

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
 - Università 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



Formulate 'Structured Question'



Module 1



Select Keywords



Search the literature



Obtain full (relevant) review article(s)



Check the review article for validity



Check the primary studies included for validity



Check results for importance and present them in clinically meaningful measures



Assess for applicability to local population



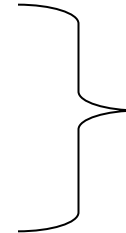
Prepare a critically appraised summary of the review



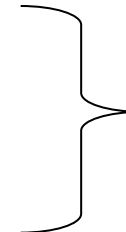
Disseminate the evidence



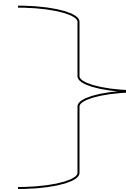
Use the evidence to guide practice



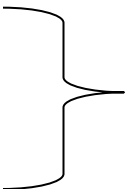
Module 2



Module 3



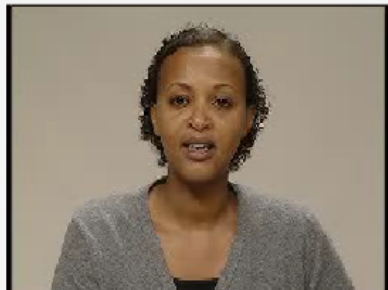
Module 4



Module 5

Modules

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



MODULE 1

Outline Thumbnails Notes Search

- 1. Evidence Based MedicineModule 1
- 2. Learning Objectives
- 3. Recognizing knowledge gaps
- 4. Prioritising questions in two dimensions
- 5. Classifying clinical questions
- 6. Specific questions = PICO structure
- 7. The clinical process
- 8. Type of research evidence & study design
- 9. An example question
- 10. Module 1: Summary

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.



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Assessment: MCQs

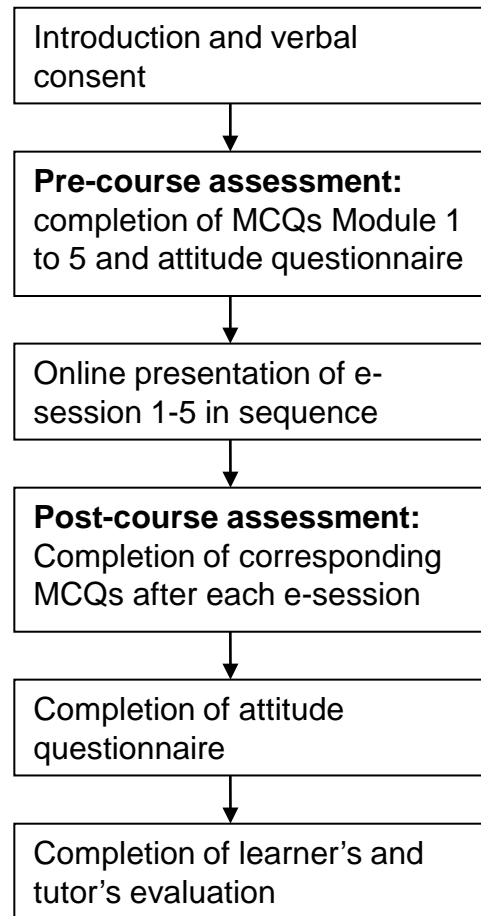
- previously validated, adapted to learning objectives
- ‘true’ false’
- ‘best fitting answer’

