Reviewer's report

Title: Relationship between students’ perceptions of the adequacy of M1 and M2 curricula and their performance on USMLE Step 1 examination

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Reviewer: Edward Krupat

Reviewer's report:

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Manuscript MEED-D-19-00033 deals with a topic of great interest, student perceptions of their curriculum and performance on the USMLE Step 1 Exam. I felt, however, that this manuscript had many flaws, most of them remediable, that make the current draft less than satisfying. Let me note some of these below:

* Ideally the first paragraph of a paper gets the reader right into the primary focus of the research, yet this first paragraph is broad and general and does not tell us where this paper is going. I would almost begin with the second paragraph and get right into things. Rather than wander around the Kern model and other methods of evaluating curriculum that don't provide much relevant background for this particular paper, the authors might get directly into issues about student involvement and the extent to which educators do--or should--rely on students' assessments of the curriculum. (Lurking in the background, never really acknowledged in this paper, is whether the primary focus of a pre-clinical curriculum should be getting high scores on Step 1, but that's another matter). After an Intro that could be shortened and sharpened, however, the authors do a good job at putting the two related research questions before us.

* The level of analysis here, the group as a whole, is a bit disappointing. I had hoped and expected that each individuals' scores would be correlated with each individual's perceptions. Analyzing the data at the level of the group as a whole leaves much more room for error. Can I assume that the authors' data set would not allow for this individual-level type of analysis.

* We need more information on the process of dealing with the qualitative data. For instance, we need to have more information on how the themes emerged.
The qualitative data are treated very quantitatively. Most researchers prefer that qualitative data are presented and discussed without getting into percentages of attempts at quantitative precision.

I'm not sure exactly what the qualitative data add in terms of insights. What we see are lists of complaints about many aspects of the curriculum. This looks to be a cohort of students that feel as if they are not taught physiology or pharmacology (and many other subjects) adequately. At my institution and many others I know, these are not unusual student concerns. What makes these findings a bit distressing is that apparently the students are correct: students feel as if they are not getting good preparation and, yes, their scores in these areas suggest that their perceptions are valid.

The Discussion (as the Introduction, noted earlier) doesn't seem to want to get to the point. Typically the Discussion starts with a brief summary of key findings which are then interpreted by the authors in light of the literature. Here, I believe that the authors need to sharpen and shorten once again.

Although in some cases the students' assessments were inconsistent with their Step 1 results, for the most part they were. I would have expected that the authors might have concluded something about the need for a model of student-faculty partnership whereby the perceptions of the students are discussed in an ongoing way so as to incorporate student feedback from year to year, if not from module to module or from week to week. There are examples of this sort of partnership models here and there in the literature, and the authors might have sought out some of these for discussion.

We know that at just about all medical schools, students seek out all sorts of materials and courses, sometimes online, sometimes through local or national for-profit organizations such as Kaplan. What is interesting is that apparently at this school outside preparation was not very able to overcome the deficiencies in preparation of the actual medical school instruction.

Whenever one encounters a single-school report, the question is whether this would best be a local report to the dean and faculty leadership or whether there is some form of "generalizable knowledge" generated from this data collection. While the authors do attempt to frame their paper within some of the broader issues, I would urge them at the very least to note their one-school data as a limitation, but more importantly, to attempt to derive some conclusions that might serve as lessons learned for all readers, regardless of their institution.

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