

Evidence -based practice

*Dr. Farihan Barghouty MD, MRCGP, Professor of family
medicine*



Objectives



- 1- define evidence-based practice (EBP) and its importance in clinical setting
- 2- describe the steps of EBP process
- 3-forming questions
- 4-Acquire

What is Evidence-Based Practice (EBP)?





What is evidence-based practice (EBP)

Why is EBP important ?



Medical knowledge and accepted practice change rapidly



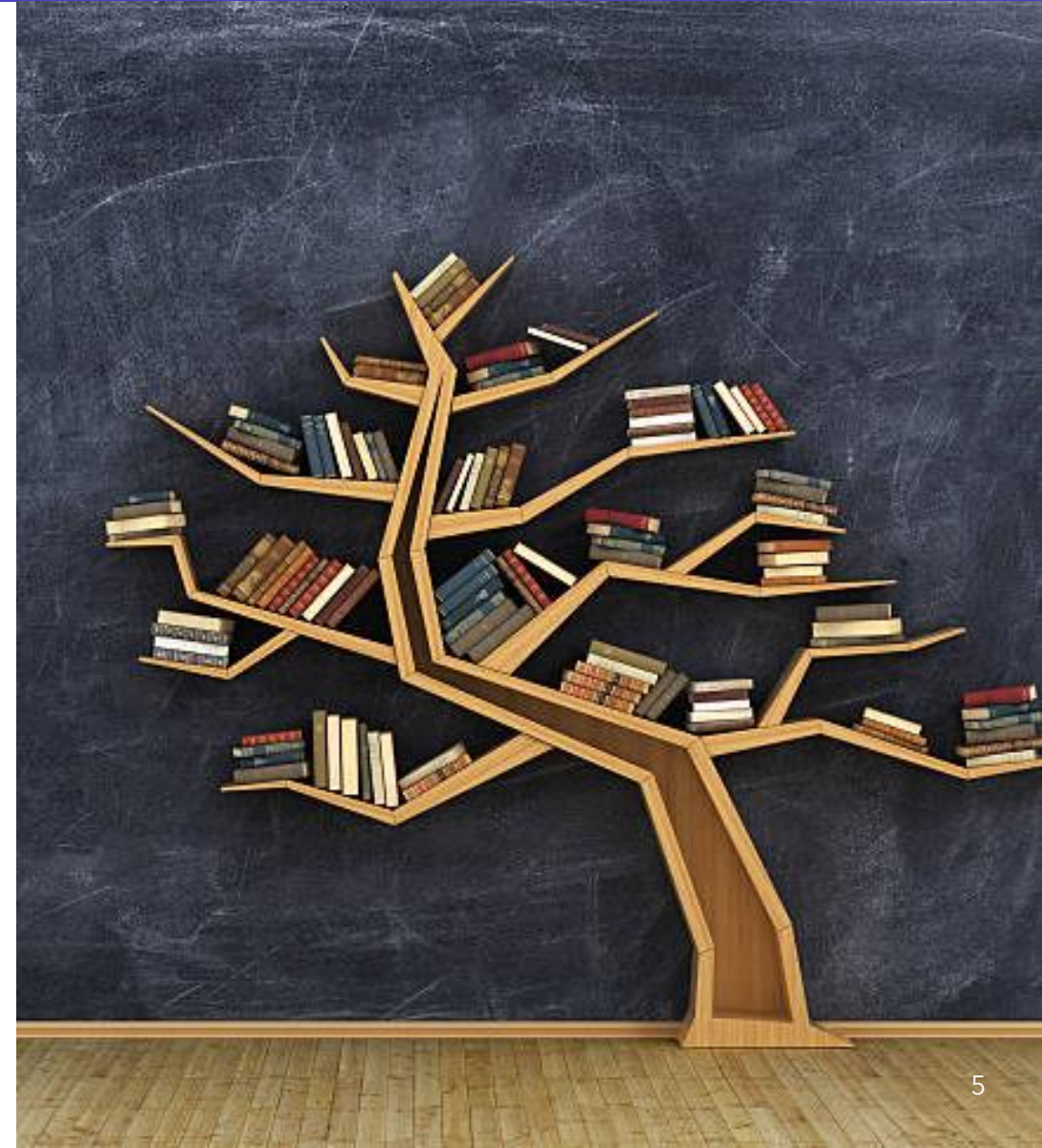
Volume of research articles is expanding



