01

How To Do Literature Search? "Summary"
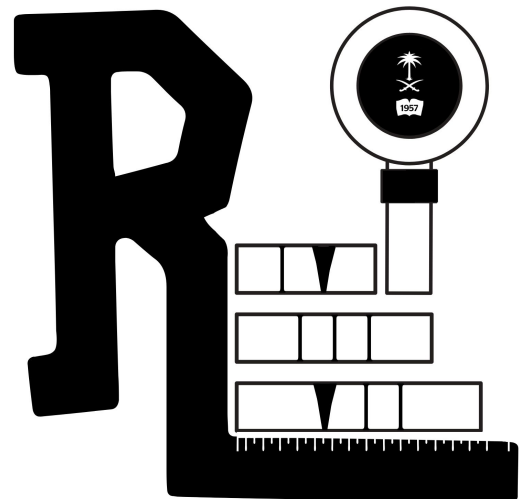
EBM Process

Evidence Based Practice:

Evidence based practice (EBP) involves the following:

Best Research and Evidence	Resources and Practitioners expertise	Client/Population characteristics & Values

This means, when I talk about an evidence based medicine/practice, these **3** components must be considered!
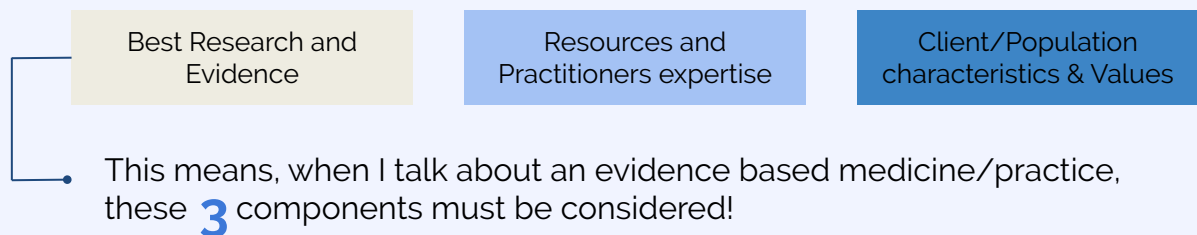
The 5-step EBM Process:

