

Searching the maze of literature

QMed Knowledge Foundation

Note: This hand out is a quick guide or a ready reckoner covering the lecture. Please check out a web based guide at <http://ls.qmedkf.org.in> .

Classification of Information Resources

Type I resources:

- Resources that cover background or factual information: Examples: Textbooks, handbooks and manuals, dictionaries, drug references sources

Type II resources:

- Resources that cover latest or past research. Examples:
Published resources: Journals and journal databases (PubMed & EMBASE)
Unpublished resources: Trials in progress, Conference abstracts

Type III resources:

Newer types of resources

- Analyze or summarize or comment on Type II resources.
 Typical examples: systematic reviews, meta-analyses, evidence summaries

Searching the maze of literature in PubMed

Understand these & apply the concepts to many other medical databases

Tip 1: When you search using "keywords", you get references that will

1. Be about your search terms
OR
2. Just contain your search terms

Tip 2: Specify where you want your search terms to appear

- a. **Search for - Wilson[author]**
 Results: Wilson is the author of all. No references on Wilson's disease
- b. **Search for - spinal manipulation[title]**
 Results: The words spinal manipulation appear in the title of every article and so, are likely to be very relevant
- c. **Search for - spinal manipulation [tiab]**
 Results: "spinal manipulation" will appear in the title or in the abstract or both areas of the article and are likely to be relevant
- d. **Search for - Drugs[jour]**
Results: References from the journal Drugs

Tip 3: Combining searches using AND, OR, NOT (In capitals)

AND – indicates compulsory. Search for

Wilson[author] AND antibiotics[title]

Result: Every article is written by Wilson and will have the word *antibiotics* in the title

OR – means “any or all”. Search for

Wilson[author] OR Thomas[author]

Result: Articles written by either author separately or both together

NOT – means eliminating. Search for

Asthma[title] NOT allergy[title]

Result: Articles where asthma appears in the title, but the word allergy will not appear in the title

Tip 4. Searching for articles about your topic with MeSH

Every reference in PubMed is “described by” or “indexed with” very special keywords called “MeSH terms”. MeSH stands for “Medical Subject Headings”.

Remember the following about MeSH terms.

- You can add [mesh] after your search term, just like you add [title] – as described in Tip 2.
- So, searching for Diabetes Mellitus, Type 2[mesh] will get you references **about** Type 2 diabetes mellitus (*even if these words are not present in the title or abstract*)
- All terms are **not** mesh terms. To check whether your topic is a mesh term, search the Mesh database
- If you locate your term in the Mesh Database, click “Add to search builder”. Then click “Search PubMed”. The page will refresh, and display PubMed search results for your term

MeSH searches

You can also do one or more of the following:

- a) Choose one or more subheadings (Click the relevant check boxes)
- b) Restrict to “major coverage” of the topic in your results, by selecting the check box “Restrict to Major focus”
- c) Exclude articles on “lower terms”, by selecting the check box, “Do not include terms below this term”. (PubMed will by default automatically include lower terms)

Make one or more of these choices and then use the steps “add to search builder” and search PubMed

- d) If you need to combine more MeSH terms, search for them and repeat the steps above.
- e) When you do not find a mesh term for your topic, use [title] or [tiab] instead
Example: lidocaine[mesh] AND pain[mesh] AND superior[tiab]
 (“superior” is not a mesh term)

Tip 5: Verifying references

Use "Single Citation Matcher" – (the link is available on the PubMed home page on the lower half), to verify any incomplete or incorrect references that you may have to verify. Usually this happens when:

1. You have noted down a reference, but forgotten some detail/s
2. You see a cross reference from a journal article or a submission, which turns out to be incomplete or incorrect

Searching for Evidence – free resources

The Cochrane Library – www.thecochranelibrary.com.

The Cochrane Library has six databases.

- The Cochrane Database of Systematic Reviews: the gold standard for evidence. (Free full reviews in India)
- DARE – Other systematic reviews published in journals
- CENTRAL – a comprehensive database of clinical trials

The other three are not highly relevant for clinical queries

PubMed – Clinical queries

Available as a link from the PubMed home page, any search performed here filters PubMed results to evidence based queries. Remember to use MeSH terms and text words as explained earlier. The filters are explanatory

PubMed Health

A new resource and covers Reviews, Summaries and some Type I resources as well. There is also a good explanation of what constitutes clinical effectiveness

Searching for Evidence – paid resources

UpToDate – www.uptodate.com and **Dynamed** <http://dynamed.ebscohost.com/>

- Two well known subscription based Evidence summary resources. Summaries - written by experts who base them on available articles of varying Levels of Evidence
Authors also grade the evidence and recommend what you can do just now for the disease/condition for a patient

Other Databases & Journals

- BMJ – Clinical Evidence - <http://clinicalevidence.bmj.com/>
- BMJ – Evidence based journals - <http://group.bmj.com/products/journals>
- JAMA Evidence – <http://jamaevidence.com/>
- ACP Journal Club – Part of Annals of Internal Medicine

Conclusion

This resource sheet comprises the core background knowledge you need to search the literature and search for evidence. We recommend going through the search instructions in each of these databases and/or attend training workshops for more.