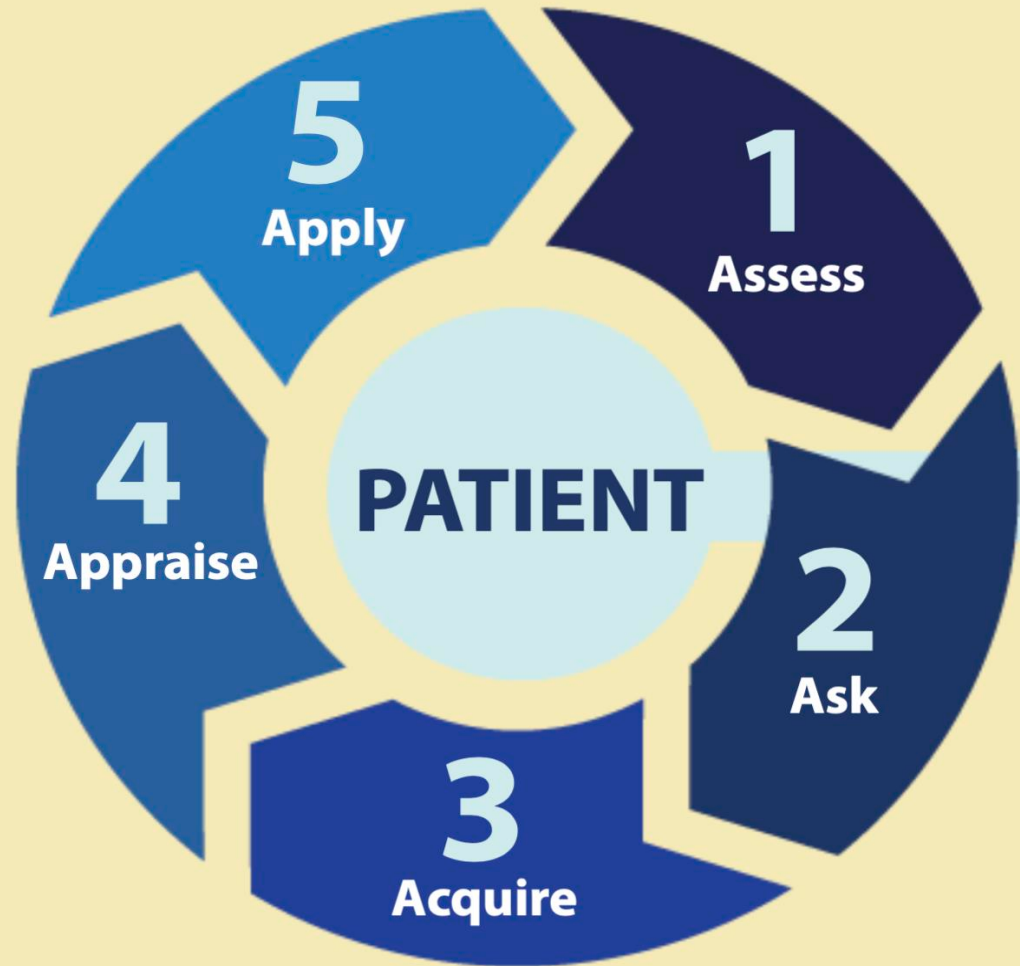
Integrating evidence into practice regularly makes it easier to find and apply the evidence during busy clinical schedules



It allows to blend patient's preferences with the research, resulting in patient -centered care



Steps in the EBP Process



EBP begins and ends with the patient

Assess

Let's put the process into practice



how we apply EBPfor this patient

- 65 male patient
- With diabetes and
- Knee surgery 10 years ago
- Obese
- Non smoker



Assess



- Tried numerous diet without much success
- Wants to see his granddaughter graduation
- Understands that diabetes --- increase the risk of heart disease and wants to lose weight

Assess



- Heard about stomach stapling -----
Lose weight and cure diabetes
- Dose it really work?



