Title **Literature Searching for Clinical and Cost-effectiveness Studies used in Health Technology Assessment Reports Carried out for the National Institute for Clinical Excellence Appraisal System**

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Reference Health Technol Assess 2003;7(34). Nov 2003. www.ncchta.org/execsumm/summ734.htm

Aim

To contribute toward making searching for Technology Assessment Reports (TARs) more cost effective by suggesting an optimum literature retrieval strategy.

Conclusions and results

The median number of sources searched per TAR was 20. Six sources (CCTR, DARE, EMBASE, MEDLINE, NHS EED, and sponsor/industry submissions to National Institute for Clinical Excellence) were used in all reviews. Searching the MEDLINE, EMBASE, and NHS EED databases yielded 87.3% of the clinical effectiveness studies and 94.8% of the cost-effectiveness studies, rising to 98.2% when SCI, BIOSIS, and ASCO Online and 97.9% when SCI and ASCO Online, respectively, were added. The median number of sources searched for the 14 TARs that included an economic model was 9.0 per TAR. A sensitive search filter for identifying non-randomized controlled trials (RCT) retrieved only 85% of the known sample. In searching for non-RCT studies we recommend searching for the intervention alone and then scan records manually for those that look relevant.

Recommendations

Searching databases beyond the Cochrane Library, MEDLINE, EMBASE, and SCI (plus BIOSIS meeting abstracts) was seldom effective in retrieving additional studies for the clinical and cost-effectiveness sections of TARs (apart from reviews of cancer therapies, where searching the ASCO database is recommended). A more selective approach to database searching would make the TAR process more efficient. Searching non-database sources appears to be a productive way to identify further studies.

Methods

All sources used to search for clinical and cost-effectiveness studies were recorded. All studies in the clinical and cost-effectiveness sections of the TARs were identified, and their characteristics recorded. Each was also classified by publication type, and checked to see whether it was indexed in the following databases: MEDLINE, EMBASE, and then either the Cochrane Controlled Trials Register (clinical effectiveness studies) or the NHS Economic Evaluation Database (cost-effectiveness studies). Any study not found in at least one of these databases was checked to see whether it was indexed in the Science Citation Index (SCI) and BIOSIS, and the American Society of Clinical Oncology (ASCO) Online if a cancer review. Any studies still not found were checked to see whether they were in other databases.

Further research/reviews required

Prospective studies of many topics to investigate the effectiveness of extended searches in identifying extra studies. Testing the generalizability of findings from this study in an international context by comparative analysis on TARs from other INAHTA agencies. Assessing the quality of search strategies used in systematic reviews. Developing and testing search filters to retrieve different types of non-RCT studies. A followup study to find the proportion of unpublished drug company studies that are eventually published, and whether the conclusions of the published versions differ from the commercial in confidence versions.

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