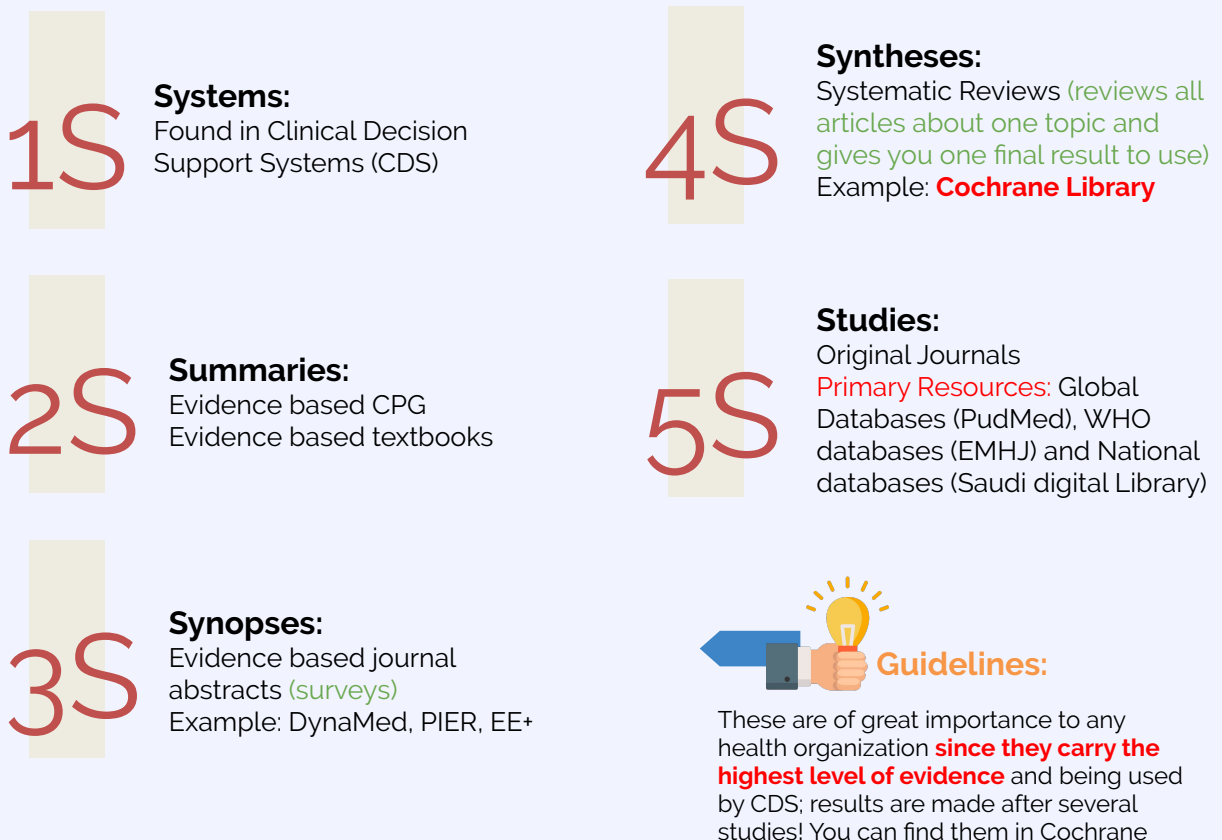| ASK	ACQUIRE	APPRAISE
You start by asking a question! You will start with a very basic and broad question which we call a **Background question (usually asked by novices)**, then you will specify it more and limit it to have your **Foreground question (usually asked by an expert)**	Your question is ready for your investigation and this begins with **searching for information relevant to your topic**. Several engines helps you to seek these information; **1-Cochrane Library 2-PubMed 3-Saudi Digital Library**	**Critical Appraisal key elements:** 1-Reference or ID number (for quick access to the record being appraised) 2-Study design (strength of evidence of the data; RCT is the highest) 3-Participants (how many) 4-Characteristics of the problem within the population 5-Intervention outcomes 6-Include or Exclude the study, this is based on your findings! **Key Elements of high quality articles:** 1-Peer reviewed Journal 2-Currency 3-Clearly recognized research question or problem 4-Study design (which is the higher evidence) 5-Times cited (doesn't reflect how good is the article)

APPLY	ASSESS

EBM Process

Hierarchy Of Evidence:

(This is important for step 2 -Acquire-)

Levels of Evidence:

1st — Systematic Reviews

2nd — Randomized Controlled Trials

3rd — Cohort Studies

Case-control studies — **4th**

Case series and reports — **5th**

Editorials, Expert Opinion — **6th**

Haynes' 5S pyramid of EBM resources:

1S
Systems:
Found in Clinical Decision Support Systems (CDS)

2S
Summaries:
Evidence based CPG
Evidence based textbooks

3S
Synopses:
Evidence based journal abstracts (surveys)
Example: DynaMed, PIER, EE+

4S
Syntheses:
Systematic Reviews (reviews all articles about one topic and gives you one final result to use)
Example: **Cochrane Library**

5S
Studies:
Original Journals
Primary Resources: Global Databases (PudMed), WHO databases (EMHJ) and National databases (Saudi digital Library)