Ask

PICO is a key component for well focused foreground question



Patient problem

Described your patient



Intervention

Prognostic factor, or exposure
What do you want for your patient



Comparison

Two drugs or tests



Outcome

What to accomplish

Patient Problem



Obese

Intervention



**Diabetes
Type 2**

Comparison



**Weight
Loss**

Outcome



Mortality

**Remission
of
Diabetes**

Male

**Stomach
Stapling**

**Standard
Medical
Care**

Type of Question

The type of question is important and can help lead you to the best study design.

Diagnosis

How to select and evaluate diagnostic tests.

Study Designs:

Cross-sectional study or a prospective, blind comparison to a gold standard

Therapy

Is a treatment effective?

Study Designs:

Systematic review, randomized controlled trial or cohort study

Prognosis

What is the patient's likely clinical course over time?

Study Designs:

Cohort study, case control and case series

Harm/Etiology

What caused this disease?

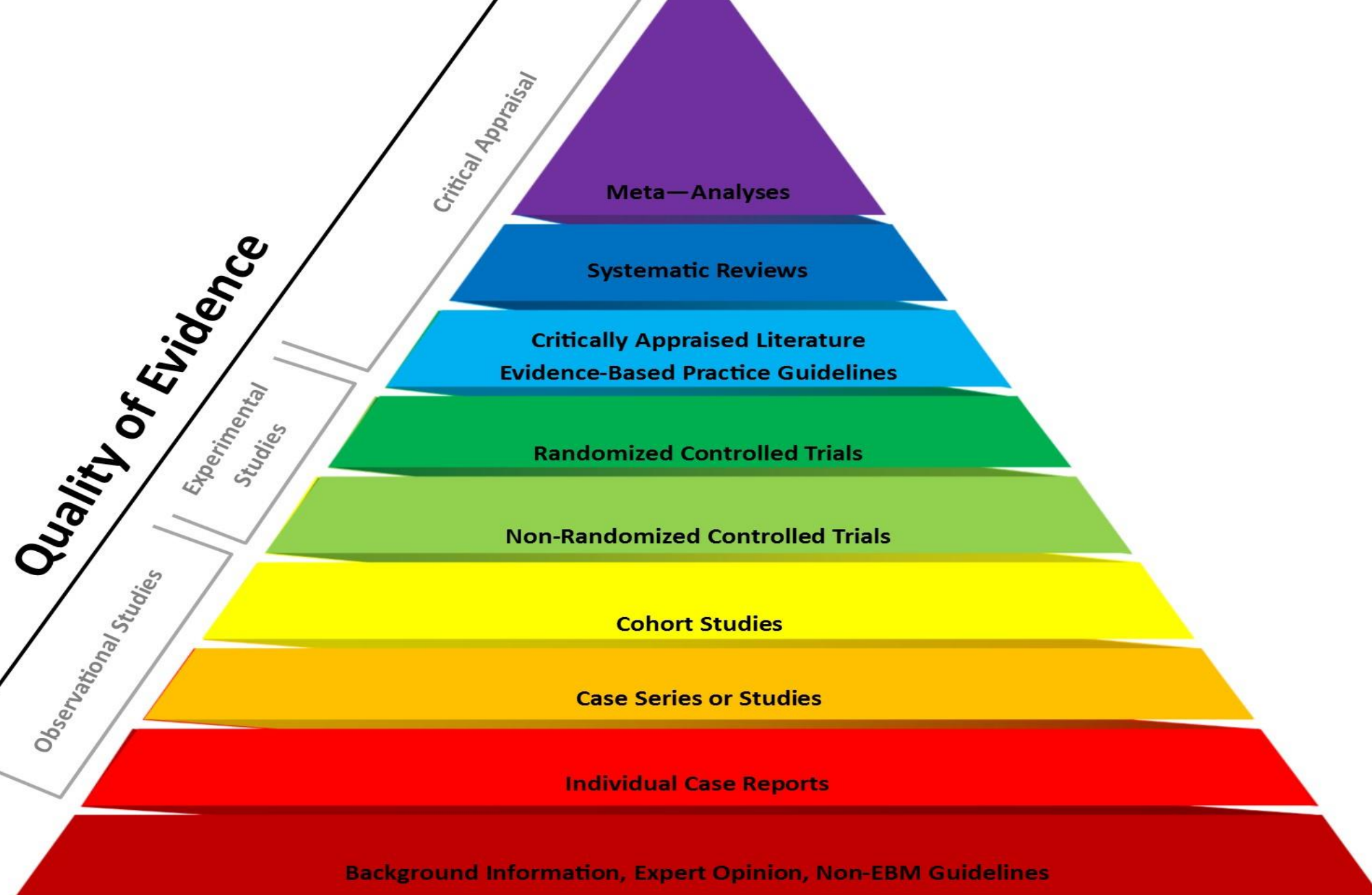
Study Designs:

Cohort, case control or case series can answer questions of harm.

