**Boolean Worksheet: A Medline/PubMed Search**

**Step 1: Choose databases that suit your research question**

**Sample Search**

**Sample Research Question:** Does handwashing among healthcare workers reduce hospital acquired infection?

**Recommended Databases:**
- CINAHLPlus
- Medline (via PubMed or Ovid)
- PsycINFO
- Cochrane Database of Systematic Reviews
- JBI (Joanna Briggs Institute) EBP Database
- Scopus
- Web of Science
- Embase
- ProQuest Central
- Dissertations and Theses Global
- Other ______________________

For the sample search, we will start in PubMed

**Your Search**

**Your Research Question:** ______________________

**Recommended Databases:**
- CINAHLPlus
- Medline (via PubMed or Ovid)
- PsycINFO
- Cochrane Database of Systematic Reviews
- JBI (Joanna Briggs Institute) EBP Database
- Scopus
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- Other ______________________

**Step 2: Perform a simple keyword search**

Identify **keywords** that describe the important concepts in your research question. (For a PICO question, select keywords that describe your patient, problem or population and your chosen intervention)

**Sample Keywords:**
- **Concept 1** (Patient or Problem or Population)
- **Concept 2** (Intervention)

hospital acquired infection  handwashing

Connecting keywords with **AND** in the database search retrieves article citations that contain **both** terms.

**Your Keywords:**

<table>
<thead>
<tr>
<th>Concept 1</th>
<th>Concept 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Patient or Problem or Population)</td>
<td>(Intervention)</td>
</tr>
<tr>
<td>(your concept 1)</td>
<td>(your concept 2)</td>
</tr>
</tbody>
</table>
Step 3: Expand your search with MeSH terms and other synonyms

From the initial search results, retrieve alternate terms/synonyms/MeSH subject terms for one or both concepts.

Combining these terms with OR expands the search to find citations with ANY of the added terms (Remember – OR retrieves MORE!)

Sample Synonyms:

<table>
<thead>
<tr>
<th>Concept 1</th>
<th>Concept 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>hospital acquired</td>
<td>handwashing</td>
</tr>
<tr>
<td>infection OR</td>
<td>OR</td>
</tr>
<tr>
<td>cross infection</td>
<td>hand hygiene OR</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>nosocomial infection</td>
<td>hand disinfection</td>
</tr>
</tbody>
</table>

A larger OR’d set of MeSH/keywords/synonyms may be recombined with AND to narrow the search

Your Synonyms:

<table>
<thead>
<tr>
<th>Your Concept 1</th>
<th>Your Concept 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>__________</td>
<td>__________</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>__________</td>
<td>__________</td>
</tr>
</tbody>
</table>

TIP: Remember to nest OR’d synonyms with parentheses in your database search – e.g. (handwashing OR hand hygiene OR hand disinfection)

Step 4: Add limits to your results

Most databases allow you to add “limits” or “filters” that restrict search results by characteristics such as type of study, type of article, date, time factors, age group, etc.

In your search, look for database ‘filters’, limits’ or ‘refinements’ to narrow your search.

You may want to consider how you can apply the following filters to best suit your research needs:

- Article Type: __________
- Date: __________
- Language: __________
- Age Group*: __________

*Pro Tip: If you are looking for articles about a particular age group of patients, DON’T include terms like ‘pediatric’ or ‘elderly’ in your search. Instead, use the age group filter that is available in many databases