

MANDATORY REQUIREMENTS FOR EBM WORKSHOP DIRECTED TO RESIDENTS AND FELLOWS

**As Per Saudi Council of Health Specialties
(Communication ref 1763/3 dated 6/4/1426H)**

1. **Duration 3 days**
2½ days course
+ One half day assessment
Seven Hours/day

2. **Human and other resources**
 - A. **Human resources**
 - One trainer (Instructor) per 8 candidates or less.
 - Trainers should have attended a Basic EBM Course and preferably “Teaching The Teachers” Course.
 - It is preferably if one trainer or librarian attended a course on searching or has sufficient searching skills.
 - Ten candidates or less per group (small group teaching)
 - B. **Other arrangements and resources**
 - One computer with live Internet connection per three candidates or less.
 - The material should be sent for candidates not less than one week before the course.
 - A space enough for small group discussion and OSCE examination.
 - Subscription and or access to the following databases, Cochrane Systematic Reviews and DARE, MEDLINE, CLINICAL EVIDENCE, Evidence Based Medicine, ACP Journal Club, trip database and SUM Search, GACGUIDELINES.

3. **Learning outcomes**
At the end of the course, the candidates should have mastered the following competencies which are based on the five steps of EBM.

Translation of uncertainty into an answerable question. The student identifies knowledge gaps during the course of practice and asks foreground questions to fill these gaps. The student should ask focused questions that lead to effective search and appraisal strategies.

Search for and retrieval of evidence. The student can design and conduct a search strategy to answer questions. The strategy should be effective and comprehensive: likely to retrieve all relevant evidence. The student understands the strengths and weaknesses of the different sources of evidence.

Critical appraisal of evidence for validity and clinical importance. The student can appraise the validity of a study. The appraisal will include: the suitability of the type of study to the type of question asked, the reliability of outcome measures chosen, and the suitability and robustness of the analysis employed. The student can appraise the importance of the outcomes and translate them into clinically meaningful summary statistics, such as number needed to treat (NNT). The course should cover the therapy, diagnosis, systematic review (Meta Analysis) and guidelines.

Application appraised evidence to practice. The student can assess the relevance of the appraised evidence to the need that prompted the question. The student can explore the patient’s values and the acceptability of the answer.

Evaluation of performance. The student asks focused questions, searches sources of evidence, appraises or uses pre-appraised evidence and applies these in practice. The student reflects on how well these activities are performed.

4. **Process of teaching:**

	EBM Steps	No. of Hours	
		Theory	Practical
1.	Translation of uncertainty into an answerable question	1	1
2.	Search for and retrieval of evidence.	1	3
3.	Critical appraisal of evidence for validity and clinical importance.	1	8
4.	Application of appraised evidence to practice.	1	2
5.	Evaluation of performance.	1	2

N.B.: The practical should be taught during small group discussion with two instructors and less than ten candidates per group.

5. **Methods of Teaching**

The following teaching guideline that covers the EBM steps should be covered.

Translation of uncertainty in to an answerable question.

Presenting clinical scenarios or asking for students to share a problem encountered in clinical practice. Framing a focused, answerable question in a structured in clinical practice. Framing a focused, answerable question in a structured format⁽²⁾. Several formats are taught: 3 part (patient-intervention/ exposure-comparator-outcome), or 5 part (patient-intervention/exposure- comparator-outcome-time) questions.

Search for and retrieval of evidence.

Theoretical instruction backed by a supervised practical session with online connection⁽³⁾. A librarian with search could be utilized this purpose. A variety of databases should be shown with the relative benefits discussed. Guideline such as Cochrane, MEDLINE, Clinical Evidence, CINAHL, Evidence based Medicine, Sum Search, tripdatabase, GACGUIDELINES.

Critical appraisal of evidence for validity and clinical importance.

This is probably the most widely taught skill [5] Examples include the Critical Appraisals Skills Program⁽⁴⁾.

Application of appraised evidence to practice.

Examples include applying the identified evidence to the specific context that led to the quest for evidence. This requires exploration of the generalisability of the evidence to the specific scenario, and particularizing outcomes by adjusting for patient-specific risks⁽⁵⁾.

Evaluation of performance

Role modeling by EBP teachers. The encouragement of adult learning styles. Journal Clubs⁽⁶⁾.

6. **Assessment:**

- It is essential that assessment is conducted in the form of written, OSCE and assignment. Computer based OSCE has been used elsewhere to test the abilities of framing questions, searching and retrieving appropriate evidence⁽⁸⁾.
- The number of questions (stations) should not be less than four.
- Each question (station) lasts around 10 minutes.

The assessment for each EBM step is as follow:

1. One or more station covering step 1: Translation of uncertainty into an answerable question as follows:

The skills can be assessed by presenting a clinical scenario and asking the student to form a focused, answerable question (included in the Fresno test)⁽⁷⁾. This could be done by presenting the question on the screen or in paper and ask the whole group to answer at the same time.

2. One or more question (station) covering step 2 as follows: Search for and retrieval of evidence. This could be done by either giving the search assigned at the end of 2nd day asking them to bring on the 3rd day or in the form of computer based OSCE.

3. One or more station covering step 3 as follows: Critical appraisal of evidence for validity and clinical importance.

Test for critical appraisal of validity include the Berlin Questionnaire⁽⁹⁾ and the Fresno test, or giving them an article to appraise overnight or during the working day.

4. One or more station covering step 4 as follows: Application of appraised evidence to practice.

Objective structured clinical examination (OSCE) involving clinical application and interaction with patient after reading supplied evidence⁽¹⁰⁾.

5. One or more station covering step 5 as follows: Evaluation of performance.

Use of a questionnaire to assess knowledge, attitude and behavior⁽¹¹⁾.

6. Assignment (optional for courses and the participants): It is a strong educational tool. Each candidate could write (500-1000) words EBM report. The report describes the experience of the candidate in the application of the five steps of EBM for clinical question. The candidate should reflect on how well these activities were performed and what conclusions and lessons were learned.