Postgraduate training in evidence based medicine-EU EBM Unity

Evaluation of the e-learning content
EU EBM Unity partnership

- Development of core curriculum
- Piloting and evaluation
• Partners:
  – Birmingham Women’s Hospital /The University Of Birmingham
  – Aquamed – Germany/Austria
  – Universita Cattolica del Sacro Cuore - Italy
  – AMC Amsterdam – The Netherlands
  – CASPi – University of Birmingham
  – CASP Poland
  – CASP Spain
  – CASP Hungary
  – Basel Institute of Clinical Epidemiology Switzerland

• Steering Committee
Learning opportunity identified in a Clinical Setting

1. Formulate ‘Structured Question’
   - Select Keywords
   - Search the literature

2. Obtain full (relevant) review article(s)
   - Check the review article for validity
   - Check the primary studies included for validity

3. Check results for importance and present them in clinically meaningful measures
   - Assess for applicability to local population
   - Prepare a critically appraised summary of the review

4. Disseminate the evidence
   - Use the evidence to guide practice

Modules:
- Module 1
- Module 2
- Module 3
- Module 4
- Module 5
Modules

- clinical setting
- e-sessions
- assessment
- activities and assignments with feedback
- handbook
Learning Objectives

At the end of module 1 you will:

• Be able to identify knowledge gaps in your practice and prioritise them.
• Be able to translate your knowledge needs into structured PICO questions.
• Be able to choose the most appropriate study design to answer a given clinical question.
• Know that systematic reviews offer the highest level of evidence.
Assessment: MCQs

- previously validated, adapted to learning objectives
- ‘true’ false’
- ‘best fitting answer’

- Attitudinal questionnaire
Methods

• March – July 2007
• Before and after design
• Effect of e-learning on
  – knowledge gain
  – attitudinal changes
  – qualitative feedback
• 5 partner countries: Germany, Hungary, Spain, Switzerland, UK
• Translation
Administration of the course

Introduction and verbal consent

Pre-course assessment: completion of MCQs Module 1 to 5 and attitude questionnaire

Online presentation of e-session 1-5 in sequence

Post-course assessment: Completion of corresponding MCQs after each e-session

Completion of attitude questionnaire

Completion of learner’s and tutor’s evaluation
Flow of participants

No of participants enrolled
n=112

Pre-course test completed
n=105

Post-course test completed
n=101

Participants/country:
- Germany n=10
- Hungary n=28
- Spain n=14
- Switzerland n=24
- UK n=36

Pre-course test completed
n=105

Declined participation:
n=7

Dropouts after pre-course test completed
n=4

Participants/country:
- Germany n=10
- Hungary n=27
- Spain n=12
- Switzerland n=23
- UK n=34
Relative change between pre course and post course scores for MCQ of the five modules for all participants
Relative score change between pre course and post course scores for MCQ of the five modules according to centre.
Attitudinal questionnaire

- (A) Original research is confusing
- (B) Study design is important in article selection
- (C) Evidence-based decision making is ‘health care by numbers’
- (D) Contracts for health care professionals should include time taken away from patient care for reading and appraising the literature
- (E) I am confident that I can assess research evidence
- (F) Systematic reviews play a key role in informing evidence-based decision making
- (G) The health care system in my country should have its own programme of research about clinical effectiveness
Qualitative feedback

- Slides, audio and visual components clear understandable
- Adequate difficult level
- Some sessions are too long
- Sometimes interruptions (internet connection)
- Useful to have further courses
Strengths and weaknesses

• Different
  – countries
  – languages
  – medical disciplines

• Absence of a control group
• Sample size
Conclusions

• Quality of materials found to be good and at adequate difficulty level
• Multilingual e-EBM materials that can be helpful in providing unified EU certification in EBM
Curriculum

Aim

• Educationally sound methods
  – Mapping of learning needs
  – Explicit learning objectives
  – Appropriate teaching and learning method
  – Assessment matched with objectives
NS = not statistically significant; all other comparisons statistically significant

Maximum possible scores:
Module 1 = 13; Module 2 = 7; Module 3 = 14; Module 4 = 13; Module 5 = 8

Wilcoxon signed ranks test used for comparison
1. Which are the elements you need to know to form a good clinical question?

Answer:  
- a. Comparison
- b. Outcome
- c. Search terms for literature search
- d. Intervention
- e. Population/patient

Submit

2. You have a patient with osteoporosis and you want to prevent hip fractures:

Answer:  
- a. This is a prognostic problem
- b. This is a harm problem
- c. This is a therapeutic problem
- d. This is a diagnostic problem

Submit

3. You are a paediatrician and see a five year old girl with a painful ear. Your diagnosis is that she is suffering from an otitis media and you think about prescribing an antibiotic drug. You conduct a literature search and identify several studies that deal with this issue. Which study, based on its design, would you choose as the most appropriate for solving this problem (assume that all studies were done very well)?