Supplementary searches of PubMed to improve currency of MEDLINE and MEDLINE In-Process searches via OvidSP

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BACKGROUND

When conducting comprehensive literature searches for systematic reviews of health care interventions one bibliographic database is almost always included - MEDLINE. MEDLINE content can be searched via several search interfaces, the majority of which are provided by fee-based subscriptions (e.g., OvidSP, EBSCO or ProQuest), although it can be accessed for free using PubMed. Many Information Specialists would choose to search using sophisticated interfaces (usually fee-based) that enable the design of complex search strategies. PubMed has more limited search capabilities, for example proximity searching is not possible and truncation is limited to 600 variants. However, 2% of PubMed records are not found in MEDLINE,[1] including ahead-of-print articles that are not yet available in MEDLINE or even MEDLINE In-Process. It is the "ahead-of-print" citations that precede an article's final publication that are of particular interest to this investigation.[2]

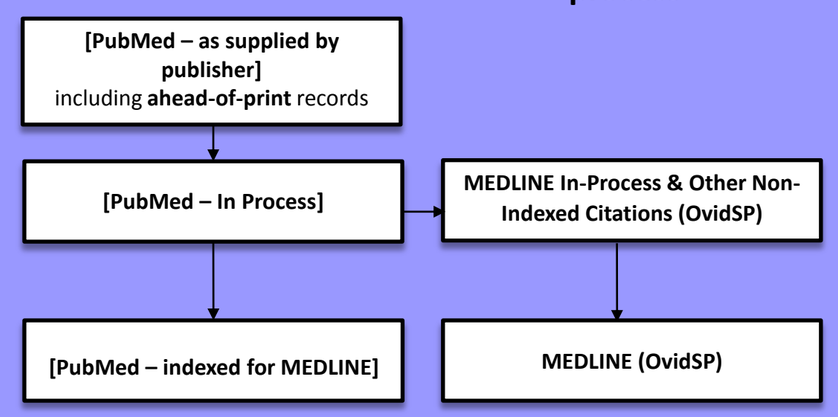
OBJECTIVE

To investigate whether conducting a supplementary search of PubMed in addition to the main MEDLINE (OvidSP) search is worthwhile.
To ascertain whether this PubMed search can be conducted quickly and if it retrieves unique, recently published and ahead-of-print studies that are subsequently considered for inclusion in the final review.

METHODS

Searches of PubMed were conducted after MEDLINE (OvidSP) and MEDLINE In-Process (OvidSP) searches had been completed for two recent reviews.[3,4] The MEDLINE (OvidSP) search strategies were not translated verbatim to run in PubMed. Due to different levels of functionality in search interface, exact translation was not feasible; and in this instance the objective was not to duplicate searches, rather to supplement them. Search strategies were simplified but retained the original conceptual structure as the MEDLINE (OvidSP) strategy. The PubMed strategy used phrase searching predominantly. The searches were limited to records ***not*** in MEDLINE or MEDLINE In-Process, using the following limit:

(pubstatusaheadofprint OR publisher[sb] OR pubmednotmedline[sb])



RESULTS

- The PubMed search for one recent review[3] identified an additional 121 records of which 75 were ahead-of-print records (the remaining 46 records are not currently indexed in MEDLINE). The search itself was not time consuming: the strategy was short, consisting simply of the concept 'prostate cancer' combined with an RCT filter, and was quickly adapted to run in PubMed. Reviewer screening took approximately 30-40 minutes and two studies were ordered for checking. One study was excluded after full text screening,[5] and one study was included in the final review.[6] The included study was added to PubMed on 2014/03/04, but only moved to in-process status a month later on 2014/04/03.

- The second recent review[4] search retrieved 44 unique records, and 27 of these were ahead-of-print records. The PubMed strategy was straightforward to translate as it was relatively short consisting of free-text terms. One article was ordered and included in the final review.[7] This article was added to PubMed on 2014/01/15 (EDAT). At the time of writing (5 June 2014), it has yet to reach in-process status, and is still not available in MEDLINE (OvidSP), MEDLINE In-Process & Daily Update (OvidSP) or Embase (OvidSP).

CONCLUSION

- Supplementary PubMed searches identify additional unique records with potential studies for inclusion in the final review.

- Searching PubMed for studies unavailable elsewhere is worthwhile, and improves the timeliness of the final review. It may also be worth establishing search alerts in PubMed until final publication of a review.

FURTHER INVESTIGATION

- Further supplementary PubMed searches will be conducted, and findings reported.

- An investigation into how long it takes for a record to move from entry into PubMed to in-process will be undertaken by randomly selecting ahead-of-print records and following them over time. A selection of ahead-of-print records from major journals may also be followed e.g., BMJ, JAMA, Lancet.

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