### Search Process Checklist

**Problem/Issue/Question:**

**Check to see if there is an established way of doing things:**

- Talked with nurse manager, nurse clinician, and/or hospital (unit) experts
- Checked for available hospital/unit policy
- Checked for systematic review/meta-analysis on the topic.

**Checked for available protocols**

| National Guideline Clearinghouse |
| Joanna Briggs Institute: Best Practice Information Sheets |
| RN Assoc. of Ontario |
| National Organizations |

**Stakeholders/Those Affected by Project:**

(May Need to Talk with These People or Departments)

**PICO (Not applicable in all situations)**

- **P** – Patient, Population, Problem, Program:
  - Important Characteristics

- **I** – Intervention:
  - Drug/treatment, diagnostic/screening test, exposure, etc.

- **C** – Comparison Intervention (If Applicable)
  - Alternative being considered (placebo, std. therapy, no treatment, gold std.)

- **O** – Outcome
  - What to measure, accomplish, improve, affect (reduced mortality/morbidity, improve quality of life, accurate & timely diagnosis)

- **T** – Type of Question

- **T** – Type of Study (See Pyramid on Page 2)

**The type of question can help determine the type of study one should search for:**

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Best Type of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Therapy</strong></td>
<td>Randomized Control Trial (RCT)</td>
</tr>
<tr>
<td><strong>Prevention</strong></td>
<td>RCT / Cohort Study / Case Control</td>
</tr>
<tr>
<td><strong>Prognosis</strong></td>
<td>Cohort Study / Case Control / Case Series or Case Report</td>
</tr>
<tr>
<td><strong>Diagnosis</strong></td>
<td>Blind RCT / Compared to Gold Standard (best treatment/test for diagnosis)</td>
</tr>
<tr>
<td><strong>Etiology/Harm</strong></td>
<td>RCT / Cohort Study /Case Control</td>
</tr>
<tr>
<td><strong>Cost analysis</strong></td>
<td>Economic Analysis</td>
</tr>
</tbody>
</table>

**Describe PICO Components**

- **P** – Patient, Population, Problem, Program:
  - Important Characteristics

- **I** – Intervention:
  - Drug/treatment, diagnostic/screening test, exposure, etc.

- **C** – Comparison Intervention (If Applicable)
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  - What to measure, accomplish, improve, affect (reduced mortality/morbidity, improve quality of life, accurate & timely diagnosis)

- **T** – Type of Question

- **T** – Type of Study (See Pyramid on Page 2)

✓ **Restatement of question using PICO components:** *(Needs to be answerable/measurable question)*

✓ **Search Terms/Concepts (Background Information):**

Search for Background Information; Review related articles and other resources to come up with alternative terms or concepts. *(ex: Medline Plus, PubMed Clinical Queries, First Consult, Google Scholar, etc.)*

<table>
<thead>
<tr>
<th>Primary Search Term</th>
<th>Synonyms/ Related Concepts (Other Ways to Describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>

Contact a librarian to discuss search strategy, possible databases and other aspects of the literature search.

Contact: Roy Brown, MLIS, AHIP | Email: rebrown2@vcu.edu

✓ **What types of study designs should be included in the search?**

Start search by trying to find evidence at the top of the pyramid & working downward

- Evidence Based Practice Guideline
- Meta-Analysis/ Systematic Review/ Integrative Review
- Critical Appraisal (Topic/Article)
- Randomized Control Trials (RCT)
- Cohort Studies / Cross-Sectional Study / Qualitative Studies
- Case Control Studies / Case Reports
- Reviews / Protocol
- Background Information / Textbooks / Expert Opinion/ Manufacturer Recommendations

Links for Definitions of the following:
- Practice Guideline
- Systematic Review
- Meta-Analysis
- Integrative Review
- Review Article

Evidence Level & Quality Guide Sheet

Filtered Information

Unfiltered Information

Primary Studies
Possible Limits to be Applied:

<table>
<thead>
<tr>
<th>Gender:</th>
<th>Age Groups: (may differ by database)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ Male</td>
<td>___ All Ages (13—18 yrs.)</td>
</tr>
<tr>
<td>___ Female</td>
<td>___ Adolescent (19 - 44 yrs.)</td>
</tr>
<tr>
<td>Species:</td>
<td>___ Newborn (&lt; 1 month)</td>
</tr>
<tr>
<td>___ Humans</td>
<td>___ Infant (1 - 23 months)</td>
</tr>
<tr>
<td>___ Animals</td>
<td>___ Pre-School (2 - 5 yrs.)</td>
</tr>
<tr>
<td></td>
<td>___ Child (6 - 12 yrs.)</td>
</tr>
<tr>
<td>Years to be Covered:</td>
<td>Languages: English Only Other Languages: _____________</td>
</tr>
</tbody>
</table>

Known Authors/Researchers in the Field

1) 
2) 

Relevant Citations:

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Source Title v. no. date</td>
<td></td>
</tr>
</tbody>
</table>

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<td></td>
</tr>
<tr>
<td>Source Title v. no. date</td>
<td></td>
</tr>
</tbody>
</table>

If you find a good article, search for it in PubMed, CINAHL or another database that has a controlled vocabulary and see how it is indexed. This will allow you to find terms that may be useful to find articles on the same topic.

