Reviewer's report

Title: Reinforcing Outpatient Medical Student Learning Using Brief Computer Tutorials: The Patient-Teacher-Tutorial Sequence.

Version: 2 Date: 26 June 2012

Reviewer: Fredric M Wolf

Reviewer's report:

The authors have responded thoughtfully to the initial reviews in their revision. I have a couple of remaining questions and a few suggestions for the authors to consider.

Major Compulsory Revisions/Minor Essential Revisions

1. The authors state on page 15 (of 33) that “None of the terms that included Topic (ORS vs. FWS) were statistically significant suggesting that knowledge gain was not moderated by which of the two topics is considered.” This statement is inconsistent with the following 2 paragraphs that highlight differences between the 2 topics in which there is a significant effect for ORS, but not for FWS (as the confidence interval crosses zero):

“For the ORS topic, students who did the tutorial in the ‘in sequence’ condition scored 1.9 points higher out of 10 (95% confidence interval for the difference 0.7, 3.1) corresponding to a Cohen's-d effect size of 0.85 (95% CI 0.25, 1.5)

Students who did the FWS tutorial in the ‘in sequence’ condition scored an average of 0.6 points higher out of 10 on the post-test than the comparison group (95% confidence interval for the difference (-0.3, 1.6) corresponding to a Cohen's-d effect size of 0.38 (95% CI -0.20, +0.97).”

Similarly, the results summarized in Table 1 show no effect for Topic or its interaction terms, yet Table 2 summarizes the significant effect for ORS and the non-significant effect for FWS. The authors need to reconcile and/or explain this difference.

Discretionary Revisions

1. The authors state on page 9 (of 33) that “Randomization was by varying blocks of 6, 8, or 10.” Can you briefly explain why did the block sizes varied?

2. I believe that Table 2: “Relevant Patient - -” headings need only one minus sign (-), not two (- -)?

3. p. 13: “0.84 (Cranach’s alpha)”; I think this should be Cronbach’s alpha, as stated on p. 11.
4. p. 16: I suggest that the authors add the phase “, which is not statistically significant.” to the following text, i.e., “... the ‘in sequence’ group spent 1.6 minutes more with a given tutorial than did the comparison group (95% Confidence Interval -1.2, +4.5 minutes), which is not statistically significant.”

5. Some minor edits are needed, e.g. some reference citation numbers in the text are grouped, e.g. p. 4: [1, 2] and some are listed separately, e.g. [3] [4]. There are still some format inconsistencies among the references (use of capitalization of most, but not all titles; use of italics for most, but not all, journal names).

5. It would be helpful for Figure 3 to note that the values are means and 95% confidence intervals (I think). Also, the figure would be much easier to read if the authors used 4 vertical lines instead of 2 vertical lines so that the confidence intervals could be seen more clearly. For example, on the x-axis, “Not Exposed to Patient” could have one vertical line for “Not Exposed to Tutorial” and another beside it for “Exposed to Tutorial”.

**Level of interest:** An article of importance in its field

**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