Evidence Based Pharmacotherapy

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GENERAL COURSE DESCRIPTION

This course is designed to provide the student with an understanding of statistical and study design principles useful in critically evaluating the biomedical literature. A combination of classroom lectures, class discussion, required readings, and take-home assignments will be used to facilitate the student's understanding of important biostatistic and literature evaluation principles.

Course Goals and Objectives

The course have three objectives: (a) to promote the use of EBP in the students' current clinical work on rotations, (b) to set a pattern of lifelong learning through students' use of principles of EBM, and (c) to help students become familiar with the medical literature and its application to patient care.

		Didactic Seminar	Practice	Objectives	Required readings
0		Introduction to the course			
1		Introducing evidence based medicine			
2		**Pharmaceutical care and evidence based medicine**			**- Scenario-BMJ** **- Worrisome ailment in medicine: Misleading journal Articles** **-Aburuz 2010, EBPC**
3		**Asking focused clinical questions**	Case presentation Questions: Diagnosis, Therapy, Etiology, Prognosis	1. Formulate a logical, useful, and searchable clinical question based on a patient scenario 2. List the major components of a clinical question which would be useful to patient care	**- The Well-built Clinical Question: A Key to Evidence-based Decisions**
4		Basics of study design		1. Determine the type of study being reported in a paper 2. Discuss the strengths and weaknesses of the following study types: randomized controlled trial (RCT), cohort study, case control study	
5, 6,		**Finding evidence**	Searching the medical	1. identify sources of	

7, 8		literature: pub med, guidelines web sites, Cochrane, clinical evidence, evidence based journals	evidence 2. Devise a search strategy for obtaining evidence pertinent to a well-defined clinical question 3. Use PubMed in searching for evidence 4. Employ limiting terms in search strategies	
		Case presentation		
	Workshop 3 hours searching the evidence			
	Critical Appraisal: an introduction			
9, 10, 11	Factors affecting research validity			
12	How the results are expressed		NNT, RRR, ARR, NNH	
13, 14	Basic statistics		1. descriptive statistic 2. hypothesis testing 3. p value 4. confidence interval	
15	**Midterm**			
	Evaluating the evidence:			
16, 17,18	Evaluating the evidence: clinical trials core validity criteria	Case presentations Searches assigned for treatment questions		Ask students to read the trial in advance and to bring it with them

19,20, 21	Evaluating the evidence: systematic review core validity criteria	Case presentations Searches assigned for systematic review questions	1. Assess the validity of a systematic review 2. Discuss the importance of a systematic review to individual patient management 3. Explain the utility and limitations of a guideline in the care of a particular patient problem 4. Access appropriate resources, including the Cochrane Library and Web sites dedicated to practice guidelines	
22	Evaluating the evidence: cohort studies core validity criteria	Case presentations		
23	Evaluating the evidence: Case control study core validity criteria	Case presentations		
21	Evaluating the evidence: Cross sectional study core validity criteria	Case presentations		
22-24	Drug information resources and Answering drug information request: introduction	cases		
25	Complete example			
26-28	workshops and student presentation			

Assignments

1. Asking Questions
2. Searching

Criteria for evaluating search assignments include:

    I.   Utilizing an EBM Hedge for Therapy, Diagnosis, Etiology/Harm or Prognosis
    II.   Exploding appropriate MeSH terms as needed.
    III.   Focusing appropriate MeSH terms as needed
    IV.   Properly using Subheadings as needed
    V.   Effectively using Boolean Operators (AND, OR, NOT), as needed
    VI.   Reviewing the Complete Reference of selected article for relevant MeSH terms and text words

3. CAT Presentation:

4. Evidence based pharmacotherapy case study:

5. Critical appraisal: Small group discussions

6. Mini-di consult
Students will be expected to complete one mini-consult related to using the systematic approach to handling drug information request. The student will demonstrate proficiency in searching the literature according to the methods presented in class, and in formulating a response that is appropriate in content and style.