BUILDING SEARCH STRATEGIES & FINDING RELEVANT RESEARCH

MIDW 110 Critical Appraisal of the Literature

HELEN BROWN, UBC HEALTH SCIENCES LIBRARIAN

HELEN.L.BROWN@UBC.CA | 604-822-4442
LEARNING OBJECTIVES - BY THE END OF THE CLASS YOU WILL HAVE …

• Translated your PICO question into searchable keywords
• Searched at least one pre-appraised information source (eg. Cochrane) and noted how well your chosen search terms worked
• Understand the difference between keywords and subject headings
• Created an account in PubMed
• Practiced searching in PubMed and assessing the effectiveness of your search terms
• Identified any relevant subject headings in PsycINFO (or CINAHL)
• Built a search using both keywords and subject headings (and applied any relevant limits)
6 ELEMENTS OF A GOOD SEARCH
(hint: for consideration in your assignment)

- Use PICO format for clinical questions.
- Search concepts one at a time to be combined later.
- Select appropriate keywords *and* subject headings for key PICO elements.
- Truncation/proximity operators used appropriately.
- Applying limits at the very end of the search.
- Verify results are relevant to your research question.
# PICO REVIEW EXAMPLE

In people suffering from urinary tract infections, can cranberries help to prevent recurrence?

<table>
<thead>
<tr>
<th></th>
<th>Patient / population / problem</th>
<th>UTIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Intervention / exposure</td>
<td>Cranberries</td>
</tr>
<tr>
<td>C</td>
<td>Comparison</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Outcome</td>
<td>Prevent or decrease recurrence</td>
</tr>
</tbody>
</table>
### PRACTICE PUTTING A CLINICAL QUESTION INTO PICO

<table>
<thead>
<tr>
<th>Patient or Problem</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td></td>
</tr>
</tbody>
</table>

Express your PICO elements in the form of a well-built PICO question (i.e., among P does I versus C affect O?)
PRE-APPRAISED RESOURCES

Exercise #1
• Go to SOGC’s Practice Guidelines
• Search or browse for a guideline, paying attention to their coding for currency
• Find it in UBC Library’s JOGC subscription (online or print)

Exercise #2
• Search a pre-appraised source from the “Resources” or “Systematic Review” boxes. (I suggest searching a Cochrane resource)
What is PubMed?

PubMed is the premier biomedical database with over 26 million journal articles in the life science. The Medline database makes up the majority of the content in PubMed.

What is a database?

Databases are “large collection of data organized especially for rapid search and retrieval”¹ Databases are composed of metadata – data about the article such as title, author, abstract. When we search in Medline we are only searching the metadata – *NOT the full text of the article.*

We search the database fields (metadata), not the actual full text article.
DEFINITION: Subject Headings

• **Controlled vocabulary** indexing the article’s content. Subject specialists index the article by tagging it with controlled vocabulary from a standardized list.

• Organized in a **hierarchical structure** which allows for searching at various levels of specificity.

• Articles are **indexed to the most specific subject heading** (in Medline called MeSH) e.g. Infant, Extremely Premature
KEYWORD STRATEGIES

Why use keywords?

• It takes a few months for articles to be indexed with MeSH.

• Sometimes an appropriate subject heading or MeSH is not available.

• The concept is very new to literature. Keywords find the older literature e.g. Zika Virus (2016).

• Indexes errors/omissions.

• Completeness of your search.
Approaches to improving the contribution of the nursing and midwifery workforce to increasing universal access to primary health care for vulnerable populations: a systematic review.

Dawson AJ, Mkwone AK, Whelan A. 3.4.5

Abstract

BACKGROUND: Despite considerable evidence showing the importance of the nursing and midwifery workforce, there are no systematic reviews outlining how these cadres are best supported to provide universal access and reduce health care disparities at the primary health care (PHC) level. This review aims to identify nursing and midwifery policy, staffing, education and training interventions, collaborative efforts and strategies that have improved the quality, quantity and relevance of the nursing and midwifery workforce leading to health improvements for vulnerable populations.

MeSH strategy searches here
Keyword strategy searches here, but finds only the exact terms specified if present.
SEARCH IN PUBMED

Demo

• Search for UTI cranberry juice
• Search details
• Modify search
• Save search
Limit your search by article type, date, or population.

Suggested articles with your terms in the title

Click here for more filters

How did PubMed interpret your search?
PICO & PUBMED

Exercise:

1. Translate your PICO question into search terms using the handout or a similar sheet

2. Search in PubMed
   Create an account
   Save a search or article to a folder
PSYCINFO

Covers journals in the field of psychology and the psychological aspects of related disciplines, including medicine and nursing.

Contains more than 4 million records

Useful for research questions dealing with any psychological aspect of health or health care
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. **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: n
Searches these words in relationship to each other

Truncation: *

Boolean OR operator
FILTERS

- Limit by language, gender, age, publication date etc.
- Apply at the end of the search.
PSYCINFO EXERCISE

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
6. Search for your 2nd concept (repeat above)
7. Add both concepts together with AND
8. Apply a limit
9. Save your search
LEARNING OBJECTIVES - BY THE END OF THE CLASS YOU WILL HAVE …

• Translated your PICO question into searchable keywords
• Searched at least one pre-appraised information source (eg. Cochrane) and noted how well your chosen search terms worked
• Understand the difference between keywords and subject headings
• Created an account in PubMed
• Practiced searching in PubMed and assessing the effectiveness of your search terms
• Identified any relevant subject headings in PsycINFO (or CINAHL)
• Built a search using both keywords and subject headings (and applied any relevant limits)
GETTING HELP

Helen L. Brown
helen.l.brown@ubc.ca | 604-822-4442

Woodward Library Reference Desk
Mon.- Fri. 9-5, Sat. 2-5
wd.ref@ubc.ca | 604-822-4440

AskAway – Chat with librarians from across BC
Library homepage → Ask Us!