MIDW: KNOWLEDGE SYNTHESIS LIBRARY SKILLS WORKSHOP

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LEARNING OBJECTIVES

1. Know where to find more information about literature review or systematic review types of methodologies

2. Know which sources you need to use for your review

3. Acquire skills to conduct a structured and replicable search strategy

4. Gain some tips on how to manage the process (come see us for more!)
COMMON KNOWLEDGE SYNTHESIS METHODS

- **Literature reviews** follow less formal and systematic methods but aim to find, evaluate, and summarize the literature on a topic, usually as part of another study or as part of a publication/thesis/article.

- "A **Systematic Review** attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question.

  Researchers conducting Systematic Reviews use *explicit methods* aimed at minimizing bias, in order to produce more reliable findings that can be used to inform decision making.” Cochrane Handbook for Systematic Reviews of Interventions: [http://handbook.cochrane.org](http://handbook.cochrane.org)

- Because a systematic review synthesizes evidence (often from randomized controlled trials), there needs to be a critical mass of evidence to draw from. A **scoping review** is better when there is little existing research.

- Systematic reviews can take months. **Rapid review** is an emerging methodology which aims for quicker answers. Downside: less rigorous.
RESOURCES

- Systematic Review Methodologies Guide from UBC Library
- Literature Review Guide from UBC Library
- HLWIKI Overview of Scoping Reviews
- Searching Videos & Tips
SYSTEMATIC REVIEW PROCESS

Stage 1: Planning the Review
Step 1 – Forming a review panel
Step 2 – Mapping the field of study
Step 3 – Producing a review protocol

Stage 2: Identifying and evaluating studies
Step 4 – Conducting a systematic search
Step 5 – Evaluating studies

Stage 3: Extracting and synthesizing data
Step 6 – Conducting data extraction
Step 7 – Conducting data synthesis

Stage 4: Reporting
Step 8 – Reporting the findings

Stage 5: Utilizing the findings
Step 9 – Informing research
Step 10 – Informing practice
DEVELOPING A SEARCH STRATEGY

- Clarify the search topic using PICO, PEO, or another conceptual framework
- Identify the main concepts
- Develop a range of possible search terms for each concept
- Build a search strategy based on the possible search terms

Most often used framework is PICO

Others: PEO, SPICE, PESICO, SPIDER, ECLIPSE …
WHERE TO SEARCH?

- CINAHL
- Medline (Ovid or PubMed)
- Embase
- Web of Science
- Grey Literature sources
  such as government reports or stats, dissertations, organizations, guidelines, etc.
- Citation chaining
- Experts
CINAHL

Coverage of nursing and allied health literature from 1982 to present, including most midwifery journals.

Includes over 1,250,000 records.

Indexes 2700+ journals, as well selected books, pamphlets, dissertations, audiovisuals in nursing, allied health, consumer health, biomedicine, alternative therapy, health sciences librarianship.
# MeSH vs. Keywords

<table>
<thead>
<tr>
<th>MeSH/Subject Headings</th>
<th>Keywords</th>
</tr>
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<tbody>
<tr>
<td>• Time delay: Established concepts (Diabetes, Heart Disease)</td>
<td>• Newer concepts (eHealth)</td>
</tr>
<tr>
<td>• Conservative Bias: Core biomedical concepts (diseases,</td>
<td>• Boundary-crossing topics (psychosocial and humanities concepts)</td>
</tr>
<tr>
<td>drugs &amp; chemicals, anatomy)</td>
<td>• New parts of medicine (Rehabilitative Sciences, Population and Public</td>
</tr>
<tr>
<td>• Traditional parts of medicine (Surgery, Immunology)</td>
<td>Health, etc.)</td>
</tr>
<tr>
<td></td>
<td>• New Articles (not yet indexed)*</td>
</tr>
<tr>
<td></td>
<td>• Errors in indexing</td>
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*For sensitive searches use a combination of MeSH and keywords*
KEYWORD STRATEGIES

1. **synonyms** to describe concept.

2. Join synonyms with **Boolean operator: OR**
   e.g. labour OR childbirth

3. **Truncation:** *
   e.g. lactat* = lactate, lactation, lactating

4. **Wildcards:** #
   e.g. labo#r

5. **Adjacency operator: n**
   e.g. (labour OR labor) n3 (obstetric* OR birth OR childbirth OR pregnancy) = the words labour or labor are within 3 words of the words obstetric*, birth, childbirth, or pregnancy
# KEYWORD STRATEGIES

**Adjacency operator:** \textbf{n}

Searches these words in relationship to each other

**Truncation:** \textbf{*}

**Boolean OR operator**

<table>
<thead>
<tr>
<th></th>
<th>S1 OR S2</th>
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<tbody>
<tr>
<td>S3</td>
<td>labo#r n3 (obstetric OR birth OR childbirth OR pregnancy or vaginal or caesarian)</td>
</tr>
<tr>
<td>S1</td>
<td>DE &quot;Birth&quot; OR DE &quot;Caesarean Birth&quot; OR DE &quot;Natural Childbirth&quot; OR DE &quot;Premature Birth&quot;</td>
</tr>
</tbody>
</table>
Find Subject Headings

Use "Clear" to refresh search bar between searches

Add search lines in "Search History" and by using +

Create account to save articles to folders, save searches, and create alerts
Limits

- Limit by language, gender, age, publication date etc.
- Apply at the end of the search.
- May be used in literature reviews, or date limits may be used in rapid reviews
- Otherwise, use search filters such as the University of Alberta Library’s Indigenous Peoples filters
CINAHL – COMPREHENSIVE SEARCHING PROCESS

1. Create an account
2. Search subject headings for your 1st PICO concept
3. Search keywords for your 1st PICO concept
4. Combine your 1st concept terms with OR
5. Assess your terms by looking at the article records and make edits as needed
6. Search for your 2nd concept (repeat 1-5 above)
7. Add both concepts together with AND
8. Search for your 3rd concept if needed (repeat 1-5 above)
9. Apply a limit if appropriate
10. Save your search, take an image of the search, and set up alerts
ADDITIONAL SEARCH TOOLS

Saving searches & creating alerts
• Save CINAHL search as “Permanent”
• When your search is finalized, save it again as an “alert” to get updates about new articles published on the topic

Searching other databases
• Reproduce your search in another database (Medline Ovid)
  • Find the relevant subject headings for that database
  • Copy and paste the keywords but then adapt them to the new database

  Eg. Recurrent **N3** (miscarriage* OR abortion* OR pregnancy loss*) in CINAHL becomes Recurrent **adj3** (miscarriage* OR abortion* OR pregnancy loss*) in Medline Ovid
GUIDES FOR MORE INFORMATION

- Systematic Review Methodologies Guide from UBC Library
- Literature Review Guide from UBC Library