

# UT-COMC Capstone Course:

Finding the Best **E**vidence  
Using the Medical Library's  
Resources

# There are five steps to providing Evidence-Based Care (EBC):

- 1. **ASK** = Develop your answerable clinical question using PICO
- 2. **ACQUIRE** = Efficiently find the best evidence
- 3. **APPRAISE** = Critically evaluate the evidence for validity and usefulness
- 4. **APPLY** = Use the results of the appraisal in your clinical practice
- 5. **ASSESS** = Evaluate your performance

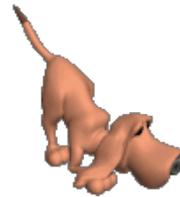
# Framework “PICO”

- **P**atient or **P**roblem
  - How would you describe a group of patients similar to yours?
- **I**ntervention
  - What intervention are you considering?
- **C**omparison
  - What is the main alternative to the intervention?
- **O**utcome(s)
  - What can you hope to accomplish?
  - What could this exposure really affect?

NOTE: Not all elements are applicable for every question.

# Asking an answerable clinical question:

- Are you asking the RIGHT question?
- Am I using the most current terminology?
- Am I being too specific? Or not specific enough?
- Become a bloodhound...



What leads can I get from the related citations?  
From the bibliographic references?

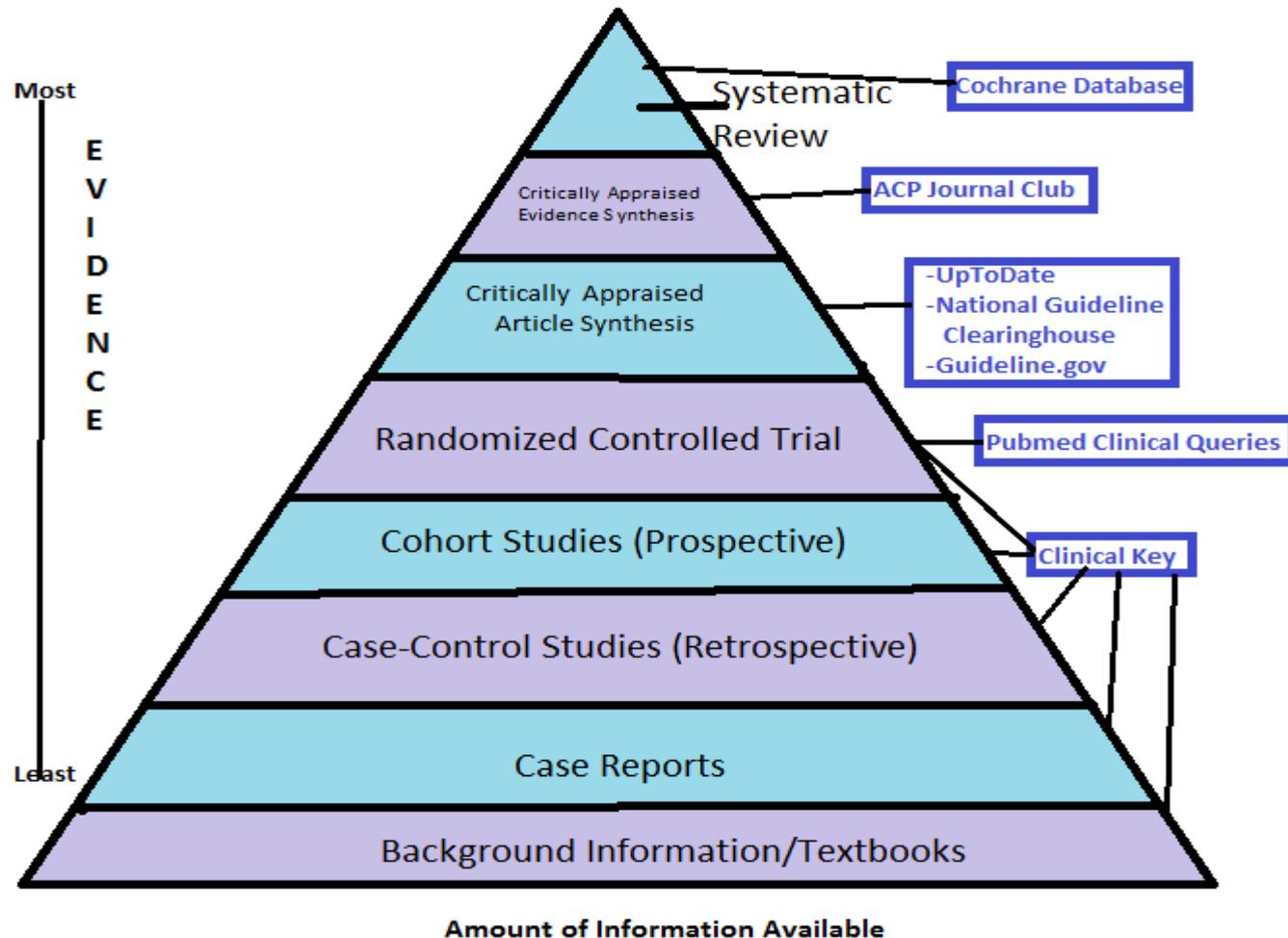
Sniff out the **EVIDENCE!**

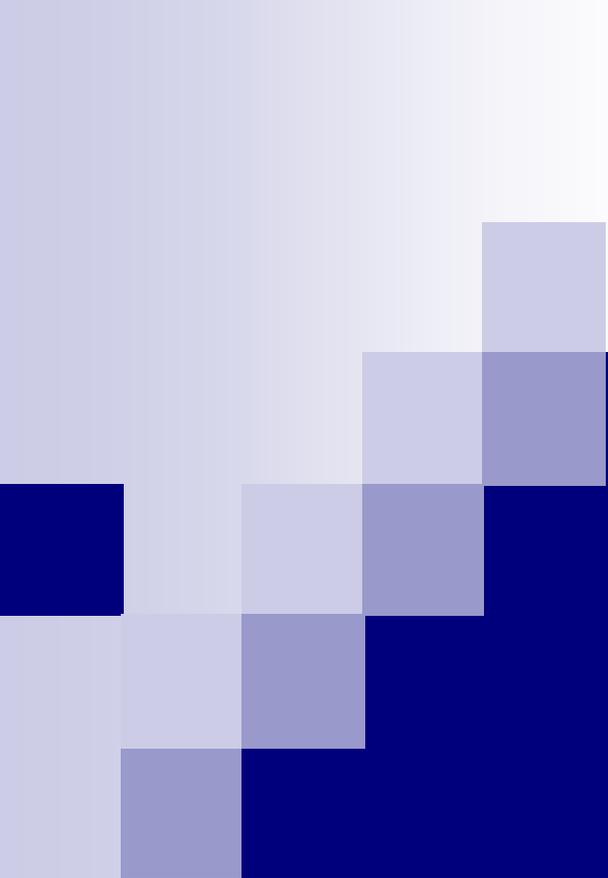
4 components of a successful answer to the bedside clinical question:

- Relevance
- Currency
- Accuracy
- Speed of retrieval



