Search Process Checklist

✓ **Problem/Issue/Question:**

EBP Process

EBP Inquiry Process Diagram

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

☐	Talked with faculty, and/or dentistry clinic experts	☐	Checked for available **protocols**
☐	Checked for available clinic policy	☐	Checked for **practice guideline** and other databases:

☐	Checked for **systematic review/ meta-analysis** on the topic.

____	Cochrane Library
____	CINAHL
____	PubMed

____	National Guideline Clearinghouse
____	Trip Database
____	The Dental Elf
____	DOSS

Stakeholders/Those Affected by Project: _____
(May Need to Talk with These People or Departments)

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

PICO Components	Describe PICO Components
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:**

Type of Question	Best Type of Study
Therapy : How to select treatments to offer patients that do more good than harm and that are worth the efforts and costs of using them	**Randomized Control Trial (RCT)**
Prevention: How to prevent a disease or condition	**RCT/ Cohort Study / Case Control**
Prognosis: How to estimate the patient's likely clinical course over time and anticipate likely complications of disease	**Cohort Study/ Case Control/ Case Series or Case Report**
Diagnosis: How to select and interpret diagnostic tests	**Blind RCT / Compared to Gold Standard** (*best treatment/test for diagnosis*)
Etiology/Harm: How to identify causes for disease	**RCT/ Cohort Study /Case Control**
Cost analysis: Economic costs of all facets of a intervention or disease treatment	**Economic Analysis**

Users' guides to the medical literature :A manual for evidence-based clinical practice (2008). In Rennie D. (Ed.), McGraw-Hill Medical: McGraw-Hill Medical : New York.

✓ **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: DOSS, Medline Plus, PubMed Clinical Queries, First Consult, Google Scholar, etc.)

	Primary Search Term	Synonyms/ Related Concepts *(Other Ways to Describe)*
P		
I		
C		
O		

	Contact a librarian to discuss search strategy, possible databases and other aspects of the literature search. **Contact: Irene Lubker	Email: imlubker@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

Filtered Information

Quality of Evidence

Unfiltered Information

Primary Studies

Links for Definitions of the following:

Practice Guideline
Systematic Review
Meta-Analysis
Integrative Review
Review Article
Protocol

Evidence-Based Guideline

Systematic Review

Critically Appraised Article

Randomized Controlled Trial

Cohort Study

Case-Controlled Study Case Series / Case Report

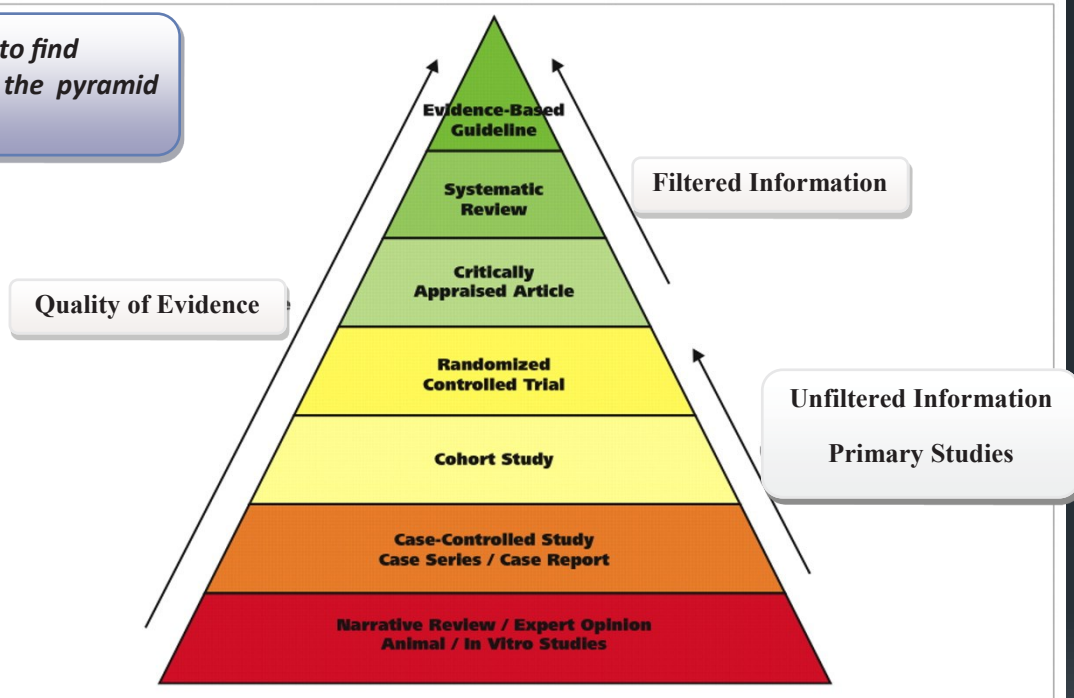Narrative Review / Expert Opinion Animal / In Vitro Studies

