Reviewer's report

Title: Systematic Review of Clinical Decision Support Interventions with Potential for Inpatient Cost Reduction

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Reviewer: Ivan Ip

Reviewer's report:

General comments: Very interesting and timely review article highlighting the need for further cost-effectiveness studies of clinical decision support systems. With the CMS requirement of meaningful use, this article will generate considerable interest from policy makers.

Specific comments:

- Major Compulsory Revisions

1. One key proxy of cost that was not mentioned is medical imaging. High-cost medical imaging, particularly CT and MRI, is an increasing proportion of healthcare costs. Therefore, would consider this to be a proxy of financial cost. Rate of readmission would be another.

2. It is not apparent to me why articles in the ED setting were included in addition to inpatient. The focus of the paper was stated to be inpatient only, thus would exclude ED articles. One can argue that a fair proportion of ED patients end up being admitted to the hospital, but one can argue the same for clinic patients.

3. While the methodology described in Data Source section certainly does make sense, I have noticed that there are some key sources that were excluded. For example,

   Drescher FS et al, Effectiveness and acceptability of a computerized decision support system using modified wells criteria for evaluation of suspected pulmonary embolism (2011)


   Were these intentional? Or was it due to the key words not being comprehensive? If later, then we would need to re-define

- Minor Essential Revisions
Some rows in Table 1, column Intervention, are missing p-values/NS. For example, reference 21. Would add these for completeness

- Discretionary Revisions
  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