Reviewer's report

Title: The development and implementation of a mini-Clinical Evaluation Exercise (mini-CEX) program to assess the clinical competencies of internal medicine residents: From faculty development to curriculum evaluation

Version: 1 Date: 16 November 2012

Reviewer: Danette McKinley

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Major Compulsory Revisions

1. The purpose of the study is quite ambitious. The conclusion regarding the need for revision to the curriculum regarding professionalism seemed a bit premature. The purposes outlined in the introduction needed a bit more focus. That is, the focus seemed to be on faculty development rather than the performance of residents, although that was presented in the findings. Instead, the focus of this paper should be on the training provided and the implementation based on faculty as raters rather than the residents.

2. Since the pretest and posttest were administered on the same day, the gain in scores could be attributed to testing, where the subjects are sensitized to the materials because they saw them prior to instruction. How was the workshop different from the grand rounds lecture? What was the duration of the workshop?

3. How was the assessment modified for use in the study? Please describe.

4. Why was the feedback analysis categorized in a different fashion than the domains measured by the mini-CEX? Is ‘attitude’ similar to ‘humanistic qualities’? Examples of the feedback and reflections (even as an appendix) should help the readers of this manuscript.

5. For the statistical analysis, I assume that a paired t-test was used so that the difference between pretest and posttest variance was analyzed. In addition the faculty should be evaluated using a model that evaluates their ability as raters (generalizability analysis or variance components analysis). These statistical models allow the researcher to determine how much variance in scores is due to the raters. This could be quite useful when considering workshop effectiveness.

6. Evaluation of dimensions and differences by year of training should have been part of a repeated measures analysis of variance (RM-ANOVA). The dimensions of the mini-CEX are within subject (resident) factors and year of training is the between subject factor in the analysis.

7. What information was provided to the residents as part of the implementation of the use of the mini-CEX?

Minor Essential Revisions
1. Table 2 should be eliminated, since those results reported in the text of the article.

2. Please provide minimums and maximums in addition to means when describing the monthly mini-CEX assessment program. For example, if each resident received an average of 8.9 evaluations, what was the fewest number of evaluations received?

3. In the discussion, the authors state that ‘we found that the evaluators with participation in the faculty development program tended to adhere to the principles of mini-CEX as a formative assessment, provision of effective feedback. These results indirectly demonstrated the effectiveness of our faculty development program and its sustained educational impact on our residency program.’ The results in Table 6 contradict this information. Although more of those attending the workshop provided feedback, those without participation spent significantly more time giving feedback and engaged resident reflection more often. Findings were mixed, and so other evaluation should be conducted.

4. What other reasons might there be for the lack of difference in the professionalism ratings by year of training? If the statistical model is changed to the RM-ANOVA, and the difference still exists, there may be other factors that could potentially affect the ratings. The authors should consider these in the discussion of their findings.

Discretionary Revisions

None

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

Quality of written English: Not suitable for publication unless extensively edited

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