

CADTH Peer Review Checklist: Enhancing the Review and Evaluation of the Quality of Search Strategies

Monika Mierzwinski-Urban, MLIS; Melissa Severn, MLIS; Amanda Hodgson, MLIS,
Canadian Agency for Drugs and Technologies in Health, Ottawa, Ontario

BACKGROUND

The peer review of electronic search strategies has always been a standard practice and integral part of Information Specialists' (IS) search processes at CADTH. The main purpose of this process is to enhance the review and evaluation of the quality of search strategies.

PURPOSE

The purpose of this project was to evaluate and adapt the PRESS (Peer Review of Electronic Search Strategies) quality assessment checklist tool (Sampson et al.) according to CADTH's IS needs and incorporate it into CADTH's IS peer review processes.

METHODS

Phase 1: PRESS Systematic Review Search Update

Sampson et al.'s PRESS report systematic review searches were updated to identify any additional evidence on the importance of checklist elements to the validity of electronic searches and to identify any other assessment checklists that evaluate or validate the quality of electronic search strategies.

Phase 2: Survey

A web-based survey was conducted to seek the feedback of CADTH's IS on the importance of the 18 checklist elements indicated by Sampson et al.'s report and to identify any other elements to the validity of electronic search strategies to consider.

Phase 3: CADTH Peer Review Checklist

CADTH's IS provided feedback on the first draft of the CADTH Peer Review Checklist and tested it for a month to assess its usability and effectiveness.

RESULTS

| |
|---------------------------------------|
| Citations identified: 2,479 |
| Title/abstract screening: 41 selected |
| Full-text screening: 6 selected |
| Final selection: 0 selected |

Eighty-six per cent of CADTH's IS completed the survey. All of the elements from Sampson et al.'s PRESS checklist tool were ranked as important and three new elements were identified as important.

Based on the systematic review search update, the survey, and CADTH's IS feedback, the CADTH Peer Review Checklist was created, and the final number of questions assessing possible errors in electronic search strategies increased from seven to 10.

| CADTH Peer Review Checklist | |
|-----------------------------|---|
| 1. | Translation: Is the search question translated well into search concepts? |
| 2. | Operators: Are there any mistakes in the use of Boolean or proximity operators? |
| 3. | Subject headings: Are any important subject headings missing or have any irrelevant ones been included? Consider whether exploded terms, subheadings, major emphasis, and other subject heading devices are used to their best advantage. |
| 4. | Natural language: Are any natural language terms or spelling variants missing or have any irrelevant ones been included? Is truncation used optimally? |
| 5. | Spelling and syntax: Does the search strategy have any spelling mistakes, system syntax errors, or wrong line numbers? |
| 6. | Appropriate search filters: Are the appropriate search filters being applied (e.g., systematic reviews, randomized controlled trials, guidelines, etc.)?* |
| 7. | Limits: Do any of the limits used seem unwarranted or are any potentially helpful limits missing (e.g., publication types, methodological filters, language, dates)? |
| 8. | Fields: Are the appropriate fields being searched (i.e., title, abstract, registry number, etc.)?* |
| 9. | Adapted databases: Are all relevant databases being searched? Has the search strategy been adapted for each database? |
| 10. | Additional suggestions or comments* |

*Denotes a question that was added to the CADTH Peer Review Checklist.

CONCLUSION

Implementing a validated checklist tool for peer reviewing electronic search strategies will improve the retrieval of relevant information. The aim of the CADTH Peer Review Checklist is to standardize peer review processes at CADTH and to improve the quality of electronic search strategies. This checklist will make the peer review processes more transparent and rigorous; thereby increasing the quality and completeness of CADTH's IS search strategies.

REFERENCES

Sampson M, McGowan J, Lefebvre C, Moher D, Grimshaw J. PRESS: Peer Review of Electronic Search Strategies. Ottawa: Canadian Agency for Drugs and Technologies in Health; 2008.

McGowan J, Sampson M, Lefebvre C. An evidence based checklist for the Peer Review of Electronic Search Strategies (PRESS EBC). Evid Based Libr Inf Pract. 2010;5(1):149-154.

