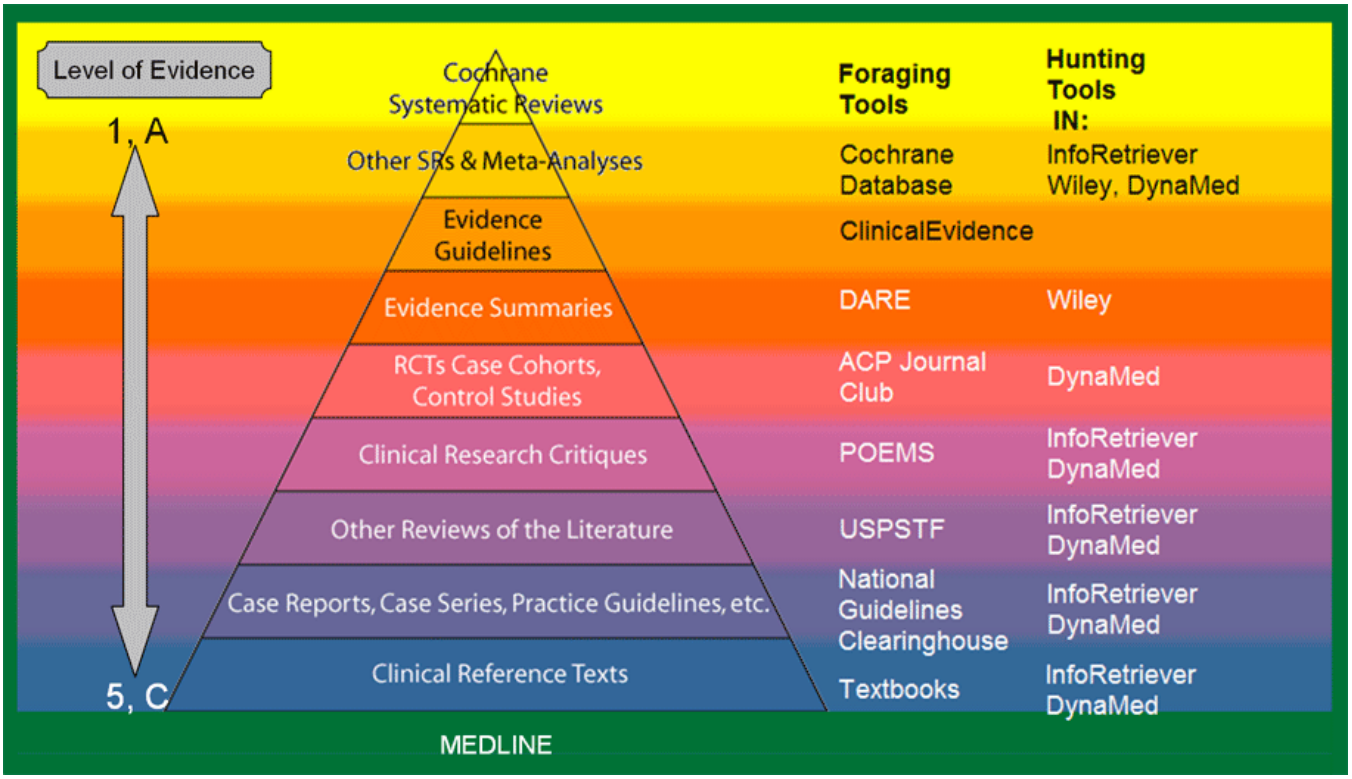
Evidence Based Medicine Resources at the Florida State University College of Medicine

Pyramid of Evidence



As you move up the pyramid, the amount of available literature decreases, but increases in its relevance to the clinical setting.

Examples of Evidence Based Medicine Resources

- Cochrane Collaboration
- Clinical Evidence from the British Medical Journal (BMJ)
- ACP Journal Club (American College of Physicians)
- Database of Abstracts and Reviews of Effectiveness (DARE)
- PubMed's Clinical Queries
- National Guidelines from Agency for Health Research & Quality (AHRQ)
- InfoRetriever (InfoPOEMS)
- Dynamed
- TRIP Database

Definitions of Types of Studies

A **Meta-analysis** will thoroughly examine a number of valid studies on a topic and combine the results using accepted statistical methodology as if they were from one large study. Some clinicians put Meta-analysis at the top of the pyramid because part of the methodology includes critical appraisal of the selected RCTs for analysis. PubMed's *Clinical Queries* is a good place to start.

Systematic Reviews usually focus on a clinical topic and answer a specific question. An extensive literature search is conducted to identify all studies with sound methodology. The studies are reviewed, assessed, and the results summarized according to the predetermined criteria of the review question. *The Cochrane Collaboration* has done a lot of work in the area of systematic reviews.

Evidence Guidelines are documents with the aim of guiding decisions and criteria in specific areas of healthcare, as defined by an authoritative examination of current evidence. Guidelines are usually produced at national or international levels by medical associations or governmental bodies.

Evidence Summaries provide a critical appraisal synthesis for a specific research article, so that practitioners may more readily determine if the evidence in that research study is valid and reliable, and whether they can apply it to their own practice. BMJ's *Clinical Evidence* is an example of a resource that contains evidence summaries.

Randomized controlled clinical trials are carefully planned projects that study the effect of a therapy on real patients. They include methodologies that reduce the potential for bias (randomization and blinding) and that allow for comparison between intervention groups and control groups (no intervention). PubMed's *Clinical Queries* and the *Cochrane Library* are resource tools.

Cohort Studies take a large population and follow patients who have a specific condition or receive a particular treatment over time and compare them with another group that has not been affected by the condition or treatment being studied. Cohort studies are observational and not as reliable as randomized controlled studies, since the two groups may differ in ways other than in the variable under study. PubMed's *Clinical Queries* and the *Cochrane Library* are resource tools.

Case Control Studies are studies in which patients who already have a specific condition are compared with people who do not. They often rely on medical records and patient recall for data collection. These types of studies are often less reliable than randomized controlled trials and cohort studies because showing a statistical relationship does not mean than one factor necessarily caused the other PubMed's *Clinical Queries* and the *Cochrane Library* are resource tools.

Clinical Research Critiques are reviews of patient care relevant studies. *ACP Journal Club* and *InfoPOEMS* are resources.

Case series and **Case reports** consist of collections of reports on the treatment of individual patients or a report on a single patient. Because they are reports of cases and use no control groups with which to compare outcomes, they have no statistical validity.