Reviewer’s report

Title: What hinders the uptake of computerized decision support systems in hospitals? A qualitative study and framework for implementation

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Reviewer: Justin Benzer

Reviewer's report:

This is a qualitative study of barriers and facilitators to implementation of CDSS in four sites, two that have adopted CDSS and two that have not. Grounded theory (GT) is cited as the methodology. However, this appears to be a theory-free inductive study rather than a true GT study. In GT, I expect to see inter-related data collection and theoretical analysis and verification of hypotheses that result from this analysis throughout the course of a research project. Over a sustained period of data collection, analysis, and hypothesis generation, I expect to see evidence of the systematic development of concepts, asking generative and conceptual questions, and the verification of relationships among those concepts. What I see in this study may be the first stage of GT. Some hypotheses have been proposed - that implementation of CDSS is a process of negotiation of control over the CDSS between the system (managers?) and the users. Positions are identified across two dimensions of control (technological and evidence). However, there does not appear to be a rigorous process of verifying these hypotheses, collecting additional data, and refining the hypotheses into a theory. Furthermore, I see no reference to how these concepts fit or contradict established theory (e.g., power, identity, implementation frameworks). GT should not be presented as a theory-naïve process. Instead, GT should be conducted by researchers who are theoretically sensitized. I am sure that this is the case with the current research team, but the current manuscript does not communicate this theoretical knowledge well.

I have identified several areas for strengthening the manuscript that I hope will be helpful.

1. Consider whether this is in fact a GT study or just a thematic analysis (i.e., coding of interview data and thematic analysis of relationships between codes). If GT, provide more detail about the GT process of asking questions, and verifying, expanding, and falsifying hypotheses. If thematic analysis, provide more detail on the coding and analysis process. What codes were developed? How did the authors move from these codes to the 2x2 framework and positions?

2. Regardless of methodology, more detail is needed regarding the development of the 2x2 framework and positions. What constitutes a 'position'? Are the positions mutually
exclusive? How were these positions identified? What evidence is used to support the 2x2 framework? Are there differences among the settings in what positions are endorsed?

3. Please include a table that presents exemplar quotes for each setting and professional group for each position (or indicate that the quotes are not available). This will help establish that the quotes represent repeating patterns of views among the participants and will highlight what is being discussed more by leaders, physicians, and nurses. Differences among settings and professional groups should be highlighted.

4. It occurs to me that the CDSS may not be that useful for orthopedic surgeons, for example. What is the evidence that the CDSS is in fact useful for all of the interviewed participants?

5. Consider presenting a conceptual framework for the study. It would be helpful for the reader to understand how this study fits in to extant theory, both in regard to implementation science, but also more broadly to the literature on individual and organizational change (e.g., power and identity). Another potentially useful approach could be to ground this study in the CDSS literature. What don't we know about implementing CDSS in particular, and how does this study advance knowledge in that area?

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