



CAN MEDLINE RECORDS BE EXCLUDED FROM AN EMBASE SEARCH WITHOUT LOSS OF SENSITIVITY, FOR A SYSTEMATIC REVIEW?

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INTRODUCTION

Searching for studies for inclusion in a systematic review requires multiple databases to be searched. However, this leads to duplicate records. This exploratory study looked at the impact of using a database-level filter to exclude records imported from MEDLINE from the results of an Embase (OVID) search.

METHODS

Sample selection

20 Cochrane reviews were identified using the following criteria: A) searched MEDLINE and Embase using the OVID interface. B) reported the searches in text format so they could be copied. C) used searches that incorporated both subject headings and textwords. D) included no less than 20 and no more than 100 studies.

The search strategies were copied line-by-line from each Cochrane review and re-run in MEDLINE and Embase. The results were downloaded to Endnote. The Embase searches were then re-run using the Records from: Embase filter. Filtered results were downloaded to Endnote.

Data extraction

For each review, a list of the included studies (from the "references to studies included in the review" section) was created in Excel, and checked against the 3 data sets (MEDLINE, Embase unfiltered, Embase using the "Records from: Embase" filter). If a record was found in a data set, then it was logged with a 1, and if not then it was logged as a 0. We then compared the filtered versus unfiltered results for each review.

Limitations

1) The filter was only tested in the OVID interface. 2) The study was exploratory and used a set of 20 Cochrane reviews which may not be large enough to fully test the filter. 3) The effect of the filter on only "included studies" from the 20 Cochrane Reviews was assessed; we did not assess the filter's effect on every record retrieved.

RESULTS & DISCUSSION

TABLE 1: EFFECT OF FILTER ON EMBASE SEARCH RESULTS

Review #	Included studies found (Embase)	Included studies (filtered Embase)	Difference in search yield
1	5	5	374 (16.70%)
2	0	0	1029 (35.06%)
3	3	3	2183 (45.28%)
4	6	6	545 (35.76%)
5	2	2	140 (33.41%)
6	12	12	274 (32.97%)
7	4	4	390 (19.10%)
8	1	1	841 (37.02%)
9	6	6	173 (28.69%)
10	4	4	187 (12.30%)
11	1	1	879 (28.00%)
12	0	0	3929 (46.80%)
13	1	1	941 (38.17%)
14	5	5	1569 (25.90%)
15	0	0	328 (45.24%)
16	0	0	1218 (42.09%)
17	1	1	802 (28.10%)
18	2	2	88 (25.07%)
19	1	1	262 (22.64%)
20	1	1	153 (76.12%)
Total	55	55	16305

Effect on # of included studies

Using the "Records from: Embase" filter resulted in **no loss of included studies**; all (55) of the unique references to included studies (i.e. found through the Embase search but not the MEDLINE search) were also found in the filtered results.

Effect on # of records retrieved

The average reduction from using the "Records from: Embase" filter was 33.7%, with ranges between 12.3% and 76.1%. This translates to an average of 815 records, between a minimum and maximum of 88 and 3,929 references respectively.

CONCLUSION

We tested the impact of a filter in Embase. The results of our study showed no loss in unique "included" journal articles retrieved from Embase, therefore the filter is a viable option.