Figure. The evidence pyramid displays the quality of evidence according to type of study. "Quality" refers to the likelihood of predicting what would occur in one's own practice (and the least probability of bias). Guidelines explicitly based on this evidence pyramid offer clinicians a simplified mechanism for obtaining and potentially using the knowledge identified in this pyramid. Conversely, the lowest level of evidence, with the least likelihood of predicting what would occur in one's practice (and the highest probability of bias), can provide useful background information (such as laboratory and animal studies, cross-sectional epidemiologic studies, and expert opinion or narrative reviews). "Filtered information" is so-called secondary research. These reports systematically search for, critically appraise, distill and present the results of primary research, called here "unfiltered information." Adapted from Harvey Cushing/John Hay Whitney Medical Library, Yale University.[2]

Niederman, R. et al. JADA 2011;142:4:364-367

Created by Roy Brown (rebrown2@vcu.edu)   December 20, 2013

✓ **Possible Limits to be Applied:**

Gender:	Age Groups: (*may differ by database*)
_____ Male	_____ All Ages _____ Adolescent (13—18 yrs.)
_____ Female	_____ Newborn (< 1 month) _____ Adult (19 - 44 yrs.)
Species:	_____ Infant (1 - 23 months) _____ Middle aged (45 - 64 yrs.)
_____ Humans	_____ Pre-School (2 - 5 yrs.) _____ Elderly (65 - 79 yrs.)
_____ Animals	_____ Child (6 - 12 yrs.) _____ Aged (> 80 yrs.)
Years to be Covered:	**Languages: English Only** **Other Languages: _____**

✓ **Known Authors/Researchers in the Field**

1)

2)

✓ **Relevant Citations:**

Authors_____ **Title**_____

Source Title _____ **v.** _____ **no.** _____ **date** _____

Authors_____ **Title**_____

Source Title _____ **v.** _____ **no.** _____ **date** _____

♦ *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)**

Database/Source #1 _____	Database/Source #2 _____	Database/Source #3 _____

✓ **Appraisal of the Literature: Is There Adequate Evidence?**

_____Yes	**Proceed with Evidence Based Practice Project**
	
	• **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 **EBP Inquiry Process Diagram**
	    ◊ Report Results to Decision Makers
	    ◊ Adopt Change & Identify Next Steps
	    ◊ Disseminate

_____No	**Proceed with a Research Project**
	
	• **Next Steps:**
	
	    ◊ Find or Be Assigned Mentor
	
	    ◊ Formulate IRB Proposal and Submit for Approval - **VCU IRB Link**
	
	    ◊ Collect Data (_Pre and Post_)
	    ◊ Analyze Data
	    ◊ Determine Impact or Outcome of Study
	    ◊ Disseminate

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

♦ **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.**
  • **PubMed:** Good resource when problem is medical in nature or if you are unsure where to start.
  • **CINAHL:** Good resource when problem falls within the scope of nursing & allied health practice.
  • **DOSS:** Indexes and abstracts for 160 dental journals, most with full-text available
◊ **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.**

Finding Too Many Articles? Ways to *Decrease/Focus* Your Results	Not Finding Enough? Ways to *Expand/ Increase* 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.	◊ 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 Soda AND (tooth decay)	OR ((Dental Prostheses) OR (Dental Implants)	Not (hydrogen peroxide) NOT (Carbamide peroxide)
Soda — Tooth decay	Dental Prostheses — Dental Implants	Hydrogen Peroxide — Carbamide Peroxide
Retrieves records that contain *BOTH* terms entered	*Retrieves records that contain either ENTERED term*	Retrieves records that exclude the term following the operator

Notes