Reviewer's report

Title: Presentation of laboratory test results in patient portals: influence of interface design on risk interpretation and visual search behaviour

Version: 0 Date: 02 Oct 2017

Reviewer: Amy Franklin

Reviewer's report:

In this article the authors explore the use of eye tracking in conjunction with different visualizations of patient portal information. They consider number of fixations and fixation durations along with the risk assessment finding that there is no significant impact of the display format on decision making. Medium risk determinations are the most difficult for their participants.

There is limited information provided regarding the rationale for the selection of features and differences in the display provided by the different interface formats. The authors do not state (and given the quality of the images it is difficult to discern) how total quantity of information, information redundancy/security, and information access are influenced by the interface choices. No specific hypotheses are stated regarding the impact of design selection on performance. It is clear they made use of color and grouping which may facilitate the time to access information (reaction time) and the gaze pattern between pieces of information (linked and perhaps faster). Authors only report on duration and total fixation counts. The links between the displays and the type of decision to be made require further articulation. If the goal is to use tailored displays to improve risk assessment, how does certain interface choices support different levels of risk assessment? Wouldn't the consideration of specific features of information access as it relates to the risk assessment be more telling than a count of fixation? For example, does the order of information access (path between widgets) indicate the confusion found in medium level decisions?
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?  
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Yes

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