Reviewer's report

Title: Potential hospital cost-savings attributed to improvements in outcomes for colorectal cancer surgery following self-audit.

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Reviewer: cesrae hassan

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The paper deals with the potential cost-saving due to the adoption of a widespread implementation of a computerized self-audit in Australia in order to reduce colorectal cancer surgical complications. The Authors show that assuming a rough 50% reduction of the post-surgical complication rate, the per-year saving would be $30 million for the Australia.

Minor comments:

1) The result section is too informal, so that it is difficult for the reader to understand the parameters chosen for the systematic revision and the final estimates, before reading Table 1. Similarly in Table 1, range values have been used for the estimates, although it was never clearly indicated from the Authors. Therefore, I suggest to prepare a more structure section of the result, briefly indicating how the Authors reached the main estimates used in the analysis.

2) The Authors introduced in their cost-analysis the post-surgical death rate. However, it does not appear to me that there is any cost associated with such an event. how did the Authors use this information. It would be interesting to estimate the absolute number of persons saved in 1 year in Australia.

3) The only estimate of self-audit software comes from only 1 company with which the Authorship is in conflict of interest. The readers may be willing to know whether there are other programmes that may be adapted at a lower or null cost. Alternatively, the Authors should describe in detail how the $250 estimate is made (i.e. cost, charge, etc.).

4) I don't understand the sensitivity analysis. It was based on the absolute cost of surgery under audit. This is not the study focus. The study focus is the saving associated with audit. Therefore, I would like a new sensitivity analysis based on this variable.

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'