Why is this important?

1. Evidence Based Practice
2. Workforce Competencies
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."

Information skills and the 10 Essential Public Health Services
**Information Competencies for Public Health Professionals:**

**Use information technology to collect information (databases and citation managers)**

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A2. Identifies quantitative and qualitative data and information</td>
<td>1B3. Applies ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
<td>1C3. Ensures ethical principles are applied in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
</tr>
<tr>
<td>1A3. Applies ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
<td>1B4. Uses information technology in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
<td>1C4. Uses information technology in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
</tr>
<tr>
<td>1A4. Uses information technology in accessing, collecting, analyzing, using, maintaining, and disseminating data and information</td>
<td>1B14. Makes evidence-based decisions</td>
<td>1C14. Makes evidence-based decisions</td>
</tr>
<tr>
<td>1A14. Describes how evidence is used in decision making</td>
<td>1B15. Advocates for the use of evidence in decision making that affects the health of a community</td>
<td>1C15. Advocates for the use of evidence in decision making that affects the health of a community</td>
</tr>
</tbody>
</table>

The literature search process
Databases → journal articles

Key Resources for Health Sciences—Public Health

- **Academic Search Complete**: Health promotion, GLBT, Latin American, Middle East, and South Asian studies, Women’s studies
- **Biological Abstracts**: Biomedicine, genetics, pharmacology
- **Biological Sciences**: Aquatic life, biochemistry, entomology, plant and safety science, toxicology, virology, water
- **CINAHL**: AIDS & HIV, chronic diseases, dietetics, environmental health, GLBT studies, health policy, health promotion, maternal and child health, medicinal plants, minority health, nutrition, rural health
- **Cochrane Library**: Systematic reviews and meta-analyses
- **EMBASE**: alternative & complementary medicine, environmental health, genetics, health policy, health services, infectious disease, occupational health, pharmacology, pollution, immunology, toxicology
- **Environmental Science & Pollution Management**: Environmental biotechnology and engineering, industrial hygiene, pollution, toxicology, U.S. environmental impact statements, waste management
- **Global Health**: Biostatistics, epidemiology, food sciences, health promotion, health systems, infectious diseases, public health emergencies, tropical and international health
- **Health & Sciences Safety Abstracts**: Emergency management, environmental health, epidemiology, injury, natural disasters, occupational health, pesticides, toxicology, trauma
- **PubMed@TU**: biomedical journal articles (MEDLINE)
- **Risk Abstracts**: Biological, environmental, industrial, and labor risks
  Ecological, environmental, industrial, and occupational safety
- **Tropical Diseases Bulletin**: Infectious diseases, nutrition, parasitology, medical zoology/entomology, reproductive health, traditional medicine, travel medicine

3/1/2018
Use the Public Health Cross-Search

Tip
Advanced Users can still use the Articles & Databases functionality.

Use subject quick sets to search multiple databases in subject area sets that have been selected by our librarians.

Quick Set: Public Health
Set contains 10 databases

- Academic Search Complete
- Biological Abstracts
- Biological Sciences
- CINAHL Plus with Full Text
- Environmental Sciences & Pollution Management
- Global Health
- Health and Safety Science Abstracts
- Physical Education Index
- PubMed
- Risk Abstracts
1. Open your citation management program and create a folder
2. Open PubMed and sign into your MyNCBI account

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**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**
    - 6. Select articles and save to citation manager

- **Perform new search**

- **Examine keywords and types of resources retrieved and improve searches**

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3/1/2018 9
1a-c
Translate concepts into a Research Question
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

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   - 3c. Combine sets with AND

4. **Perform search**

5. **Examine keywords and types of resources retrieved and improve searches**

6. **Contact a librarian**

   **If NO**

   5. Evaluate results: are articles relevant to question?

   **If YES**

   6. Select articles and save to citation manager
Public Health Question in PISCO format

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

### Concepts: keywords or controlled vocabulary

- **Population:** Surinamese pregnant women exposed to key neurotoxicants
  - "neurotoxicant"[Title/Abstract]
  - OR
  - "neurotoxins"[MeSH Terms]
- **Intervention:** Mobile Health Technology
  - OR
  - ((telehealth[MeSH Terms]) OR "Mobile Health"[Title/Abstract]) OR mHealth[Title/Abstract] OR eHealth[Title/Abstract])
- **Setting:** Occupations which expose workers to key neurotoxicants
  - AND
  - no Internet access
- **Comparison:** AND
- **Outcome:** improved birth outcomes

3/1/2018
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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The Literature Search Process
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6. Select articles and save to citation manager

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.

Not every term is indexed.
1. Change your spelling or use the root word.

Examine the record, looking for “Entry Terms” which also describe the concept.
Not every term is indexed.

1. Go to PubMed Advanced Search
2. Enter your term into the top Advanced Search Box.
3. Change “All Fields” to Title/Abstract.
4. If it is a phrase, put quotation marks around the term. Add the result to History.

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

3. Add the result to History.
Mapped terms

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.)
Formulate your query
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
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

![Diagram showing the combination of sets with AND]

- 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
4. Perform your search
1. Open your citation management program and create a folder
2. Open PubMed and sign into your MyNCBI account

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      If YES
      6. Select articles and save to citation manager
Try another database: OVID HealthStar

MEDLINE data: Focuses on non-clinical aspects of health care delivery.

- Evaluation of patient outcomes
- Effectiveness of procedures, programs, products, services and processes
- Administration and planning of health facilities, services and manpower
- Health insurance
- Health policy
5. Evaluate your results
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Use the Course Guide

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

http://libguides.tulane.edu/publichealth
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