Reviewer's report

Title: Medical Student's and Resident's Preferred Site Characteristics and Preceptor Behaviours for Learning in the Ambulatory Setting: A Cross-sectional Survey

Version: 1 Date: 15 January 2004

Reviewer: Walter Kernan

Reviewer's report:

General
1) The new information from this research relates to the comparison between different types of learners for site characteristics and teaching behaviors in ambulatory settings. These differences, however, are not terribly large or unexpected (e.g., students are less interested than residents in instruction on office management). Despite measurable differences, no learner type seems to want to be asked for an assessment and plan in front of a patient or to be constrained in certain dimensions of learning.
2) For me, the key to strengthening this paper is to hone its message. The authors might consider making a clean statement that learners at all levels and in all locations throughout Ontario seem have very similar preferences for site characteristics and teaching behaviors, with minor exceptions.
3) Althought the findings from this research regarding specific site characteristics and teaching behaviors preferred by learners are not new, that is ok. Science needs confirmation of existing findings. Presented as affirming evidence, the research will be of considerable interest to educators.
4) I disagree with the author's interpretation that their findings support the importance of conducting surveys such as this at many institutions. Although a few observed differences between institutions were statistically significant, they were not quantitatively unimportant. I might argue that too often investigators feel they must conduct investigations such as this at multiple institutions when there is actually little reason to believe that broader sampling increases validity. It rarely hurts to sample multiple institutions (other than the pain inflicted upon the investigators), but the practice may be over-valued.
5) In my opinion, there is too much data in this paper and too many tables/figures. As a result, clarity of message may be lost. See below for specific suggestions for reducing the number of figures/tables and simplifying these.

Discretionary Revisions (which the author can choose to ignore)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

ABSTRACT:
1) Please consider a structured abstract.
2) Please define "theoretical constructs" in the abstract or eliminate the term.
3) Consider being even more specific in the abstract regarding the central findings. For example, tell readers about the teaching strategies you identified that, although commonly recommended by experts, were not valued by your learners. The details are what make this paper interesting.
4) The abstract, in general, lacks punch and fails to convey excitement.

BACKGROUND:
1) Please explain the "theory" that is referred to and which may suggest that learners at different levels have different needs. Come back to this in the discussion and comment on whether your
results confirm this theory and how strongly it does or does not.
2) The introduction does not make clear why you undertook this research. Was it to test the theory you refer to? What would be the specific implications of differences if you observed them? Consider giving an example. Is anyone suggesting that students be taught with the same methods as students? What specifically made you think this research would change educational practice. How were you planning to use this research? I think you need to "set up" your endeavor more thoroughly. Convince readers they should read the rest of the paper.

METHODS:
1) It is stated that non-responders were contacted a second time. Does this mean that surveys were sent to named individuals? Please specify.
2) Please describe your strategy for assuring data quality. For example, were the data entered twice into the data set? Was there a systemic effort to look for out-of-range data?
3) Why did you chose to use two different strategies to identify the most highly valued site characteristics and behaviors? If there is not a very compelling reason to use both, I would suggest you loose one of them. Even if there was a compelling reason to use two procedures, the results from the two procedures are almost identical, and it would be reasonable not to report results from both.
4) Factor analysis is difficult for many readers (myself included) to fully understand. You may want to include a few sentences about it. Why use it? How is it done? Is it completely objective or can it be influenced by user discretion?
5) Explain more fully why you did a subanalysis without family medicine residents. Were the results of this reported?
6) Please reference your statistical package, particularly the bonferroni analysis.

RESULTS:
1) Readers need to know about missing data. Consider revising Tables 3 and 4 to include a column for N (responders).
2) Table 2 includes two columns with words (CAPER) and (ACMC) that are not explained. I would encourage you to simplify this table by eliminating these columns. Just state in the text that the characteristics of responders were similar to medical students throughout Ontario and Canada. The differences appear trivial. There are undefined terms in this table 2 (e.g., R1, UWO).
3) Regarding tables 3 and 4, I think you could eliminate the columns labelled "5 most important site characteristics for learning (N/1084)" and the two columns to the right of this one.
4) You might consider reformatting graphs as tables with four columns. For example, Graphs 1 and 2 might be easier to read as tables with four columns labeled Factor, Male, Femal, P-value.
5) Graph 3 could be eliminated and replaces with a simple comment in the text.
6) Figure 1 is not needed.
7) A statistical reader might ask if the analysis from different schools justifies combining the data. Would a test for herogeneity justify combining?

DISCUSSION
1) Fact that only 61% of students want teacher to observe their skills warrants comment. This may be an illustration of the fact that learners do not always have good judgement regarding what experiences/teaching they need. Medical students/residents must be observed in the performance of their activities to receive informed feedback. See Holmboe in Academic Medicine January 2004.
2) The finding that learners do not want "teaching in the patient's presence" has been described previously. See Kernan in the American Journal of Medicine 2000. I think it would be important to relate your findings to those of Kernan et al.
3) Another reference that should be in this paper is Michael Elnicki from Academic Medicine 2003. He surveyed medical students regarding their preference for ambulatory teaching practices. As a general comment, this paper will be strengthened by further efforts to relate your findings to past research in the area. Might also reference the ACP book, "Teaching in Your Office".
4) On page 8, you list some written comments from students. The ascertainment of these comments is not described in the methods section.
5) Page 10, line 6: please explain who is doing the "directing".

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
From methods section above: comments 1, 2, and 3
From results section above: comments 1, 2, and 7
From discussion section above, comments 1, 2 and 3

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
None