Guidelines:
These are of great importance to any health organization **since they carry the highest level of evidence** and being used by CDS; results are made after several studies! You can find them in Cochrane
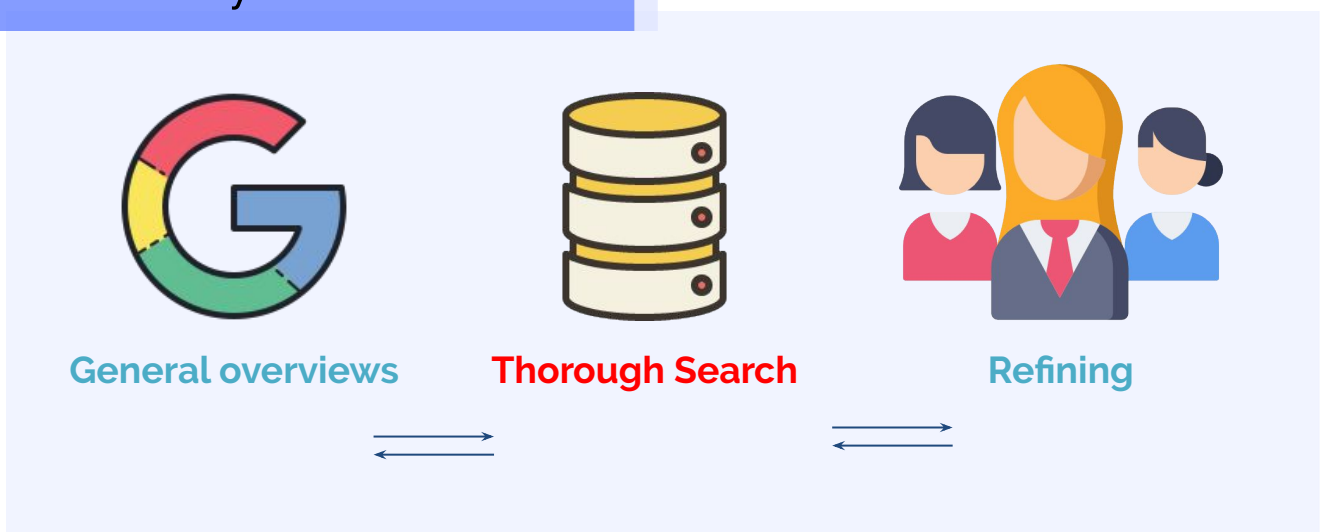
EBM Resources

Cochrane vs PubMed:

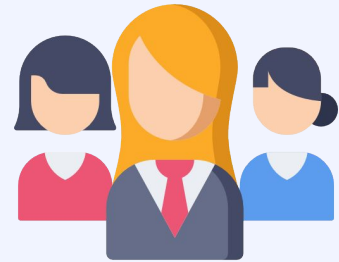| Cochrane	PubMed
Advocated RCTs to inform healthcare practice (Published and unpublished)	Reviews clinical effectiveness research. It is a database
Regularly updated	Provides an access to MedLine
Research based evidence. The best tool to search for the effect of something on something else	MedLine is a database of indexes (With citations and abstracts)
Focus on intervention (mainly but not always)	NLM indexes biochemical literature. Largest medical library
Minimum Bias (including and excluding is based on Explicit quality criteria)	-
Syntheses resource. Provides Plain Language Summary (Gives you the decision!)	Studies resource

How to start your search:

General overviews   **Thorough Search**   **Refining**

EBM Resources

How to start your search:

General overviews   **Thorough Search**   **Refining**

Steps of thorough Search

1-Prepare	2-Organize	3-Combine
It is about what we need to know about our topic and that's done by making a list of all the terms **connected** with our topic	1-Make a list contains **critical terms** to your search **2-Exchange/add** some words if needed 3-Note any term that you **don't want to appear** 4-**Discard** the rest	Use **Boolean Operators** to combine our most important term. Use this operator wisely to get your desired results; you may get zero results and that because you either used in wrong way or nothing was found about your topic!

IMPORTANT!!!!!!

LEAN Operators!

AND — Retrieves articles that contains ALL the term
Narrows down the search

OR — Retrieves articles with ANY of the terms
Broadens the search

NOT — Eliminates articles containing the SECOND term
Narrows down the search

Search!

Metaanalysis:

- It is a statistical approach to combine the data derived from a systematic review
- Gives you one decision based on all previous studies; effective or not, use or not to use
- While the systematic review shows you all studies without providing you the final answer; no one answer, don't combine.

MeSH indexing:

- Acronym for "Medical Subject Headings"
- Arranged in hierarchy. from more general to more specific
- Used by researchers
- It will give you fewer articles in your results pages by excluding categories you don't want to appear (Choose the category you have interest in)

Keys to successful searching:

1-Indexes:
Identifying appropriate indexes through clinical questions

2-Components of 'well-built clinical questions' : PICO
- Patient/Problem
- Intervention
- Comparison intervention
- Outcome

Summarizing the literature review:

1-Introduction:
Gives quick idea of the topic such as the central theme or organizational pattern
2-Body:
Contains your discussion of sources and is organized either chronologically, **thematically** or methodologically
3-Conclusions/Recommendations:
Discuss what you have drawn from the reviewing literature so far. Where might the discussion proceed?