Reviewer's report

Title: Reporting and Methodologic Quality of Cochrane Neonatal Review Group Systematic Reviews

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Reviewer: Andreas Lundh

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General
The authors have assessed the reporting and methodological quality of a random sample of Cochrane Neonatal Reviews. The assessment was done using the QUOROM statement for reporting quality and the Overview Quality Assessment Questionnaire (OQAQ) for methodological quality. The authors found that the quality was good on average, but that improvements are possible and that the methods of Cochrane Reviews in neonatology should be scrutinized before accepting results.

Major Compulsory revision
Page 7-9: Your results section is very descriptive and includes few quantitative data. You should also emphasize main findings quantitatively in the results section (e.g. that only 26% of the systematic reviews avoided bias in the selection of studies (item 4 of the OQAQ) is an important finding).

Page 11 para 1 line 1-7: Too long a sentence. You write that “...however since the editors in the Cochrane library do not employ the statement as the backbone to guide their methodology, we could not reliably assume a causal relationship...”. First of all I'm not sure who the "editors in the Cochrane library" are. The Cochrane library is a database. I assume you mean the editors of the CNRG? Furthermore would you have assumed a causal relationship if the editors had employed the statement? This is similar to a before-and-after study and is prone to many types of bias. The association could be confounded by a time trend because the methodology of research in general improves by time. Also since many reviewers undertake more reviews the improvement over time can simply be the result of gains in methodological experience over time. You should therefore be more conservative in the interpretation of this finding.

Minor Essential Revisions
Page 1 para 2 line 5-6: Last sentence in methods can be skipped. You should write something about the pre-/post-QUOROM comparison. This also goes for the results section.

Page 1 para 3 line 2-7: You start by stating that the reviews had good quality based on the OQAQ score (i.e. methodological quality), but then you go on to mention deficits that are related to the QUOROM assessment (i.e. reporting
quality). You should make this distinction more clear.

Page 2 para 1 line 3-4: Check your references. You use reference 1 & 2 for the evidence that a physician needs to read 17-20 articles a day to keep up with data. But ref. 2 only states this number and uses ref. 1 as a reference, and ref. 1 doesn’t mention these number at all. I believe you should quote the Haynes paper (Haynes RB. Where's the meat in clinical journals? ACP Journal Club 1993;119:A23-4.), as this is the original source of the much quoted estimate.

Page 2 para 2 line 5: You state that there are 50 Cochrane Groups, but currently there are 51. It is true that only 50 groups are related to therapeutic/preventive interventions in health care, as the methods group does methodological reviews, but then you should state this. The way the sentence is constructed gives the impression that all groups are dedicated to improving outcomes in newborn infants.

Page 3 para 2 line 14: Reference 9 is not properly cited. You should cite the handbook as mentioned in it. And it would seem more appropriate to cite the most recent version 5.0.0. (Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.0.0 [updated February 2008]. The Cochrane Collaboration, 2008. Available from www.cochrane-handbook.org./). Furthermore, you should state which day you accessed the quoted URL’s. This also goes for reference 10 (access date and full name of organisation).

Page 4 para 1 line 4: It is not clear how the number 61 for included reviews was chosen, was it based on any sample size calculations or arbitrarily chosen? Second 61/210 is 29% not 30%.

Page 4 para 1 line 6: You should delete the whole sentence “Stratification based on….” and combine it with the similar sentence under data extraction (page 5 para 2 line 8-10).

Page 4 para 1 line 7-8: You write “however we found that most reviews published prior to QUOROM statement were updated at a later stage”. I assume you only included the most recent version of reviews in your sample or did you also include older versions? The sentence is not clear enough to assess what was actually done.

Page 4 para 2 line 2-5 AND Page 4 para 3 line 1. You indirectly and directly describe the QUOROM statement as a quality assessment instrument/tool. While it is true that the QUOROM statement includes a checklist, this checklist is meant for assisting authors with reporting their results properly and it is not a checklist for critical appraisal of reports of meta-analysis or for judging their quality or risk of bias. This distinction is important.

Page 5 para 4 line 5: You have chosen a cut-off date 13 months after the publication of the QUOROM statement. While it is arguably reasonable to use a later date due to delay in implementation because of the time needed to conduct the research and publish it, you should explain your reasons for choice of cut-off.
Page 10 para 3 line 4: You write “one third of included reviews scored 3-4”. Based on the data in Fig. 1 my calculation is \((12 + 13)/61 = 41\%\).

Page 11 para 2 line 1-7: As you state below the assessment of item 10 is influenced by the subjectivity of the assessors. I would therefore be very careful about the comparison of average scores between studies (i.e. external validity). Second you conclude “...which reinforces the notion that Cochrane reviews in general appear to have greater methodological rigor...”. But since you had no comparison group in your study, this conclusion is unwarranted. In my opinion, the only conclusion you can draw from this study is “...that Cochrane reviews in general appear to be of high methodological quality”.

