Reviewer’s report

**Title:** An empirically-derived approach for investigating Health Information Technology: the Elementally Entangled Organisational Communication (EEOC) framework

**Version:** 1  **Date:** 28 March 2012

**Reviewer:** Brian Dixon

Reviewer’s report:

The article suggests that there is a paucity of health information technology (HIT) systems research that employs an explicit approach centered on organizational communication. The authors then suggest an elementally entangled organizational communication (EEOC) framework to frame and guide future HIT research. Three case studies involving the deployment of computerized provider order entry (CPOE) are used to illustrate the dimensions of the proposed framework.

While the article builds a solid case that HIT systems impact organizational communication, which is a key factor implicated in the safety, efficiency and quality of care delivery, the EEOC framework is unclear and, in its present state, is not sufficient for use by other HIT researchers. Therefore the following suggestions are provided to help the authors enhance the submitted article.

Major Compulsory Revisions

1. The most pressing issue for the authors to address is the need for a framework to study organizational communication in HIT system development and/or deployment. Several recent articles in the literature have discussed the paucity of studies that explicitly examine organizational communication*, and these articles call for greater attention to organizational communication in future health care and HIT studies. While this point is well taken, why does the HIT community need a framework to explicitly examine organizational communication? Why not simply examine organizational communication as a phenomenon without a framework? What value does the EEOC framework provide other than a new label to a previously described challenge in HIT system implementation?

2. The framework as described appears to combine organizational communications with the socio-material and temporal-spatial of workflow and/or sociotechnical traditions. It remains unclear as to whether the authors are attempting to a) extend the sociotechnical tradition (mentioned in the Introduction); b) extend the organizational communications tradition, or c) present a novel framework that doesn’t extend another framework but combines essential elements from other traditions into a new framework. The authors should assert whether their framework extends existing traditions (e.g., the organizational...
communications enhancements that Kuziemsky et al make to Donabedian’s structure, process, outcomes framework) or whether the EEOC framework should stand on its own, independent of other theoretical frameworks used in HIT research.

3. The framework as described is of little utility to other HIT researchers. While interesting, the article does not provide guidance on the application of the framework to broader organizational communications elements and components beyond those discussed in the first two case studies. Figure 1 is a bit abstract, and the article lacks a sufficient explanation of the various components of the overall framework depicted in the figure. More detail is necessary not only when the Figure is introduced but also the Discussion section to provide advice for others seeking to leverage the framework for their HIT evaluation efforts. Again, the article emphasizes (correctly) that organizational communications can advance HIT innovation and research, but it remains unclear how the framework can support this aim.

4. The three case studies in the Results section contain excellent detail on the setting and the intervention. However, the case studies lack detail when describing the CPOE outcomes and the relationship between the findings and the EEOC framework. Given that this journal does not restrict on page length, the authors should expand their discussion of the case studies, offering the reader more detail on the findings from the CPOE implementation and describing the link between outcomes and components of the framework. Specifically,

a. The authors assert that Blood Bank employee concerns about the safety and adequacy of the system’s warning and notifications mechanisms (4th paragraph of Results) led to the non-utilization of the CPOE. Describe how the CPOE warning and notifications interrupted existing communication patterns or prevented “normal” communication from effectively passing along critical information to Blood Bank or other hospital personnel.

b. Provide more detail on “the experience” involving the LIS interface with the CPOE system. It would appear that the vendor developed an interface to replace the existing homegrown connection. Did the interface not work as desired? Describe the explicit linkage between the interface and existing organizational communications.

Minor Essential Revisions
None

Discretionary Revisions
None

*References for consideration
Coiera E. When conversation is better than computation. JAMIA. 2000;7(3):277-286.
Gius DA, Kuhn KA. Health information systems challenges: the Heidelberg

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.