The question is

In patients with type 2 diabetes and obesity is bariatric surgery is more effective than standard medical therapy at increasing the probability of remission of diabetes

Quality of Evidence



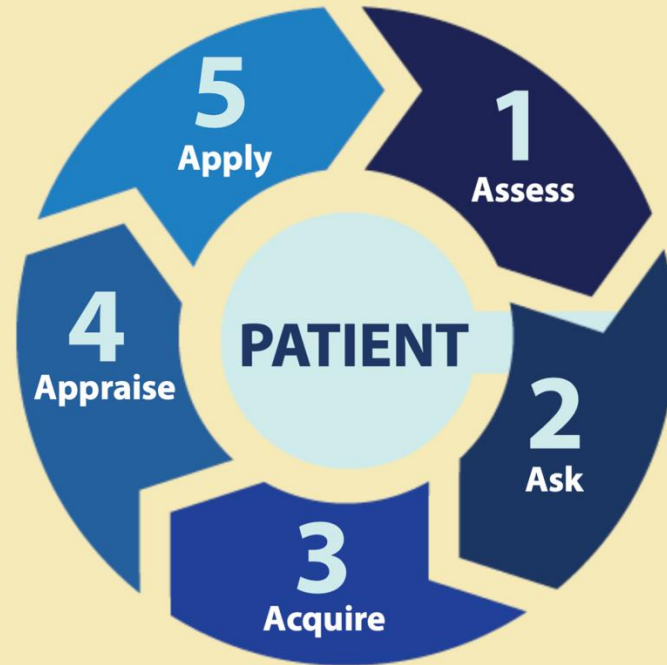
Implement EBP

- What type of question we need in our 65 old patient
- What type of study

It is a Therapy question.

The best evidence would be a randomized controlled trial (RCT). If we found numerous RCTs, then we might want to look for a systematic review.

Steps in the EBP Process



EBP begins and ends with the patient

Selecting a Resource

Resources for
Background Questions

Resources for
Foreground Questions



Textbooks

Online textbooks are searchable and offer guidance and best practices for various specialties and disciplines.

Some examples of online textbook sources are:



