



Search Peer Review Essentials

April 2022

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Agenda

- Post-submission search peer-review objectives
- Overview of search errors
- Suggested vs required revisions
- Guidance & feedback (based on the assignment)



Search Peer Review (PR) Objectives

Through post-submission search PR, we aim to:

1. Ensure all MECIR conduct and reporting items are followed
2. Ensure the search strategies are free of “first order” errors that may limit recall (i.e., result in missed eligible studies)

Evaluating reporting vs conduct

Reporting items

- Evaluated in part A of the forms (PR17-21, R33-R38, UR3)
- Revisions do not require authors teams to re-run searches
- Revisions are much easier to make at all review stages

Conduct items

- Evaluated in part A (C24-38, U6) and in part B of the forms
- Revisions at the review and update stages require author teams to re-run searches
- Revisions are very difficult to make after the protocol stage



An Overview of Search Conduct Problems

Ranked according to variables:

- impact on recall
- impact on precision

First-order problems	Second-order problems
<ul style="list-style-type: none">- Errors in conceptualization- Errors using logical operators- Spelling errors- Error in the combination of lines- Missing MeSH terms	<ul style="list-style-type: none">- Missing free-text language- Missing free-text and MeSH combinations- Missing spelling variants- Inadequate truncation- Irrelevant free-text language- Inadequate use of limits

(Sampson, 2009)

Conduct Problems in Cochrane SRs

2006 Study (Sampson) of 63 Cochrane SRs

- 90.5% of the strategies had ≥ 1 problem
- 82.5% had ≥ 1 first order problem that could have affected recall

2018 Study (Franco) of 59 Cochrane SRs

- 73.0% of the strategies had ≥ 1 problem
- 53.0% had ≥ 1 first order problem that could have affected recall



Top Conduct Errors to Impact Recall:

1. Missed MeSH terms (44.4%) – FIRST ORDER PROBLEM
2. Unwarranted explosion of MeSH terms (38.1%) – SECOND ORDER PROBLEM
3. Use of irrelevant MeSH or free text terms (28.6%) – SECOND ORDER PROBLEM
4. Missed spelling variants (20.6%) ; Strategy not tailored for other databases (20.6%) – SECOND ORDER PROBLEM
5. Logical operator error (19.0%) – FIRST ORDER PROBLEM

(Sampson, 2006)

Required vs suggested revisions

Peer Review form items	Required revisions	Suggested revisions
Part A (MECIR) – Reporting	Missing mandatory MECIR items Inconsistent methods reporting (e.g., search dates)	Missing highly desirable MECIR items
Part A (MECIR) – Conduct	Missing mandatory MECIR items	Missing highly desirable MECIR items
Part B (PRESS) – Search strategy	First order problems	Second order problems Expert searcher suggestions

Recommendations in Editorial Manager

Recommendation	Revision types
Reject (very rare)	Many required revisions in Part A (conduct items) Many required revisions in Part B High likelihood of missed eligible studies Very low confidence team could address revisions
Major revisions (common for protocols, rare for reviews and updates)	Required revisions in Part A (conduct items) Required revisions in Part B Possibility of missed eligible studies
Minor revisions (common)	Required revisions in Part A (reporting items) Suggested revisions in Part B Low likelihood of missed eligible studies
Accept (common)	Suggested or no revisions in Part A Suggested or no revisions in Part B Low likelihood of missed eligible studies

Guidance & Feedback (1)

Some general and specific guidance based on the search PR assignment:

Don't be afraid to require revisions, ...

- for missing/incorrect mandatory MECIR items
- for first order conduct problems

... but it's okay accept with no revisions 😊

- A search with only suggested revisions is probably fine
- You don't need to find problems (if you dig hard enough, you probably will)



Guidance & Feedback (2)

Avoid over-suggesting

- Authors often try to address ALL revisions. Help them focus on making important revisions
- Limit suggested revisions for reporting items to only highly desirable MECIR items
- Limit suggested revisions for conduct items to only those that may improve precision
- Avoid too many “expert searcher” suggestions

Incorporating suggestions for future updates

- To avoid authors having to make changes at the review and update stages that may not impact their recall, indicate that suggested revisions may be considered for future updates

Guidance & Feedback (3)

Remember to check..

- how the authors report reference checking!
- the section ‘Differences between the protocol and the review’

Avoid redesigning the search or being too picky

- Require revisions for reporting the appendix strategy only if you cannot replicate
- Concentrate on search methods. You don’t need to conduct editorial work (submissions will be checked by editors too)

Guidance & Feedback (4)

Help the editors and authors

- Number your comments and indicate if they are required or suggested
- Be specific! Give authors actionable items in your comments:
 - REQUIRED REVISION 1: Please search Embase*
 - REQUIRED REVISION 2: Please report the Date of search in the abstract for which all results are fully incorporated*
 - SUGGESTED REVISION 3: Please consider adding variant spellings to the term “odor” (e.g., “odour” “malodour”)*
- Order the most important revisions first within each item of the form

Guidance & Feedback (5)

Peer review to your own comfort level

- Invitations to peer review complex reviews may be left for other team members

The more you review, the easier it gets ... and the better your searches will get too. It's very helpful to your own work to see how other IS approach their strategies.



More information available:

<https://community.cochrane.org/search-peer-review>

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References

Franco JV, Garrote VL, Liquitay CM, Vietto V. Identification of problems in search strategies in Cochrane Reviews. *Research Synthesis Methods*. 2018 May 15.

Sampson M, McGowan J. Errors in search strategies were identified by type and frequency. *Journal of Clinical Epidemiology*. 2006 Oct 1;59(10):1057-e1.

Sampson M, McGowan J, Cogo E, Grimshaw J, Moher D, Lefebvre C. An evidence-based practice guideline for the peer review of electronic search strategies. *Journal of Clinical Epidemiology*. 2009 Sep 1;62(9):944-52.