Useful Terms and Databases Searched (Controlled Vocab Terms & Keywords)

<table>
<thead>
<tr>
<th>Database/Source #1</th>
<th>Database/Source #2</th>
<th>Database/Source #3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
✓ **Appraisal of the Literature: Is There Adequate Evidence?**

Forms:

<table>
<thead>
<tr>
<th>Evidence Level and Quality Guide</th>
<th>Non Research Evidence Appraisal</th>
<th>Individual Evidence Summary Sheet</th>
<th>Overall Evidence Summation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Appraisal Tool</td>
<td>Agree II: Practice Guideline Appraisal Tool</td>
<td>Evidence Synthesis Table</td>
<td>Translation &amp; Recommendations</td>
</tr>
</tbody>
</table>

### Proceed with Evidence Based Practice Project

- **Questions:** Contact Your Nurse Clinician

- **Next Steps:**
  - Finalize team members & schedule meeting
    - Time of Initial Meeting: _____________________________
    - Team Members: 1. _____________________________
    2. _____________________________
    3. _____________________________
  - Assess translation of evidence into practice setting
  - *Gather Pre-Intervention/ Pre-Project Data*
  - Create Action Plan to Implement Change
  - *Gather Post Intervention/ Project Data*
  - Evaluate Outcome
  - Report Results to Decision Makers
  - Adopt Change & Identify Next Steps
  - Disseminate

### Proceed with a Research Project

- **Next Steps:**
  - Contact Nursing Research Advisory Council: nrac@mcvh-vcu.edu
  - Find or Be Assigned Mentor
    - Name of Mentor/Email/Phone Number: _____________________________
  - Formulate IRB Proposal and Submit for Approval - VCU IRB Link

- For questions regarding protocol preparation, IRB submissions or interpretation of regulatory requirements:
  - **Office of Research Subjects Protection**—Ph. 828-0868 or ORSP@vcu.edu

- For questions related to research ethics and education, interpretation of regulations, and concerns or questions about research compliance:
  - **Office of Research Compliance and Education** - Ph. 827-2157 or msmarkow@vcu.edu

  ◦ Collect Data (*Pre and Post*)
  ◦ Analyze Data
  ◦ Determine Impact or Outcome of Study
  ◦ Disseminate
**Tips and Reminders**

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Controlled Vocabulary</strong> (Subject Heading)</td>
<td></td>
</tr>
<tr>
<td>- May provide terms that can broaden or narrow search</td>
<td>- Recently coined terms may not have a subject term assigned</td>
</tr>
<tr>
<td>- Accounts for most common synonyms</td>
<td>- Can be difficult to find if no list of subject terms is included in the database</td>
</tr>
<tr>
<td>- Retrieve all items in database indexed under the topic</td>
<td></td>
</tr>
<tr>
<td><strong>Keyword</strong></td>
<td></td>
</tr>
<tr>
<td>- Retrieve synonyms, jargon, new or distinctive words</td>
<td>- May retrieve irrelevant articles</td>
</tr>
<tr>
<td>- Identify relevant articles quickly to find appropriate controlled vocabulary</td>
<td>- Your search must account for synonyms and alternative terms</td>
</tr>
</tbody>
</table>

**Tips & Reminders to Perform a Good Search**

- Consider what you want to know & create a question to focus your search.
- Choose the database or resource that is the best to answer your question.
  - CINAHL: Good resource when problem falls within the scope of nursing & allied health practice.
  - PubMed: Good resource when problem is medical in nature or if you are unsure where to start.
- Search Concepts Separately & Combine with Boolean Operators — *Easier to manipulate your search.*
- Always come up with synonyms for your search terms/concepts
- Use Subject Headings/Controlled Vocabulary Whenever Possible.
  - Keyword Searching: Use quotes to search for phrases like “pressure ulcer”
- Start your search broad and then make it more focused as you see what is in the literature.
- Never hesitate to adjust your search strategy once you evaluate your results.

### Finding Too Many Articles?
Ways to *Decrease/Focus* Your Results

- Do not explode
- Restrict subject heading to major focus
- Choose any relevant subheadings
- Utilize limits to English language, human subjects, review articles, etc.

### Not Finding Enough?
Ways to *Expand/Increase* Your Results

- Explode whenever possible
- Do not restrict subject headings to major focus
- Do not choose subheadings
- Consider searching back in time, look at citations
- Consider doing a keyword search

**Boolean Operators:**

- **AND**
  - (Pressure Ulcer AND Nursing Home)
  - Retrieves records that contain *BOTH* terms entered

- **OR**
  - (Pressure Ulcer OR Bedsore)
  - Retrieves records that contain either ENTERED term

- **Not**
  - (Nursing Home NOT Pressure Ulcer)
  - Retrieves records that exclude the term following the operator
Originally appeared in the following article: