Reviewer's report

Title: Adoption of computerized provider order entry systems: An organization-wide study based on diffusion of innovations theory

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Reviewer: Habibollah Pirnejad

Reviewer's report:

There are some points to be considered for the sake of the paper's quality.

Major compulsory revisions

1. Page 11, Data analysis: reading through the text it is not very clear what authors mean by “informal group-level index” and “personal agreement ratio”. Neither is it very clear that how these items were composed and calculated. Clarifying these items is necessary for the readers to interpret and understand the meaning of some findings. Authors are expected to clarify these items in recasting their paper. please also explain how did you transformed the likert scale into ratio in the graphs.

2. Comparing the graphs presented in figures 2, 3, 4, and 5: There is compatibility between graph 2 and graph 4 and 5. This compatibility however does not exist between graph 2 and graph 3. Graph 2 shows that nurses have lower compatibility with the system, comparing to physicians. This is not compatible with the pattern presented in graph 3. In graph 3, most of the items have more weight on nurses’ side. Please explain why it is so and if necessary consider necessary corrections.

3. The role of diffusion of innovation theory is clear in the study design and result analysis. However, its role in the Discussion and Conclusion sections, in interpretation of study findings and the lessons that one can learn, is not very well developed yet. The authors, for example, need to explain why the three attributes of diffusion of innovation theory were low in their study, what lessons can be learned to increase the adoption rate of CPOE system, and whether they found the theory appropriate for their purpose at the end of their study.

Minor essential revisions

1. The title of the paper: The study covered multiple organizations from different healthcare levels. Therefore, the term “an organizational-wide study” does not sound to be representative of the study scope. Maybe authors mean: Organizational-wide adoption of CPOE ...

2. In the abstract, please consider refining the research question and being more specific in the conclusion.
3. Page 5, paragraph 2, the study objective: The study followed more general objective than “examining factors associated with the adoption of a CPOE system for inter- and intra-organizational healthcare communication”. I think it is more about the factors that may influence CPOE adoption in inpatient and outpatient settings as it is also mentioned in the title of the paper. The authors should refine the objectives as well as the research question in recasting the paper.

4. Figure 1 was not referred in within the text.

5. As this study is about adoption and use of a CPOE system, providing more information about the system and its use context is necessary. For example, it is important to know whether using the system was mandatory for nurses and physicians or they could use paper-based system alongside the CPOE system. How nurses used the CPOE system; could they produce medication orders through the system or they were only working with system’s output? Was it possible for nurses to register administration data into the system?

6. On page 16, line 7: “Nurses estimated a higher relative advantage from …”. I think the authors mean: nurses were estimated to receive a higher relative advantage from …

7. On page 17: please combine the second and the third paragraphs as they both are talking about the same issue.

8. On page 23, reference 11: please complete the reference with volume and page number or “doi number” of the reference.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.