Reviewer’s report

Title: Developing a collective quality system: challenges and lessons learned; a qualitative study

Version: 1 Date: 20 Feb 2017

Reviewer: Kathleen Moreo

Reviewer's report:

1. The introduction section does not describe the local problems or gaps that motivated the authors to develop/improve the quality system (QS) in the 8 institutes. A detailed description of the motivating problems or gaps would be essential for readers to (1) evaluate and understand the described project and (2) relate the project to their own efforts to improve medical education QS.

   A corresponding suggestion for revision is to delete much of the background information about accreditation and general information on initiatives for improving medical education in order to add details that will help the readers better understand the specific, local motivating problems for this project.

   Perhaps the authors view the "weaknesses" column in table 1 as the presentation of the motivating problems for this project. However, the bullet points in that table are not sufficiently developed for readers to clearly understand the problems, especially in the context of quality systems.

2. The introduction section does not define and distinguish "quality standards" and "quality system." The lack of a definition of the latter term is especially problematic for understanding the description of the methods by which the authors developed the QS and the outcomes of the project. Please disregard this comment if the term "quality system" is common knowledge for the journal readership.

3. For several reasons, which this comment and others will address, the IMRAD structure may not be appropriate for this article. In the methods section, for example, the authors describe prior experiences with QS in their institutions. This description is more fitting for a subsection of the introduction that defines the motivating problems or gaps for this project. A suggestion is to restructure the content in the SQUIRE framework.
4. What were the strengths and weaknesses of the first 2 QS that motivated the development of GEAR? Again, table 1 does not answer this question sufficiently. That table makes it seem as if QS is simply an administrative matter.

5. In the "data collection" section, the authors refer to qualitative document analysis of the meeting materials. Details are lacking on the qualitative methodology. Was it based on an established method in the literature? By what methods did authors identify themes? At this point in the manuscript, it would also be helpful to present a few of the themes to clarify the process and its outcomes.

6. In the "research stage" section, the authors describe criteria used to develop a new QS. It's helpful for readers to know the criteria, for the sake of evaluation and application in their own systems. However, the criteria presented in this section are vague: "transparency and a positive approach," "concise and up-to-date," "exchange of good practices." More specific details would be helpful for comprehension.

7. The results section seems to begin with information about the project methodology, which is not consistent with the IMRAD format. The SQUIRE format might be more useful because this project can be conceived as a QI project, with repeated cycles of iteration for improvement the QS.

8. At the top of page 9, the authors refer to existing quality locators from the former QSs that were carried over into the new QS. It would be helpful for readers to know which indicators were maintained, why they were maintained, and how they were measured.

9. On page 9, the authors begin to describe the disagreement among the group in developing quality indicators. In successive pages there are several references to this disagreement, along with the observed complexity in developing quality indicators for the QS. By the end of the manuscript, the authors conclude that "it is questionable whether it is possible to develop valid indicators that can be measured reliably." This statement seems highly problematic for the manuscript and for peers' future attempts to develop QS in medical education. The statement raises questions about the rigor and validity of the methods used by the authors. For revision, a suggestion is to defend the statement by presenting/explaining some of the quality indicators that the authors did develop and explaining their limitations and the reasons that they are difficult to measure. This information would be helpful for future efforts to improve upon the authors' methods.
The quality indicators should be presented and discussed in the text, rather than only in table 3. Examples of the scoring system for the different indicators would also be appropriate. For example, it's not clear how one would measure "winning a scientific award." Is this simply a binary measure? Also, how does it reflect quality? These questions apply to the other indicators listed in the table.

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