LITERATURE REVIEWS

ROBIN PARKER & MELISSA HELWIG OF DALHOUSIE LIBRARIES – WK KELLOGG HEALTH SCIENCES LIBRARY
TYPES OF LITERATURE REVIEWS
CAN YOU NAME A FEW?
TYPES OF LITERATURE REVIEWS

- Critical review
- Literature review
- Mapping review/systematic map
- Meta-analysis
- Overview
- Qualitative systematic review/
  Qualitative evidence synthesis
- Rapid review
- Scoping Review
- Systematic Review
- Realist Synthesis

See: Grant & Booth (2009)
LITERATURE REVIEW

- Generic Term:
  - Published Materials that examine recent or current literature.
  - Generally cover a wide range of subjects at various levels of completeness and comprehensiveness.
  - May or may not include research findings.

- Non-systematic summary of the research often a subjective overview on a topic. A general term for all attempts to obtain and synthesize the results and conclusions of two or more publications on a given topic.

- Can be similar to a narrative review.

Grant & Booth (2009)
GENERAL STEPS IN A LITERATURE REVIEW
WHOOPS! THE STEPS ARE OUT OF ORDER

- Synthesizing the results
- Selecting your sources
- Running your search
- Applying practical screening criteria
- Choosing search terms
- Selecting research questions
- Applying methodological screening criteria
STEPS IN THE RESEARCH LITERATURE REVIEW

1. Selecting research questions
2. Selecting your sources
3. Choosing search terms
4. Running your search
5. Applying practical screening criteria
6. Applying methodological screening criteria
7. Synthesizing the results
RESEARCH QUESTION

REMINDER
How questions influence search results

Featherstone (2011)
SELECTING YOUR SOURCES
WHERE TO SEARCH

- **Bibliographic Databases**
  - PubMed, EMBASE, Cochrane, PsycINFO, CINAHL, ERIC, Scopus, Web of Science, Campbell Collaboration (Start here: Med Ed Subject Guide)

- **Websites**
  - Best Evidence in Medical and Health Professions Education
  - Associations, Organizations & Government
    - WHO, Health Canada, CMA, etc.

- **Other - “Grey Literature”**
  - Dissertations & Theses, Conference Proceedings, Web search engines
CHOOSING SEARCH TERMS
SELECTING YOUR SEARCH TERMS

1. Select your database
2. Break your question into concepts
3. Identify subject headings for each concept
4. Identify text words for each concept

- Tips:
  - Use a “target article” to help identify search terms
  - Use a worksheet to keep track of your terms
Example: Does hydration decrease incidence of delirium at the end of life?

<table>
<thead>
<tr>
<th>Concept #1</th>
<th>Concept #2</th>
<th>Concept #3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Heading:</strong></td>
<td><strong>Delirium/</strong></td>
<td><strong>exp Terminal Care/</strong></td>
</tr>
<tr>
<td>exp Fluid Therapy</td>
<td></td>
<td>exp Terminal Care/**</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td>Palliative Care/**</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td>exp Terminally Ill/**</td>
</tr>
<tr>
<td>OR</td>
<td></td>
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<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keyword:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## PUBMED OPERATORS

<table>
<thead>
<tr>
<th>Operator</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>Find Alternative endings to this word</td>
<td>Mimic* will retrieve words such as mimic, mimics, mimicing</td>
</tr>
<tr>
<td>“ “</td>
<td>Two words together</td>
<td>“pressure point”</td>
</tr>
<tr>
<td>[tw]</td>
<td>Search specific fields: Title, Abstract, MeSH, Other terms, Chemical Names of Substances, Secondary source identifier like GenBank, Personal Name as subject</td>
<td>Potato [tw] AND peel [tw] AND dressing [tw]</td>
</tr>
</tbody>
</table>
### WHAT CONCEPTS ARE IN YOUR QUESTION?