# Strength of Study Design: The Evidence Pyramid





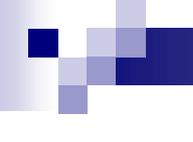
# PubMed

Finding the Best **Evidence**  
Using PubMed



# Using PubMed's Clinical Queries Utility

- [Clinical Queries](#) offers a user-friendly approach to evidence-based searching on the Medline database. Designed for busy practitioners, this specialized interface provides fast access to reliable clinical studies. ***Clinical Queries*** is divided into three sections: Clinical Studies, Systematic Reviews, and Medical Genetics



The utilities in ***Clinical Queries*** are **not** intended to supply a comprehensive literature search. They are designed to provide information on those few "good" articles which will help the clinician make informed health-related decisions.

# Clinical Queries: Clinical Study Categories

- This specialized search query is intended for clinicians and has built-in search "filters" based on research done by R. Brian Haynes, M.D., Ph.D. at McMaster University in Canada.
- Five study categories or filters are provided:

**Etiology**

**Diagnosis**

**Therapy (default)**

**Prognosis**

**Clinical prediction guides**

Two scope filters are provided:

Broad: Sensitive search – includes relevant citations but probably less relevant; will retrieve more (default)

Narrow: Specific search – will get more precise, relevant citations but less retrieval



# Clinical Queries: Systematic Reviews

This feature is provided to help clinicians locate systematic reviews and similar articles.

