. Please discuss possible reasons for this
2. Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

2.1. In the Abstract, the term “technology history survey” is used with no explanation. As far as I know, this is not an established medical term, so please explain that to the reader.

2.2. Introduction, page 4 – “Though the MDASI contains pertinent treatment information, the act of obtaining information may be particularly time consuming and error prone”. I would like a reference for that assertion, to make it clear that this is not only a subjective feeling by the authors.

2.3. Introduction, page 5, just above the “Physician interviews” – “using medical professionals as participants.”. Please explain which medical professionals. Were they Physicians only or also Physician Assistants (PAs)?

2.4. Page 7, last sentence – “two twenty-patient sets were…” – Were the sets of the same complexity, or not? Please make it more clear to the reader.

2.5. Page 11, top: - “As with the paper, the iPhone prototype…” Do you mean iPhone or iPad?

2.6. Figure 1. – Please provide the figure in color instead of in b/w to improve clarity.

3. Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

3.1. Page 9, Experiment 1 results: - Unexpectedly, we found an iPad advantage for only Across-Group items…” Please discuss this in more detail in the Discussions section.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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