- Attitudinal questionnaire

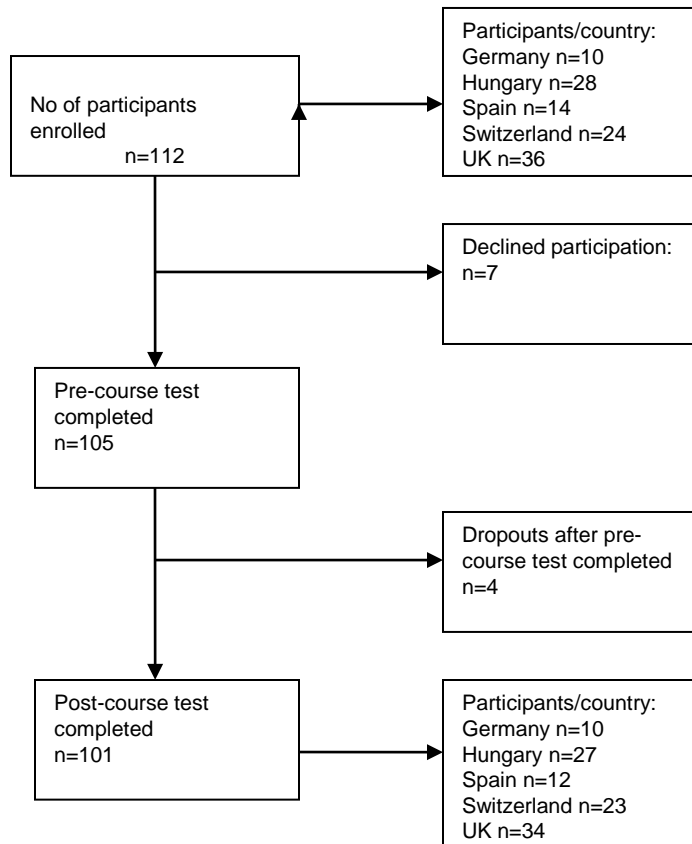
Methods

- 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

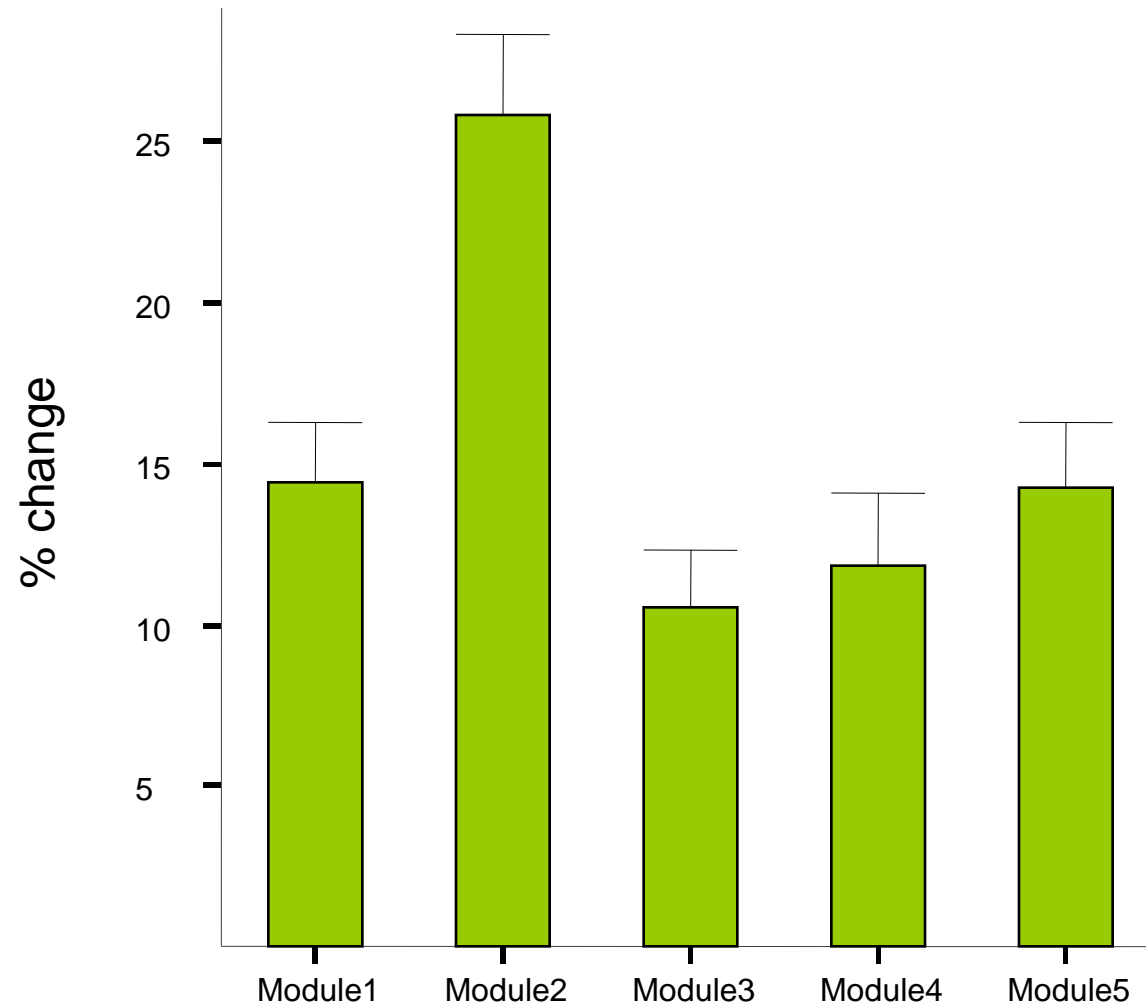
Administration of the course