<table>
<thead>
<tr>
<th>Concept #1</th>
<th>Concept #2</th>
<th>Concept #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>exp Fluid Therapy</td>
<td>Delirium/</td>
<td>exp Terminal Care/</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td>exp Terminally III/</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
<td>Palliative Care/</td>
</tr>
<tr>
<td>OR Textword</td>
<td>OR</td>
<td>“end of life”</td>
</tr>
<tr>
<td>Textword</td>
<td>OR</td>
<td>Palliative</td>
</tr>
<tr>
<td>OR Textword</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR Water</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Subject Heading:
- OR:
- exp Fluid Therapy
- Delirium/
- exp Terminal Care/
- Palliative Care/
- exp Terminally III/
- “end of life”
- Palliative
- Textword
- OR:
- hydrat*
- Deliri*
- Fluid*
- Water
RUNNING YOUR SEARCH
RUNNING YOUR SEARCH

- Start with your first concept
  - Search for the subject headings first
  - Then search text words
  - Combine these synonymous searches with OR using your search history
- Repeat for your second, third, and subsequent concepts
- Finally, combine large search results set with AND
Running your search(es)

Concept 1
Search #1 =
Search #2 =
Search #3 =
Search #4 =
Search #5 = #1 OR #2 OR #3 OR #4

Concept 2
Search #6 =
Search #7 =
Search #8 =
Search #9 =
Search #10 = #6 OR #7 OR #8 OR #9

Search #11 = #5 AND #10

Results

Featherstone (2011)
■ Dal Libraries
■ Dalhousie Med Ed Subject Guide

■ Research Question:

■ How can virtual patients play a role in self-directed learning to help trainee outcomes?
MOVING TO ANOTHER SOURCE

- Retain as much of your original strategy as possible
- Recognize that subject headings will be different (or non-existent)
- Keep track of your search terms using new worksheets

Tips: Final search strategy copy and past into your worksheet.
SCREENING
Two kinds: practical and methodological

- Use practical screening to identify a broad range of potentially useful studies
- Use methodological screening to identify the best available studies
PRACTICAL SCREENING

- Date of Publication
  - Only studies between 2001-2005
- Participants or Subjects
  - Only adults 80 plus
- Publication Language (?)
- Research Design
  - Only clinical trials
METHODOLOGICAL SCREENING

Some questions to ask:

- Is the study’s research design internally & externally valid?
- Are the data sources used in the study reliable & valid?
- Are the analytic methods appropriate?
- Are the results meaningful in practical & statistical terms?

Critical Appraisal Worksheets

Fink, A. (2005 & 2010)
WORKING WITH YOUR RESULTS

- Save or export search results into a citation manager (Refworks, Endnote, etc.)
- Remove duplicates
- Remove inappropriate studies by applying methodological screens
HAND-SEARCHING AND FINAL STEPS

- Locate the reference lists for selected articles*
- Identify new articles that have cited your articles*
- Identify key journals and “hand search” their issues
- Test your search strategy by checking to see if a few “target articles” appear in the results

*use web of science or scopus
SYNTHESIZING THE RESULTS

- Use your results to:
  - Describe current knowledge about your research topic
  - Support the need for and significance of new research
  - Explain research findings
  - Describe the quality of a body of research*

*Fink, A. (2005 and 2010)
QUESTIONS? COMMENTS?

THANK YOU!

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RESOURCES TO HELP


- Systematic Reviews – The Cochrane Group offers online courses/webinars: [http://www.cochrane.org/training](http://www.cochrane.org/training) OR [http://www.cochrane.org/Multimedia](http://www.cochrane.org/Multimedia)

- Search worksheet – See the Finding Articles page of the Subject Guide

- WK Kellogg Library – Contact us via email: Kellogg@dal.ca Or reference hours: Monday to Friday: 9 to 5, Saturday/Sunday: 1 to 4
  
  ▪ Just a few of our services: help with database searching, citation management tools like Refworks, etc, and general questions. More in Introduction video: [http://libcasts.library.dal.ca/Kellogg/Health%20Science%20Intro%20Part%201/index.php](http://libcasts.library.dal.ca/Kellogg/Health%20Science%20Intro%20Part%201/index.php)

RESOURCES TO HELP

- Evidence based Medical Education

- Critical appraisal of Med Ed literature

- AAMC Med Ed Portal
  - https://www.mededportal.org/

- Best Evidence Medical and Health Profession Education
  - http://www.bemecollaboration.org
REFERENCES

- Dartmouth College. Supporting Clinical Care Handout on Review Types.