

# Improving search efficiency by limiting searches for diagnostic studies to Medline and EMBASE: an exploratory study



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## What is the issue?

- Increasing desire to improve search efficiency
- Evidence that prioritising databases with a well designed search strategy may be an alternative to traditional, multi-database searches<sup>1</sup>
- It is proposed that Medline and Embase may be the most fruitful sources of evidence for diagnostic studies
- We wanted to assess how many studies, included in diagnostic reviews, could be found in Medline and Embase

## What did we do?

- Seven SchARR diagnostic reviews as case studies
- Examined how many included studies were identified through searching Medline/Embase
- Examined how many included studies were indexed in Medline/Embase but were not identified by searches
- Compared Medline and Embase in terms of records unique to each database
- Examined the source of all of the included studies not identified by Medline or Embase

## What did we find?

The seven case studies included 259 unique papers

Indexed in Database → Medline (71-100% papers indexed)  
Embase (76-100% papers indexed)

Retrieved by Searches → Medline (60-100% papers included)  
Embase (49-78% papers included)

Not indexed in Medline or Embase → 13 papers (5%)

Studies unique to Medline → 10 papers  
Studies unique to Embase → 14 papers

Source of papers not retrieved\* via Medline or Embase → Web of Science (13),  
CINAHL (1), BIOSIS (3)  
Google (1), PubMed (1)  
Hand search (16), Personal contact (4), Unknown (7)

Search Strategies → Databases searched (Range 7-9)  
Length of search\*\* (51-88 lines)

\* Papers may have been indexed but not retrieved  
\*\* Not available for all studies

## Summary

- Majority of included papers were indexed in Medline and Embase
- Some databases e.g. Cochrane Library databases did not provide any unique papers to the reviews
- A “perfect” search could potentially be limited to a smaller number of databases

## Limitations?

- Studies undertaken over ten year period – changes in database protocols.
- Varying reporting of search strategies in reports – better reporting needed.

## Where next?

- Critique of less successful search strategies – filters, terms etc.
- Full paper submission in 2014
- Testing in additional diagnostic studies

### References and Correspondence

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1. Beyer, F. R. and Wright, K. (2013), Can we prioritise which databases to search? A case study using a systematic review of frozen shoulder management. Health Information & Libraries Journal, 30: 49–58. doi: 10.1111/hir.12009