Reviewer's report

Title: The Effectiveness of Computerized Order Entry at Reducing Preventable Adverse Drug Events and Medication Errors in Hospital Settings: A Systematic Review and Meta-Analysis

Version: 4 Date: 14 April 2014

Reviewer: Elizabeth Conroy

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Minor Essential Revisions

ABSTRACT - Background - Anagrams [HITECH] should be introduced with their full title – especially in the abstract.

ABSTRACT - Conclusions – Limitations have been added although as more of an afterthought and does not flow with the rest of the text. Possibly because the word count is tight? I suggest this is reviewed and refined.

METHODS – Data extraction and quality assessment – ‘When information about the system developer and CDSS were missing from the published article, we contacted original authors.’ Can you add in to the results how many authors were contacted and the outcome of this? This element of the design does not appear to be discussed in the results.

METHODS - Study Selection - First paragraph - ‘We excluded studies that did not describe methods for detecting medication events, or that used incident reporting alone, because it detects only a small percentage detects 0.2%-6% of events’. I don’t think this is a reason. There should be a stronger argument for excluding that is identified before you assess the numbers of events. These studies could be potentially relevant. In the conclusions you have added a stronger justification; I think this should be added here.

METHODS – Data extraction and quality assessment – Third paragraph – Not clear how CDSS sophistication is defined. The levels of basic, moderate and advanced seem quite arbitrary. Was this determined by original authors or following some sort of definition? This should be described.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.