Reviewer’s report

Title: Risk of bias judgements and strength of conclusions in meta-evidence from the Cochrane Colorectal Cancer Group.

Version: 0 Date: 04 Jan 2019

Reviewer: Caroline Farmer

Reviewer's report:

Dear author,

This is an impressively large review of risk of bias and recommendation type in medical and surgical RCTs for colorectal cancer. The study aims are of interest to readers both in colorectal and systematic reviewing fields. However, the findings and their implications are lost in the write up. Some editing is required to emphasise the value of this interesting piece of research.

Major

* Throughout the results section, results should be presented alongside information about (a) the direction of the effect and (b) the size of the effect. Presenting p values alone is insufficient to judge the difference between categories.

* The discussion section is very descriptive, and could better showcase the findings of the review by highlighting key evidence and discussing the implications. Some examples:
  o Page 9, paragraph 3 ("The risk of bias of random sequence generation..") doesn't appear to have a conclusion. Are the authors suggesting that studies evaluating MS interventions only differed in random sequence generation because of a higher proportion of studies reporting inadequate information about randomisation? If so, how many? Can this data be presented? What are the implications, if any?
  o Page 9, paragraph 4. The authors report "a highly significant difference between M and MS papers and MS and S papers" - what was the direction and size of this difference? Size of p value is not indicative of the size of the effect. The authors' conclusions about these findings are also unclear in this paragraph.
  o Page 10, paragraph 1. This seems a long paragraph given that the difference in blinding between medical and surgical procedures is to be expected. The authors state their aim not to be to propose a solution, but perhaps they could discuss the implications of the inevitable difference in blinding between M and S procedures for conclusions about effectiveness and recommendations? I'm not sure the quoted examples add much, and could be removed for brevity.
  o Page 10, paragraph 2: does this finding apply to surgical interventions in both S and MS papers? How much more likely? The authors offer no explanation for the finding, but should discuss the implications or highlight the importance of full and correct reporting.
  o The authors conclude that surgical intervention studies (S and/or MS?) are associated with
an overall higher risk of bias compared to medical studies, as assessed using the quality score (page 11, paragraph 1). This is an interesting finding, and it would be interesting to read the authors thoughts about the implications of this.

- The authors' conclusions about the relationship between intervention type and recommendation are unclear and could benefit from a rephrase (page 11, paragraph 1). It would be of significant interest to know whether intervention type was associated with positive or negative interventions? And the impact of risk of bias in these judgements?

- Data on laparoscopic reviews don't appear to be discussed?

* Conclusion contains data not presented earlier (and useful) - can this be discussed in the results and discussion sections?

* What are the overall conclusions of the authors on the evidence identified? This should be the conclusion for the paper. What is the message for researchers and clinicians in the colorectal field?

Minor

- Unclear why the authors do not also report the relationship between risk of bias and recommendation type. If this data is available to the authors, this would increase the interest of this paper.

- Authors should emphasise in abstract and throughout study aims that RCTs were the focus of this study and no 'real world data' were included.

- Description of the risk of bias categories in introduction is very basic and well known to many readers of Systematic Reviews. It would be stronger to add in some references demonstrating the relative importance of these factors for the validity of research; e.g. association between allocation concealment and treatment effects (Schulz et al 1995).

- Add start date of search to methods (lit search and inclusion criteria)

- Clarify description of table 1, on page 5 line 6: this table is about recommendation strength, not a description of how reviews were able to inform clin practice.

- How does the word cloud contribute to the aims of the paper?

- Computation of the quality score is pragmatic and explained well, however it should be noted that this approach is limited as it does not take into consideration the relative importance of each category. Not all categories contribute equally to the validity of the research.

- Change referencing style in discussion to match rest of paper

- Page 6 line 13 clarify that this was across all categories of bias, rather than overall (summary score) bias across papers

- Weighted kappa indicates some disagreement between authors on the conclusiveness of the reviews. In how many instances? Was there a pattern in the disagreements?

- Clarify inclusion of papers that did not "specifically address questions surrounding colorectal
cancer per se" (page 8, beginning line 49). Surely these did not meet the inclusion criteria?

* Insert paragraph after "higher risk of bias." (page 11, line 6)

* The authors may wish to mention in their summary of the review strengths that this is a large review across Cochrane reviews, which are viewed as being a gold standard of systematic reviewing. That in all cases, the same validated checklist was used to evaluate risk of bias, which is also gold standard and provides a method for comparison across trials. In limitations, should mention limitation of the summary quality score.

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No