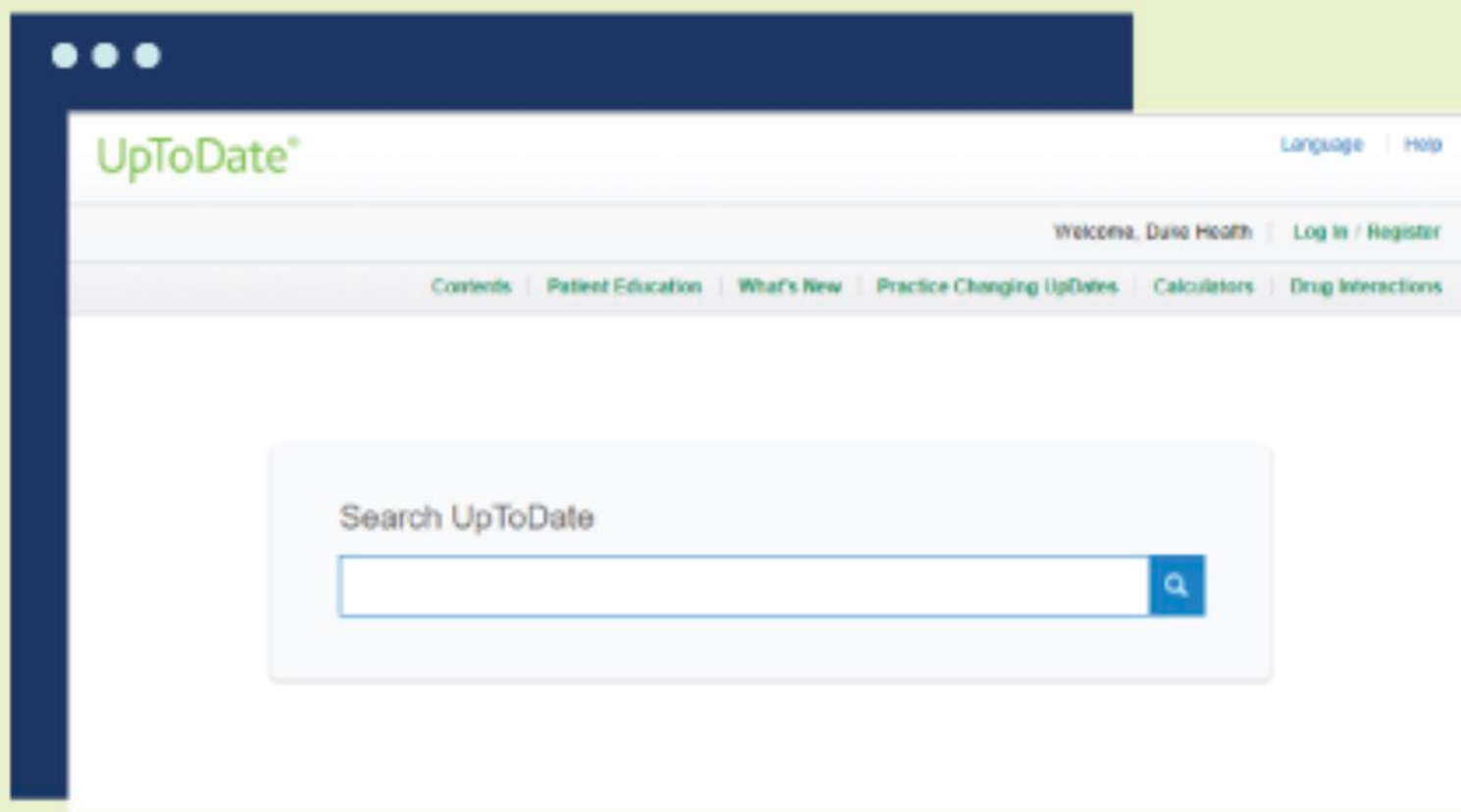
AccessMedicine



Clinical Key



Scientific American Surgery



UpToDate.com

Provides syntheses on clinical topics (e.g., "Bariatric operations for management of obesity indications and preoperative preparation"), which offer background information on disease management, prognosis, and other recommendations.

Foreground Questions



Research Articles from Journals

PubMed/MEDLINE

Scopus

Web of Science

Google Scholar

Pre-appraised Sources and Syntheses



American College of
Physicians© Journal Club



Family Physicians Inquiries
Network Clinical Queries



Essential Evidence Plus



Cochrane Library



PubMed is the National Library of Medicine (NLM)'s search interface to the MEDLINE database.

Millions

of references to articles from medicine, nursing, basic sciences, and related biomedical fields.

1940s - Present

over 5,600 global journals in numerous languages.

MeSH (Medical Subject Headings)

Each indexed reference is tagged with MeSH terms that describe the contents of the article.

1 Identify the key concepts in the clinical scenario

Use PICO



Patient Problem

**Obesity,
Type 2 Diabetes**



Intervention

**Bariatric Surgery,
Gastric Bypass Surgery**



Comparison

Standard Medical Care



Outcome

**Remission of Diabetes,
Weight Loss, Mortality**

2 | Use Subject Headings (called MeSH in PubMed)

- **Authors can refer to a given disease, condition, or medical concept in multiple ways. To ease article retrieval on a topic it is best to include subject headings in your search. In PubMed, these headings are called MeSH terms. The National Library of Medicine has added them to every citation in the MEDLINE database.**

3

Combine Sets

You can often combine PICO concepts in one search string

obesity AND diabetes type 2 AND bariatric surgery

If you choose to search for them separately, combine them with the correct Boolean operators (AND, OR) on the Advanced Search page.

Remember

- **Select resource based on question type**
- **Select study design limit based on question type**
- **Pick articles based on relevance to PICO**
- **Not every PICO has a perfect article – make a decision as to what matters**



Thank you