**Conducting a literature search**

Choosing search engines/databases:

Relevant databases offered through Western libraries: [Click here for the Western Family Medicine Program Guide](http://www.lib.uwo.ca/programs/familymedicine/)

Databases are subject-specific with different scopes. Each database indexes different journals. The same search strategy in two different databases will deliver different articles. Choose your database wisely to ensure relevant articles to your topic. If you have any questions regarding search strategies, you can direct them to Shawn Hendrikx ([shendri4@uwo.ca](mailto:shendri4@uwo.ca)).

Choosing what source you need:

1. Books are useful for finding background, widely accepted knowledge or comprehensive topic summaries. Search for books using the Western Library catalogue, internet sites, databases (certain databases can limit to books).
2. Journal articles are the best source for up to date information. Search for articles using databases [PubMed, Google Scholar, Scopus, etc]. Further, use the reference list from important papers or narrow in on an expert author.
3. Grey Literature is an important yet overlooked key resource (e.g. government reports, public health websites) Search for grey literature using internet sites or databases ([list of repositories](http://www.ophla.ca/pdf/Public%20Health%20Grey%20Literature%20Sources.pdf)).
4. Use primary (author completed it i.e. journal articles) and secondary sources (review of one or more studies i.e. book or review article)

Identify your literature search question/statement:

Clearly write out your question. This can be your PICOT (population, intervention, comparison, outcome, time) statement or a search that will inform your background.

Identify concepts:

Identify all concepts within your question. Next, identify common synonyms to describe each concept (e.g. family medicine / primary care). Some databases use controlled vocab or MeSH terms (PubMed). Use this function to conduct or inform your search. E.g. [Search for flu vaccine within NLM libraries.](http://www.ncbi.nlm.nih.gov/mesh/?term=flu+vaccines) You can see how the term is grouped and how can be separated into categories. I might use flu vaccine MeSH term in my search or use for synonyms or accurate results.

Be aware of truncation rules [Review in the database help section for the rules as each database is different]:

Be familiar with database truncation, i.e. an asterisk in PubMed is used to search for root words. E.g. assess\* receives results for assessment, assessing, assess, assessor, etc. Be aware of alternate spelling e.g. Pediatrics vs. Paediatrics

Boolean Logic [Review in the database help section for the rules as each database is different]:

Different databases use different methods to relate search terms. For PubMed:

“AND” e.g. apples AND oranges. This search finds articles that have both terms.

“OR” e.g. apples OR oranges. This search finds articles with only apples, articles with only oranges, articles with apples and oranges.

“NOT” e.g. apples NOT oranges. This search will find articles that discuss apples but only if they don’t discuss oranges.

Choosing your limits [Review in the database help section for the rules as each database is different]:

Get accuracy by narrowing parameters e.g. Types of studies 🡪 reviews? RCTs? ; publication year 🡪 Last 10 yrs? 5 yrs?

Example carried out in PubMed:

1. Identify your lit search question: What factors affect the acceptance rate of HPV vaccine in girls (9-15)?
2. To find relevant lit, identify the main concepts: ‘Acceptance’ ‘HPV vaccine’ ‘Girls’
3. Search each line below separately [each search will be saved as you move forward]. Think of more synonyms?

‘Acceptance OR refusal OR compliance OR participation’

‘HPV vaccination\* OR Gardasil OR Cervarix OR Human papillomavirus vaccine’

‘Girl\* OR adolescent\* OR child\*’

1. Combine search sets: Go to Advanced. Click add to builder to combine the four concepts and synonyms
2. Evaluate results / modify search strategy [add synonyms from results? Results filled with construct don’t want?]
3. Apply Limits e.g. Publication year: Last 5 years ; Age group 🡪 girls aged 9-15

**Note: You might need to revise and rerun your search strategy multiple times.**

For help with reference management, look to [Citing and Writing tools](http://www.lib.uwo.ca/essayhelp/index.html) to find citation management software.

Other helpful links:

[Family Medicine website - Library Resources](https://www.schulich.uwo.ca/familymedicine/postgraduate/current_residents/curriculum/academic_program/resident_project/library_resources.html)

[Western Libraries Research Skills Workshops](http://www.lib.uwo.ca/researchskillsworkshops/index.html)

[The Western Libraries website](http://www.lib.uwo.ca/) – use the Off-Campus login to access library resources when you’re not on campus. This way, you’ll have Western’s access to databases which will help to avoid paywalls