The basics of searching biomedical databases

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Learning Outcomes

At the end of this workshop you will:

• Be familiar with the difference between using subject headings and keywords when searching.

• Be familiar with the basics of searching databases like CINAHL and PubMed using subject headings and keywords.

• Be able to search these databases and locate evidence to answer PICO questions.
## Agenda

### How to search Cinahl, Medline (Pubmed) and Pubmed Clinical queries

- Search tips

### Demo & hands on

- Searching the databases:
  - Cinahl- Demo
  - Cinahl- Hands on
  - Pubmed - Demo
  - Pubmed - Hands on
  - Google Scholar – Hands on
Searching the Literature - Tips
**Boolean operators**

**AND** = every reference contains **both (or all)** of the search terms specified (smallest no. of results)

**OR** = every reference contains **at least one** of the search terms (largest no. of results)
Documents discuss both Stress AND Anxiety

Documents discuss Stress OR Anxiety
Subject headings vs keywords:

- Subject headings work like building blocks: take one concept at a time and build your search
- Keywords work like the ingredients of a soup: throw in a bunch of concepts and see how it turns out
Subject headings

- **MeSH** – medical - Used in Medline (Pubmed and OVID)
- **CINAHL** – nursing and allied health
- **EMTREE** – Embase (pharma)
- etc...
Subject headings are organized in a hierarchical tree:

- Health Occupations [H02]
  - Acupuncture [H02.004]
  - Allied Health Occupations [H02.010] +
  - Biomedical Engineering [H02.070]
  - Chiropractic [H02.110]
  - Dentistry [H02.163] +
  - Environmental Health [H02.229] +
  - Evidence-Based Practice [H02.249] +
  - Health Services Administration [H02.269]
  - Hospital Administration [H02.309]
  - Medical Illustration [H02.385]
  - Medicine [H02.403] +
  - Mortuary Practice [H02.438]
  - Nursing [H02.478]
    - Evidence-Based Nursing [H02.478.197]
    - Nursing Research [H02.478.395] +
    - Nursing Theory [H02.478.408]
    - Specialties, Nursing [H02.478.676] +
  - Nursing, Practical [H02.495]
  - Nutritional Sciences [H02.533] +
Subject headings cont…

• All synonyms included under one term so all articles about x are found using one subject heading i.e. what is the article about?

• Can usually have more control and limit search more effectively

• Note: many concepts have not been given subject headings
Subject headings cont...

- Subject headings should not be confused with subheadings!
- Subheadings are assigned to each subject heading according to relevance and can be used to limit your search. For example in Cinahl:
Other ways to limit your search

• Add another concept to your search

• Use limits provided by the database such as:
  – Age
  – Date
  – Publication type
  – Language
  – Journal subset

• Use a filter such as Pubmed Clinical Queries
  • TIP: Copy and paste your Pubmed search into the search box
Keywords

• Keywords are words that appear in the text. Does this word appear in the title, or abstract? (resources rarely search full text)

• Author’s terminology - must search each synonym so all articles about x are found using x, y, z, etc.

• Can find concepts not indexed as subject headings i.e. “72 hours”
  – Important: Many concepts must be searched using keywords as they have not been given subject headings
Important Note:

• You will be using keywords to “map” to Subject headings in Cinahl and Pubmed (Medline)

• In other words...
  1. You type in your keyword: cancer
  2. Database suggests the best Subject Heading: neoplasms
Tips for good searching

• Start broad and then narrow search using subheadings and limits if needed

• Save your search history – it can be used to inform a search in another resource
  – key words & synonyms
  – subject headings

• If you have too few results broaden your search by combining Subject Headings AND keywords

• Try search again with a fresh mind
Remember!

• A JGH Librarian is available to provide one-on-one instruction
  – Francesca Frati, local 2438, ffrati@jgh.mcgill.ca
  – Jacynthe Touchette, local 2453, jtouchette@jgh.mcgill.ca

• Tutorials are available 24/7
  – JGH.ca/HSL > Subject Guides or
  – JGH.ca/HSL > Instruction > Workshop presentations & Handouts
THANK YOU!