Reviewer's report

Title: Healthcare Technologies, Quality Improvement Programs and Hospital Organizational Culture in Canadian Hospitals

Version: 1 Date: 10 December 2012

Reviewer: Jay Ford

Reviewer's report:

Major Compulsory Revisions

1. It is not clear why the authors chose to address the technologies as individual implementation efforts when several of the technologies appear to be components of a technology that might typically be implemented within an organization. For example, why was barcoding treated as four different technologies versus one technology or in terms of electronic pharmacy, it appears that several components (e.g., barcoding medications, electronic pharmacy orders and automated medical dispensing) are treated as separate technologies instead of one large type of technology implementation. The lack of clarity may hinder applicability or generalizability of the findings. The logic behind these choices should be explained in more detail.

2. At the bottom of page 12, the authors state, “The results identify that certain technologies are statistically more difficult to accomplish than other healthcare technologies in Canadian hospitals”. However, only one example is given. More detail is needed to support this statement.

3. The type of quality improvement programs varied widely in the study. Some appear to deal specifically with employee related quality improvement (e.g., employee recognition, employee suggestion, pay bonus plans), some to different types of quality improvement approaches (e.g., six sigma or lean organization) and others to how information is shared within the organization (e.g., balanced scorecard). However, it is not clear how the implementation of technologies as described in the paper are related to these QI programs or if there are differences in the Rausch modeling if the outcome in Figure 1 (quality improvement programs adopted) varies more by type of program vs. the number of QI programs adopted. These distinctions are important and more clarification or discussion is needed.

Minor Essential Revisions

1. It is unclear how the concept of organizational culture was measured in this study. Rather than relying on a reference to a previous study, the authors could add more detail about the scale used to measure culture and describe its prior use in the literature.

2. Descriptive statistics related to the number of organizations who are or have implemented a specific healthcare technology, a given quality improvement program as well as the organizational culture variable would help strengthen the
applicability and generalizability of the findings to other organizations.

3. In addition, the paper would benefit from more information about the demographics of the sample. That is who responded, were there more responses from the centralized vs. decentralized data collection approach.

4. Additional clarification about information related to the explained and unexplained variance in the Rausch model (p11) would be helpful to the reader.

5. While language response was considered as a control variable, the type of response system (centralized vs. decentralized) as well as any respondent demographics was not included. Clarification to their exclusion would be beneficial.

Discretionary Revisions
1. None

**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