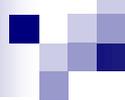
- It retrieves systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. Citations from journals specializing in clinical review studies are also included.

# Review vs. Systematic Review

## Review vs. systematic review. What is the difference?

Whereas review articles are generally an examination of the literature from the author's perspective, a systematic review can be thought of as a study design that includes some or all of the following characteristics:

- One or more questions or hypotheses are posed at the start of the review.
- Publications/study results in the subject area are collected, sometimes limited to a particular type (e.g., literature reviews, randomized controlled trials), and are often obtained from specific sources (e.g., databases, bibliographies).
- Criteria are used to include or exclude studies found in #2 for the actual review. This step is often referred to as the "study selection."
- Data extracted from the selected studies are combined and compared, or if the data cannot be combined, the strength of the evidence is assessed and used to evaluate results.
- Conclusions are made based on results and/or the presence or absence of supporting evidence.

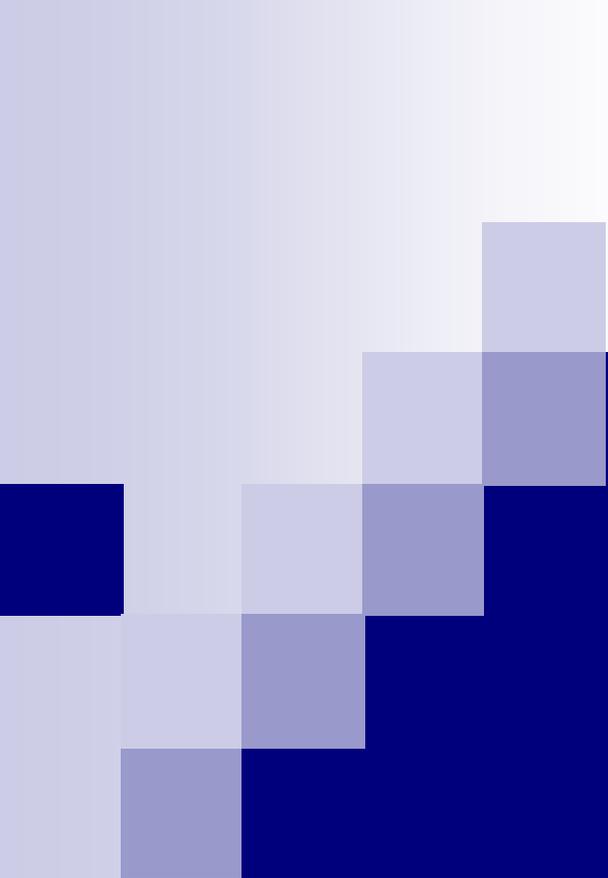


# Inputting the Search

Now you are ready to type in the subject. It is best to use **specific** subject terms. For example, if you want clinical studies on the treatment of atrial fibrillation, type in atrial fibrillation. Do not enter "heart disease". Using the most specific term will help you retrieve the articles that best match your need. Some useful tips to remember are:

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- Grammar does not count. Syntax does not count. You do not need to capitalize your terms. Think of your terms as nouns. For example, type in the name of the disease or diagnostic test you want information on:
    - Psoriatic arthritis
    - Positron emission tomography
    - Gastroenteritis

- 
- Do not enter abbreviations for diseases. Type in coronary artery disease, not CAD.
  - If you want to search for synonymous terms, such as trigeminal neuralgia or tic doloureux, capitalize the OR connector and type your terms this way:
    - Trigeminal neuralgia **OR** tic doloureux
  - If you want to combine two discrete concepts capitalize the AND connector:
    - Myocardial infarction **AND** Adrenergic beta-Antagonists



# UpToDate

Finding the Best **Evidence**  
Using UpToDate



# What is UpToDate?

- UpToDate is an evidence-based, physician-authored clinical decision support resource that can be used to help make point-of-care decisions.

