

## **EBCP CURRICULUM-OBJECTIVES**

### **GENERAL**

1. Establish and value the model of EBCP
2. Introduce essential concepts of study appraisal
3. Stimulate critical/independent approach to clinical evidence
4. Promote life-long learning behaviors such as proactively searching the medical literature
5. Increase use of evidence based resources at the point of care

### **SPECIFIC**

1. Utilizing the EBCP cycle:
  - 1.1 Formulate a patient problem/clinical scenario into an answerable question
  - 1.2 Identify appropriate literature resources and perform an efficient search for different types of questions (background vs foreground) and information needs (synopses, systematic reviews, individual studies)
  - 1.3 Recognize various types of bias in study methodology
  - 1.4 Understand significance (statistical vs clinical) and precision of the effect observed in a study
  - 1.5 Employ methods of explaining study results to patients and incorporating patient preferences into decision making
  - 1.6 Proactively search medical literature for useful, practice changing information
2. Relative to *Randomized Controlled Trials*:
  - 2.1 Explain how selection of patients in a trial affects the applicability of study results
  - 2.2 Understand the benefits of randomization and allocation concealment as well as their proper implementation
  - 2.3 Recognize the value and limitations of blinding (“masking”) and intention to treat analysis

- 2.4 Indicate the value of adequate and complete follow up of patients. Recognize methods, like sensitivity analysis, used to compensate for missing data
  - 2.5 Calculate and practice the following expressions of risk modification: relative risk (RR), relative risk reduction (RRR), absolute risk reduction (ARR) and number needed to treat (NNT)
  - 2.6 Discuss the importance of choosing appropriate outcome measures in a therapeutic trial and differentiate between primary and secondary, single and composite, clinical and surrogate outcomes.
3. Relative to *evidence based diagnosis*:
    - 3.1 Understand and appropriately use treatment and test thresholds.
    - 3.2 Recognize limitations in estimating pre-test probabilities in various clinical scenarios
    - 3.3 Discuss the issue of test utility in relevance to pre-test probabilities
    - 3.4 Calculate and practice the following expressions of the value of a test: Sensitivity, Specificity, Positive Predictive Value (PPV), Negative Predictive Value (NPV), Likelihood Ratio Positive (LR+), Likelihood Ratio Negative (LR-).
    - 3.5 Practice the use of a Fagan nomogram to calculate post-test probabilities
    - 3.6 Understand the various types of cognitive diagnostic errors and methods to reduce them
4. Relative to *observational studies* and evaluating potential *harm* of interventions:
    - 4.1 Recognize different types of observational studies and their relative contribution as well as limitations (case reports, case-series, case-control, cross sectional and cohort studies)
    - 4.2 Calculate and practice odds ratios (OR) of exposure to a potentially harmful agent and understand its limitations compared to relative risk (RR)
    - 4.3 Distinguish association from causation. Discuss confounding and additional factors (such as biologic plausibility, temporality etc)

which have to be examined when attempting to make claims of causation based on association

5. Relative to articles that *summarize evidence*:
  - 5.1 Define different types of reviews (narrative, systematic and meta-analysis).
  - 5.2 Discuss advantages and limitations of systematic reviews.
  - 5.3 Understand representation of different studies and pooled results on Forest plots
  
6. Regarding possible limitations of utilizing the EBCP model:
  - 6.1 Develop techniques to improve efficiency in utilizing the model in a busy clinical setting
  - 6.2 Discuss methods to deal with absence of evidence, low quality evidence, contradicting evidence or recommendations
  - 6.3 Recognize spin in study result presentations, discussions and editorials
  - 6.4 Understand and manage limitations of any single source of information including pharmaceutical industry promotions and advertisements
  - 6.5 Understand discrepancies between efficacy and effectiveness of clinical interventions

