Advanced Database Searching

Discussion

- Have you used controlled vocabulary (CINAHL Headings or MeSH) when doing literature searches?
- What are some of the challenges you experienced when using controlled vocabulary?
- Did controlled vocabulary ever help you to do a better search?
- Do you have any questions before we begin?

Following today’s session, you should be able to....

- Explain what controlled vocabularies are and why they are important in health sciences literature searching
- Define explode/explosion in the context of controlled vocabularies
- Describe subheadings and when you should and should not use them
- Perform searches for specific concepts using CINAHL Headings
- Perform searches for specific concepts using MeSH in PubMed

Session Agenda

- Controlled vocabulary
  - What is it?
  - Why should you use it?
- CINAHL Headings
  - Demonstration
  - Hands-on Exercises
- MeSH in PubMed
  - Demonstration
  - Hands-on Exercises
- Putting it All Together – Creating a Comprehensive Search Strategy
**What is controlled vocabulary?**

• A list of standard terms used in a database
• Database “indexers” read an article and then add the terms to the record about the article
• When you search the database, you can use the terms to find articles about the concept
• You can even tell the database to find articles whose “Major” topic is that term

**Hand**
The distal part of the arm beyond the wrist in humans and primates, that includes the palm, fingers, and thumb.

**What is controlled vocabulary?**

• Terms are organized into hierarchies that define relationships between terms
• This enables you to search multiple terms at once using “explode”
• Exploding Hand will search for Hand plus all the narrower terms

**Upper Extremity**
Hand
Fingers
Thumb
Metacarpus
Wrist

**What is controlled vocabulary?**

• Terms include subheadings that address specific questions about the term
• You can select specific subheadings
• If you can’t find a term that addresses your specific question, select all

- abnormalities
- analysis
- anatomy and histology
- blood
- blood supply
- chemistry
- complications
- cytology
- diagnosis
- diagnostic imaging
- drug effects
- economics
- education

**What is controlled vocabulary?**

• Controlled vocabularies are built into most scholarly databases

PubMed & All Versions of Medline
Medical Subject Headings
MeSH
CINAHL
CINAHL Headings
CINAHL Subject Headings
CINAHL Descriptors
**Why use controlled vocabulary?**

- Allows you to make your searches more precise
  - Particularly when you use Major and Subheadings
- Finds articles that use unfamiliar terms
  - Ibuprofen would find articles that say Ibumetin
- Enables you search multiple concepts at the same time
  - Explode Neoplasms searches all types of cancer
- Compound headings greatly facilitate searching certain topics
  - Professional-Patient Relations

> *When doing a comprehensive search, you need to use controlled vocabulary and keywords!*

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**CINAHL**

**CINAHL Headings**

- CINAHL Headings is the term used for the CINAHL controlled vocabulary
- Some terms are shared with MeSH while others differ
- Tends to have more patient-focused terms
- Good resource for compound headings-complex topics within nursing

**http://guides.library.duq.edu/nursing-doctoral**

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CINAHL Headings

Explode:
Finds Narrower Terms Under the Heading

CINAHL Headings: Explode

Major Concept:
Finds Articles Primarily About the Subject

CINAHL Headings: Major Concept

Scope:
Provides a brief description of the subject heading

CINAHL Headings: Scope Notes
CINAHL Headings: Subheadings

- Box activates when you select a CINAHL Heading
- If you don’t select individual subheadings, the database searches for all subheadings

CINAHL Headings: Searching the Database

Now You Try It!

As a group or individually, use CINAHL Headings and Subheadings to search one of the concepts below:

- Nurses – employment
- Cardiovascular Diseases – rehabilitation
- Cancer Patients – psychological aspects

Try using Explode and Major Concept to see how they affect the searches!

Want More Information?

Gumberg Library has produced a comprehensive guide on using CINAHL Headings. Check it out here:

1. Go to: http://guides.library.duq.edu/healthsciencelitsearch
2. Click Subject Headings in CINAHL
PubMed

MeSH Terms

- MeSH stands for Medical Subject Headings
- Added to database records by the National Library of Medicine (PubMed & all versions of Medline)
- Organized in a hierarchical structure
- MeSH terms are revised annually

MeSH Terms

http://guides.library.duq.edu/nursing-doctoral

Open the MeSH Database & Search for Term
MeSH Record

- **Major Topic**
  - Bullying
  - Port Catheter
  - Nursing Education

- **Subheadings**
  - Workplace Bullying
  - Bullying, Workplace
  - Cyberbullying

- **Definition**

PubMed defaults to explode (opposite of CINAHL!)

When you enter these terms, the database finds the MeSH Term

MeSH Record – Tree Structure

- **Major Topic**
  - Bullying
- **Subheadings**
  - Workplace Bullying
  - Bullying, Workplace
  - Cyberbullying

Demonstration – You Follow Along

- Bullying
- Port Catheter
- Nursing Education

Now You Try It!

As a group or individually, use MeSH and Subheadings to search one of the concepts below:

- Research Ethics - history
- Cardiovascular Complications in Pregnancy – nursing
- Find the term for Nursing Specialties, then see if you can find a specialty that interests you
- Can you find a MeSH Term for Cancer Patients?

Try using “Restrict to MeSH Major Topic” and “Do Not Include MeSH Terms found below...” to see how they affect the search!
Want More Information?

Gumberg Library has produced a comprehensive guide on using MeSH. Check it out here:

1. Go to: [http://guides.library.duq.edu/healthsciencelitsearch](http://guides.library.duq.edu/healthsciencelitsearch)
2. Click MeSH in PubMed

Putting it All Together

Comprehensive Search Strategy

1. Write an answerable research question using PICO or a similar format
2. Choose databases that are likely to address your question
3. Identify alternate ways to describe your PICO terms including:
   a. Keywords
   b. Controlled vocabulary terms for each individual database
4. Create searches in each database using AND & OR
5. Assess your searches, and revise them if necessary (remember, you can eliminate portions of your PICO search when necessary)
6. Choose relevant articles and store them in EndNote in “Groups”

Group Case Study

Work together to employ the “Comprehensive Search Strategy,” starting with a poorly formed “question:”

Importance of hand washing in hospitals.

You can use either CINAHL or PubMed.

Be prepared to discuss your answers.
1. Write an answerable research question...

2. Choose databases that are likely to address your question

3. Identify alternate ways to describe your PICO terms including...keywords, controlled vocabulary:

4. Create searches the database using AND, OR, and Parentheses
5. Assess your searches, and revise them if necessary...

6. Choose relevant articles and store them in EndNote in “Groups”

Review & Questions

Following today’s session, you should be able to....

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Health Sciences Literature Searching Guide

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