Reviewer’s report

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

Version: 3 Date: 28 July 2009

Reviewer: Andrew Georgiou

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Major comments:

1. The survey reported in this study appears broad ranging and comprehensive. There is distinct value in undertaking such surveys across a substantial health area. The use of the diffusion of innovation theory is important and potentially useful.

2. But unfortunately I do not believe the authors achieve their stated goal – “to examine factors associated with the adoption of a CPOE system for inter-organizational and intra-organizational care”. The analysis is quite shallow which the authors seem to concede in their Limitations section.

3. The authors acknowledge that they did not formally validate the questionnaire items with regard to diffusion of innovation theory. I also found that there was a lack of explanation in the Methods section of how they applied the theory to the drawing up of questions.

4. The biggest problem with the lack of thorough statistical analysis is that it means that the findings are inadequately discussed, many questions or issues remain unanswered, and the reader is left with a vague and somewhat depressing picture of the state of CPOE in the study area. For instance, the workplace location of respondents involved primary care locations as well as hospital and home care locations. Surely, the findings from the different locations should have been examined. The same applies for the different County districts and other characteristics gathered from the survey. This information would have contributed to our understanding of the results.

5. The paper also lacks a description of the system and its components. Was the CPOE system identical across the whole area? What type of decision-support was available? Was it universally available? Surely, these factors should be taken into consideration to help us understand the results.

6. The Discussion section needs to compare and assess the findings in the light of other survey findings. This would provide greater depth and content to their own results.

7. The Conclusion presents an unsatisfactory over-generalization. I agree that it is important to understand the concerns of health professionals but I would have
liked some more detail about the implications (of which there are many) of the study’s findings.

Other comments:

There are a number of places where the meaning was not clear due to imprecise expression, eg,

• First paragraph on page 5: I am not sure what “more observable” means.

• The last paragraph of page 6 contains a non sequitur. It is not clear how Ford et al.’s point about user friendly systems explains or leads to “few studies of unintended consequences.”

• The citation for Ash et al. is missing from the same paragraph.

• Second paragraph on page 15 should be “the system led …”

• First paragraph on page 16: it is not clear what “physicians were slightly more agreed…” means.

• Second paragraph on page 18: Better to use the words: “human-machine”.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.