Evidence Based Medicine

The practice of medicine is patient-centered: one patient at a time. You apply the evidence to a specific patient, taking into account both qualitative* and quantitative** research to provide the best care for each patient.

Planning Strategy

EBM – a 5 part process	Consider these four components	Formulate a focused clinical question using the **PICO** approach
1. Convert information needs into focused questions. 2. Search for best evidence to answer the questions. 3. Appraise evidence for validity and clinical usefulness. 4. Apply results in clinical practice. 5. Evaluate performance of evidence as a clinical outcome.	1. Your clinical experience & expertise 2. Patient preferences 3. Clinical research evidence 4. Available resources	1. **P**atient - Describe patient characteristics: age, sex, race, medical history, etc. 2. **I**ntervention & exposure - What do you want to do for the patient? What factor(s) might influence the patient's prognosis? What was the patient exposed to? 3. **C**omparison (if applicable) – (compared to another intervention, placebo, or nothing) 4. **O**utcomes: What is the effect of the intervention?

Classify the Problem	Select search terms
Use PICO questionnaire & select a classification term	Use these recommended terms for each classification type – check the thesaurus for additional search terms
1. Therapy – treatment options 2. Diagnosis 3. Prognosis 4. Harm/Risk	1. Enter name of disorder + Intervention in question + *EBM reviews* (in Ovid EBM Reviews database) 2. + "sensitivity and specificity" (*blind* can be used as a keyword to increase hits) 3. + prognosis – cohort studies (explode to retrieve both broad and narrow terms 4. + risk – cohort studies (explode) (may also use mortality-morbidity)
Qualitative Research - examines patients' experiences, attitudes, beliefs and preferences, and explores how scientific interventions may affect a patients' lifestyle.	Quantitative Research – Best for assessing patient care interventions such as diagnosis and treatment Quantitative Research Methods include: Randomized controlled studies Double blind method Cohort studies Case control studies

Searching *PubMed* – (formerly *Medline*)	
Qualitative Research	**Quantitative Research**
Search PubMed Directly Use the following indexing term(s) in combination with the topic to be researched for articles published from late 2002 and forward: Empirical Research (broad term) Observation (narrow term) Qualitative research (narrow term) You may also use the above terms, or specific methodologies such as "focus groups," "nursing research," or "observations" in combination with other MESH headings or keywords. Ex. "focus groups" [mesh] AND hypertension Where [mesh] indicates that the preceding term is to be searched as a subject heading, rather than a phrase in the article title or abstract. When you place quotation marks around the term, and do not follow it with a qualifier in square brackets, you tell PubMed to search the term as an exact phrase in the article title or abstract.	**Search PubMed using "Clinical Queries" option or Search Directly** **Option One** - Select: "Clinical Queries" option from left sidebar. To Search "Clinical Queries using Research Methodology Filters" (the default option) for primary literature - *reports* Select *Category*: therapy-diagnosis-etiology–prognosis Select *Emphasis*: *sensitivity* (more articles, some less relevant) *specificity* (fewer articles but more relevant) To Search "Systematic Reviews" for secondary literature – *reviews* Select: *"Limits"* to refine search to: English language, Human vs. Animal, Nursing Journals, Gender, Age, etc. **Option Two** – Search PubMed Directly When combining two or more topics in the same search (ex. 6-Mercapptopurine in the pregnant patient with IBD) When topic hasn't been researched using the top quantitative methods listed above When you want to limit the research to a specific methodology, such as cohort studies Enter search term(s) Use Boolean (AND,OR,NOT) tools Select "Limits" to refine search to: English language, Human vs. Animal, Publication types (clinical trials, etc.), Nursing Journals, Gender, Age, etc.

Searching CINAHL (ProQuest)
(1,624 journals with 502 Nursing and 381 Allied Health)

Qualitative Research	Quantitative Research
Under "search methods" select "advanced" Select "Thesaurus" tab Enter term you want to search in thesaurus search box Example: enter "qualitative studies" Select "explode" (gives you more than 10,000 articles) Enter "postoperative pain" Select "add" from box on left (approx 30 articles)	Under "search methods" select "advanced" Enter term – use keyword (from title, abstract or text) or subject heading (from thesaurus) Limit search by document/ publication type or study methodology document/ publication types – research or clinical trial methodology studies include – quantitative study, double-blind studies, prospective studies etc. Example: enter "intravenous therapy " Enter "research" (document type) Select "English" language & "Peer reviewed" limits Enter "site care" (keyword)

Searching Ovid's Cochrane Evidence Based Medicine Reviews

Create a search set for each concept (see PICO).

Enter: Disorder (subject to be searched) in search box

Enter: Intervention (suggested treatment, etc.)

Combine these two sets

Select: "EBM Reviews" limit box to limit to EBM reviews