Reviewer’s report

Title: Does mentoring new peer reviewers improve review quality? A randomized trial

Version: 1 Date: 21 June 2012

Reviewer: Aminah Jatoi

Reviewer’s report:

Callahan and other have submitted an important study that examines how to improve the peer review process as relevant to scientific manuscripts. These authors have consistently contributed to this field over time, and, although the current study was "negative," it is nonetheless important, as it describes a unique, thoughtful, time-intensive clinical trial. This manuscript also provides some interesting background information and perspective on learning and teaching critical thinking, so it is of value from that perspective also. The small sample size is a shortcoming, but the authors pre-empt this criticism by acknowledging this limitation.

MAJOR COMPULSORY REVISION

The sample size numbers in the abstract do not seem to correspond to the numbers in the body of the manuscript. The abstract numbers are the same in the consort diagram. This reviewer may be misunderstanding things but would ask that the authors double check the numbers in the body of the manuscript.

DISCRETIONARY REVISIONS

Some selection bias may have been at play to explain these negative findings. Any younger reviewer who decided to participate in the study was likely interested in critical thinking and the peer review process and hence that those reviewers who populated both groups were likely going to provide good reviews. Perhaps the authors would want to further expound on this point, or perhaps not.

The manuscript provides a nice description of what was supposed to happen between the mentored reviewer and the senior one. It falls short of telling us what really happened. This seems to be a shortcoming or at least a point of interest. Again, it may merit some comment.

The authors describe that they had no baseline data for calculating sample size, but they did settle on a sample size. It would be meaningful if, at the very least, they would share their rationale for choosing the 4 year duration number the settled upon number of recruited subjects.

Level of interest: An article of importance in its field

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.