Literature Searching

2/21/2018
Review: Evidence Based Practice
What is Evidence-Based Public Health?

• "The practice of evidence-based public health (EBPH) is an integration of science-based interventions with community preferences for improving population health."

What is Evidence-Based Medicine?

"Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients"


2/21/2018
The literature search process
1. Open your citation management program and create a folder
2. Open PubMed and sign into your MyNCBI account

The Literature Search Process

January, 2015

1. Topic and Concepts
   1a. State your topic
   1b. Identify main concepts
   1c. Translate concepts into a question

2. Databases
   2a. Locate controlled vocabulary for each concept

3. Formulate query
   3a. Create a list of subject headings, synonyms, alternate spellings and related terms
   3b. Group similar terms with OR to create a set of similar terms
   3c. Combine sets with AND

4. Perform search

5. Evaluate results: are articles relevant to question?
   If NO
   Contact a librarian

   If YES
   Perform new search

   Examine keywords and types of resources retrieved and improve searches

6. Select articles and save to citation manager
1a-c
Translate concepts into a Research Question
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5. Examine keywords and types of resources retrieved and improve searches
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   - If YES: Select articles and save to citation manager
   - If NO: Perform search again

2/21/2018
Clinical Question in PICO format

- Focused clinical question
  In 54 year old male patients with intermediate grade prostate cancer, is radical prostatectomy more effective compared to radiation treatment in reducing the risk of mortality, impotence, and incontinence?

- P (patient) - 54 year old male with intermediate grade prostate cancer
  I (intervention) - radical prostatectomy
  C (comparison intervention) - radiation treatment
  O (outcome) - reduce risk of mortality, impotence, and incontinence
**Formatted clinical question**

**EBM RQ:** In 54 year old male patients with intermediate grade prostate cancer, is radical prostatectomy more effective compared to radiation treatment in reducing the risk of mortality, impotence, and incontinence?

<table>
<thead>
<tr>
<th>Concepts: keywords or controlled vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
</tr>
<tr>
<td>54 year old male with intermediate grade prostate cancer</td>
</tr>
<tr>
<td>Intervention</td>
</tr>
<tr>
<td>radical prostatectomy</td>
</tr>
<tr>
<td>Comparison</td>
</tr>
<tr>
<td>radiation treatment</td>
</tr>
<tr>
<td>Outcome:</td>
</tr>
<tr>
<td>reduced risk of mortality, impotence and incontinence</td>
</tr>
</tbody>
</table>

**Synonyms**

- ("radiotherapy"[MeSH Terms]
  OR
  "radiation treatment"[Title/Abstract])
- "Targeted Radiation Therapies"[Title/Abstract]
EBPH RQ: Does mobile health technology improve birth outcomes among pregnant women in Suriname exposed to key neurotoxicants?

- **P** (population) – pregnant women in Suriname
- **I** (intervention) - Mobile Health Technology
- **S** (setting) – agricultural
- **C** (comparison or intervention when appropriate) – no access to the Internet
- **O** (outcome you would like to measure or achieve) – improved birth outcomes
**Formatted public health question**

**EBPH RQ:** Does mobile health technology improve birth outcomes among pregnant women in Suriname exposed to key neurotoxicants?

**Concepts:** keywords or controlled vocabulary

<table>
<thead>
<tr>
<th>Population</th>
<th>Intervention</th>
<th>Setting</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Surinamese pregnant women exposed to key neurotoxicants</td>
<td>Mobile Health Technology</td>
<td>Occupations which expose workers to key neurotoxicants</td>
<td>no Internet access</td>
<td>improved birth outcomes</td>
</tr>
</tbody>
</table>

- Population: "neurotoxicant"[Title/Abstract] OR "neurotoxins"[MeSH Terms]
- Intervention: ((telehealth[MeSH Terms]) OR "Mobile Health"[Title/Abstract]) OR mHealth[Title/Abstract] OR eHealth[Title/Abstract] OR "Mobile Health"[Title/Abstract]
2a. Locate controlled vocabulary for each concept

Or:

How the National Library of Medicine organizes 26 M records
1. Open your citation management program and create a folder
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See instructions in notes page of this slide.
Goal:
To enter words and phrases most likely to return journal articles about the question. You are not looking for the answer to your question. You are looking for evidence gathered from the work of other people to help you answer your question.

You are building a search. Searching is the last step.
Enter your natural vocabulary in MESH. Examine the record, looking for “Entry Terms” which also describe the concept.

In this case, there are no unique entry terms.

If it is a MESH term (there is, in this case), copy it.

2. Paste the term into the top Advanced Search Box. Change “All Fields” to MESH.

3. Add the result to History.

2/21/2018
There is not always a MESH term to describe your concept.

Go to PubMed Advanced Search and enter your term into the top Advanced Search Box. Change “All Fields” to Title/Abstract. If it is a phrase, put quotation marks around the term. Add the result to History.
Sometimes your natural language will be mapped to an indexed word. Search for both your own words/phrases in the Title/Abstract field and the mapped term in the Mesh field.
Sometimes your natural language will be mapped to an indexed word. Search for both your own words/phrases in the Title/Abstract field and the mapped term in the Mesh field.
MESH Entry Terms

Your words ("mobile health technology" AND the vocabulary you found in the MESH record.)
3 a-c
Formulate your query
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Group similar terms with OR

For each concept, combine the MESH term with the synonyms in this order: [MESH term] OR (each) [entry term] including your natural language and add to History
Combine sets with AND

```
Builder

All Fields ▼  (((((Telemedicine[MeSH Terms]) OR eHealth[Title/Abstract]))

AND ▼  All Fields ▼  pregnant women[MeSH Terms]
```
Search using Boolean Operators

AND

OR

NOT

"telemedicine"[MeSH Terms]
  OR
eHealth[Title/Abstract]
  OR
mHealth[Title]
  OR
"Mobile Health"[Title/Abstract]
  OR
mobile health
technology"[Title/Abstract]

Search (mHealth[Other Term]) NOT mHealth[Title]

Use this to test if there are terms in the Other Term, or author-supplied keyword field, and NOT in the Title

oil NOT dietary fat: another use of NOT, but only when a term can be used for two different concepts
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Use the Course Guide

http://libguides.tulane.edu/HINARI

Locate workshop materials, evidence-based practice resources, sources for free full-text databases, grey literature, data and statistics

2/21/2018
Contact Us

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2/21/2018
THANK YOU
See you on March 8

• Save articles
  and format a paper with references

• Authorship skills
Please complete a short survey to help us improve our instruction

http://tulane.libsurveys.com/LibraryInstructionPostWorkshop