Page 11 para 3 line 5-6: You state “hence these instruments were not subjected to extensive validation and lack published guidance for their application. But there is a published set of instructions, though it could be more extensive (Jadad AR, McQuay HJ. Meta-analyses to evaluate analgesic interventions: a systematic qualitative review of their methodology. J Clin Epidemiol. 1996;49:235-43.). Did you use these instructions in your study?

Page 12 para 2 line 1: You should state if the two reviews KA authored were included in the sample.

Page 21 Figure 2: You describe Fig. 1 as “Distribution of total OQAQ scores of CNRG systematic reviews” and Fig. 2 as “Distribution of overall OQAQ scores across all included reviews”. I assume that total and overall score is the same and that all included reviews are CNRG reviews. So in my opinion you’re displaying the same information in two ways graphically. Since you don’t state the references of the individual systematic reviews (which you must do, at least on the journal's web site) there’s no reason for the inclusion of Fig. 2, because we can’t identify the individual studies anyway. As Fig. 2 contains no new information compared to Fig. 1, I would prefer the latter as it illustrates the distribution better. You could stratify the columns in Fig. 1 by colours to illustrate the difference between pre- and post-QUOROM review scores. In addition based on Fig. 2 my calculations are score 3 (12 reviews), 4 (13 reviews), 5 (28 reviews) and 6 (8 reviews). This gives 20\%, 21\%, 46\% and 13\%, respectively. This does not seem to be the same in Fig. 1 where score 3 seems to occur in less than 20\% and score 4 20\%, but this is maybe an error in the visual display of Excel?

Discretionary Revisions

Page 1 para 1 line 1-3: While it’s undoubtedly true that the CNRG has achieved a lot despite limited resources it doesn’t seem to fit in the background description of the abstract. A more general sentence about that the CNRG aims to produce Cochrane Reviews of high quality to assist clinicians in evidence-based decision making would be more appropriate.

Page 3 para 2 line 1-4: Give reference to this statement (e.g. reference 11 and 20 and/or
Jadad AR, Moher M, Browman GP, Booker L, Sigouin C, Fuentes M, Stevens R.

Jørgensen AW, Hilden J, Gøtzsche PC. Cochrane reviews compared with industry supported meta-analyses and other meta-analyses of the same drugs: systematic review. BMJ. 2006;333:782.


Collier A, Heilig L, Schilling L, Williams H, Dellavalle RP. Cochrane Skin Group systematic reviews are more methodologically rigorous than other systematic reviews in dermatology. Br J Dermatol. 2006;155:1230-5.

Page 3 para 3 line 1-2: I'm not sure what is meant by this sentence. Do you mean that to judge the results of any study you should assess its methodological quality? Could you please rewrite it in a more clear form?

Page 4 para 2 line 4: In addition to reference 14, which is about the validation of the OQAQ, you could consider also citing ref 17. Furthermore reference 14 and 16 are identical so 16 should be removed.


Page 5 para 1 line 1: You write statistical pooling, I would recommend using data analysis, as item 8 in OQAQ also can be used in systematic reviews where data are too heterogeneous to be pooled in a meta-analysis.

Page 5 para 3 line 2: You should state if the third party was involved or not.

Page 6 para 1 line 7-8: You should state how you did the calculations for the two sample t-test (by hand or using statistical software).

Page 7 para 4 line 3: You write “…the Cochrane Register of Randomized Controlled Trials (CCRCT)”. First many clinicians are only familiar with the Cochrane Library where the database is accessible through. So you should instead write “The Cochrane Central Register of Controlled Trials (CENTRAL) in the Cochrane Library”. Secondly you should use the more common abbreviation CENTRAL to refer to it in Table 2.

Page 8 para 1 line 2-3: While contact with authors can be done to obtain information on unpublished studies to reduce publication bias, searching trial registries is probably more important and should be included in the sentence.

Page 8 para 3 line 1: Consider changing “duplicate selection” to something like “two reviewers” as this makes it more clear for readers not familiar with the process of doing systematic reviews.
Page 13-15: You should change references to journal style.

What next?: Manuscript is interesting in general, but needs considerable improvement in language and many other revisions, before a final decision can be reached.

Level of interest: Interesting to researchers involved with systematic review methodology.

Quality of written English: Not acceptable. There are too many grammatical errors and some spelling mistakes (e.g. interrator, posses).

Statistical review: Does not need to be seen by a statistician

**Declaration of competing interests:**

Declaration of competing interests: I declare that I have no competing interests.