Welcome to the Health Sciences Library Online Tutorial Series.

In this two part introductory video we will explore the core concepts underlying the use of health databases at McMaster.

Part 1 will provide a general introduction to databases and examine strategies for developing effective search terms.

The first question we want to answer is "What is a database?".

Databases collect information from a wide variety of sources, with a strong focus on academic journal articles.

Typically, databases do not collect the documents themselves but, instead, extract important bibliographic information including titles, authors, and article abstracts and compile this information into records within a searchable online catalogue.

In a field like the Health Sciences, databases are vital to your research success. Instead of manually flipping through the pages of academic journals, or filtering through a pile of non-academic results in Google, databases allow you to simultaneously search thousands of publications with a click of a button.

Another benefit of using databases over online search engines is that their content is typically limited to a specific discipline.

At the Health Sciences Library we subscribe to a number of different databases, including:

- Medline for life sciences and biomedical information;
- CINAHL for nursing and allied health literature;
- and the Global Health database for, you guessed it, global health publications.

Find the appropriate database for your discipline at hsl.mcmaster.ca.

Databases are designed to make your search more systematic. One of the ways they accomplish this is through their handling of search terms.

Understanding the difference between subject headings and keywords will help make your search more effective.

The process of creating database records requires indexers to identify the key concepts covered in a given article and include these terms in a searchable field for easy retrieval.

A common problem that arises from assigning these concept terms is that human language allows for numerous ways to describe the same concepts.

An article that discusses flu shots, for example, could be assigned any number of terms including: flu vaccines; inoculation; immunization.
To overcome this, databases generally accept a single definitive term for representing a given concept. And this is called a subject heading.

In the Medline database, for example, all articles about flu shots will be assigned the subject heading: influenza vaccines.

It is important to remember that different databases may use slightly different subject headings to represent the same concept. So switching between databases may require a little bit of translation.

Thankfully, most databases offer the ability to search or browse through their subject headings to find the concept you are trying to represent.

Subject headings will be arranged in either a hierarchical list with broader terms appearing above narrower ones, or listed alphabetically from A-Z.

Sometimes, the concept you are trying to represent may not easily be pinned down by a single subject heading. In these cases you can supplement your search with keywords like you'd use in a standard search engine.

Keyword searching is best used when trying to broaden your search with synonyms or more colloquial, non-scientific language.

Sticking with the flu shot example, imagine we were interested in the H1N1 strain of influenza, commonly called swine flu. Swine flu does not exist as a subject heading, but we can imagine an author using this terminology and we want to be sure that such articles are included in our results.

Searching for swine flu as a keyword will look at the titles and abstracts of the articles and return any of those in which the exact term is used, thus expanding our results set.

Since keyword searching finds only exact instances of the term searched, it is important to consider all the different forms your search word could take.

If we are performing a keyword search for "vaccination", it is reasonable to assume that we'd also be interested in the terms "vaccinate", "vaccine" and "vaccinating", as well as their plural forms.

We can ensure these results by appending an asterisk * to the root word, "vaccin", in a process called truncation. This tells the database that the keyword can be finished in any way, allowing for a more complete retrieval in a single search.

This concludes Part 1 of the Introduction to Database Fundamentals.

You should now have a basic understanding of what databases are, as well as some strategies for developing effective search terms. Move on to Part 2 for a more in depth look at of the unique tools databases employ to make your search more systematic.

Thanks for watching and happy searching!