Reviewer’s report

Title: Design and evaluation of software for the objective and easy-to-read presentation of new drug properties to physicians

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Reviewer: Harry Hochheiser

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This paper identifies and interesting and relevant problem: presenting clear information to physicians regarding medications is certainly a worthwhile challenge. However, this manuscript has several significant limitations that call its value into question:

1. The theoretical background is very slim. Other than their own prior report, the authors cite very little background literature on medication information provision. Surely there are more papers on the presentation of medication information, clinician workflows, and related topics? There is scarcely any mention of such issues in this paper, leaving a lack of theoretical grounding.

2. The prior work from the authors’ 2013 paper is not discussed in any detail, leaving the reader at a bit of a loss to understand the design decisions.

3. The paper is poorly organized and important details are omitted. Discussions of some of the motivations behind the design are presented in methods, while specifics are presented in results. Screenshots are presented in figures 2-10, with no discussion of how the users would navigate between those components. How does the layout in figure 1 correspond to these figures.

4. Discussion of some of the design choices is not clear. I counted five different uses of color coding to convey different types of information, with little indication of how these would be coordinated. There was very little justification for many of the design choices. As in point #1 above, additional grounding in prior studies regarding work practices and information needs may have been very useful here.
5. The resulting design is not compelling. Screen shots from Figures 2-10 provide relatively sparse displays of information, without any indication of design elements, use of screen space, or other features that are either innovative or particularly useful. Figures and 3 are particularly hard to interpret - is a separate screen shot really needed to indicate the name of the new molecule? How can users interpret the plus, minus, and equal sign for a drug without any indication of the drug to which it is being compared.

6. The evaluation is not informative. As the questionnaire is not provided, it is hard to interpret the results in detail, but the presumption is that the evaluation was not focused on completing specific relevant tasks. If it was, then the presentation of the evaluation methods should be clarified. If it was not, the evaluation was not at all convincing: I would expect an evaluation that at the very least asked participants to complete specific medication information tasks.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**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