Flow of participants

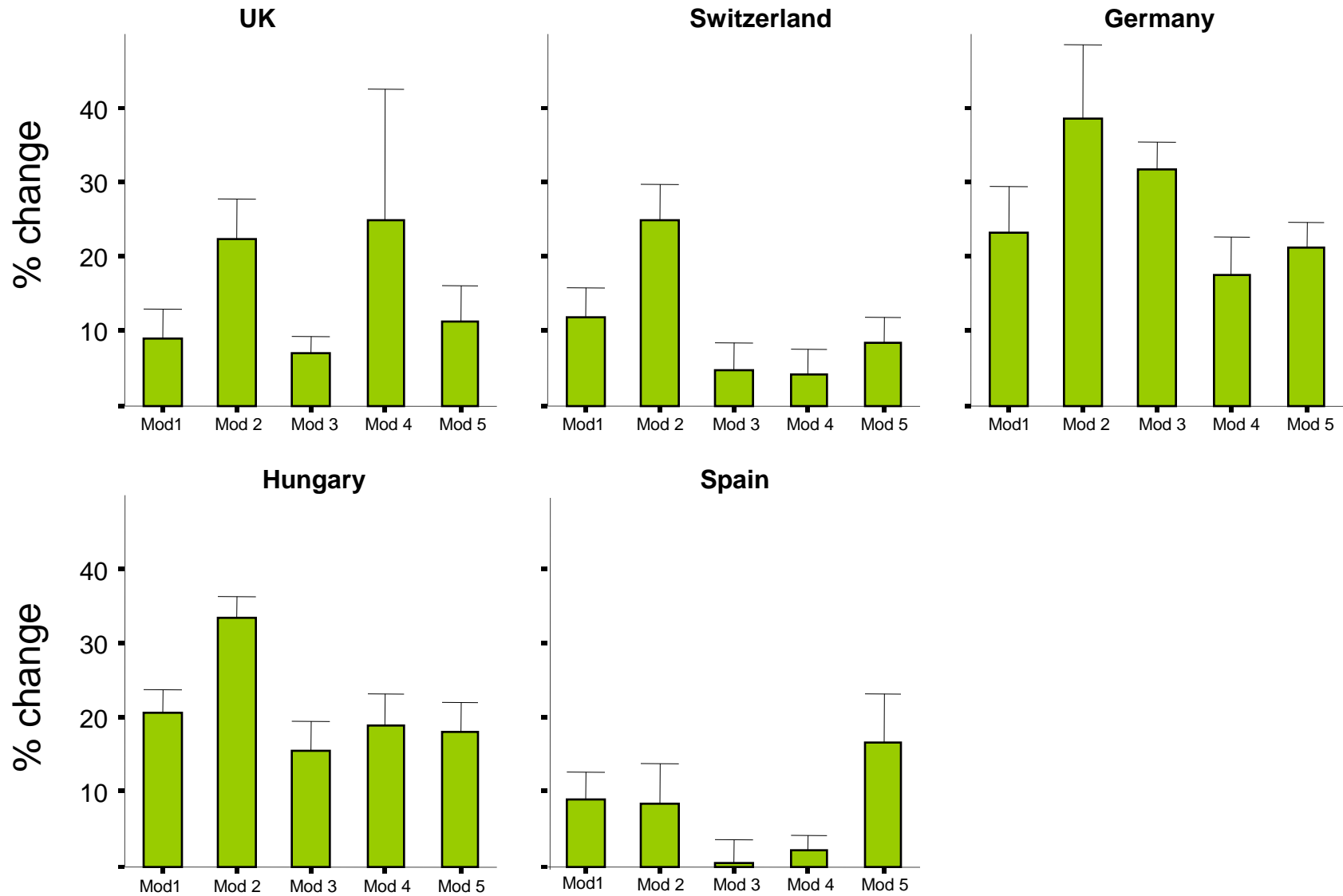


Relative score change



Relative change between pre course and post course scores for MCQ of the five modules for all participants

Relative score change

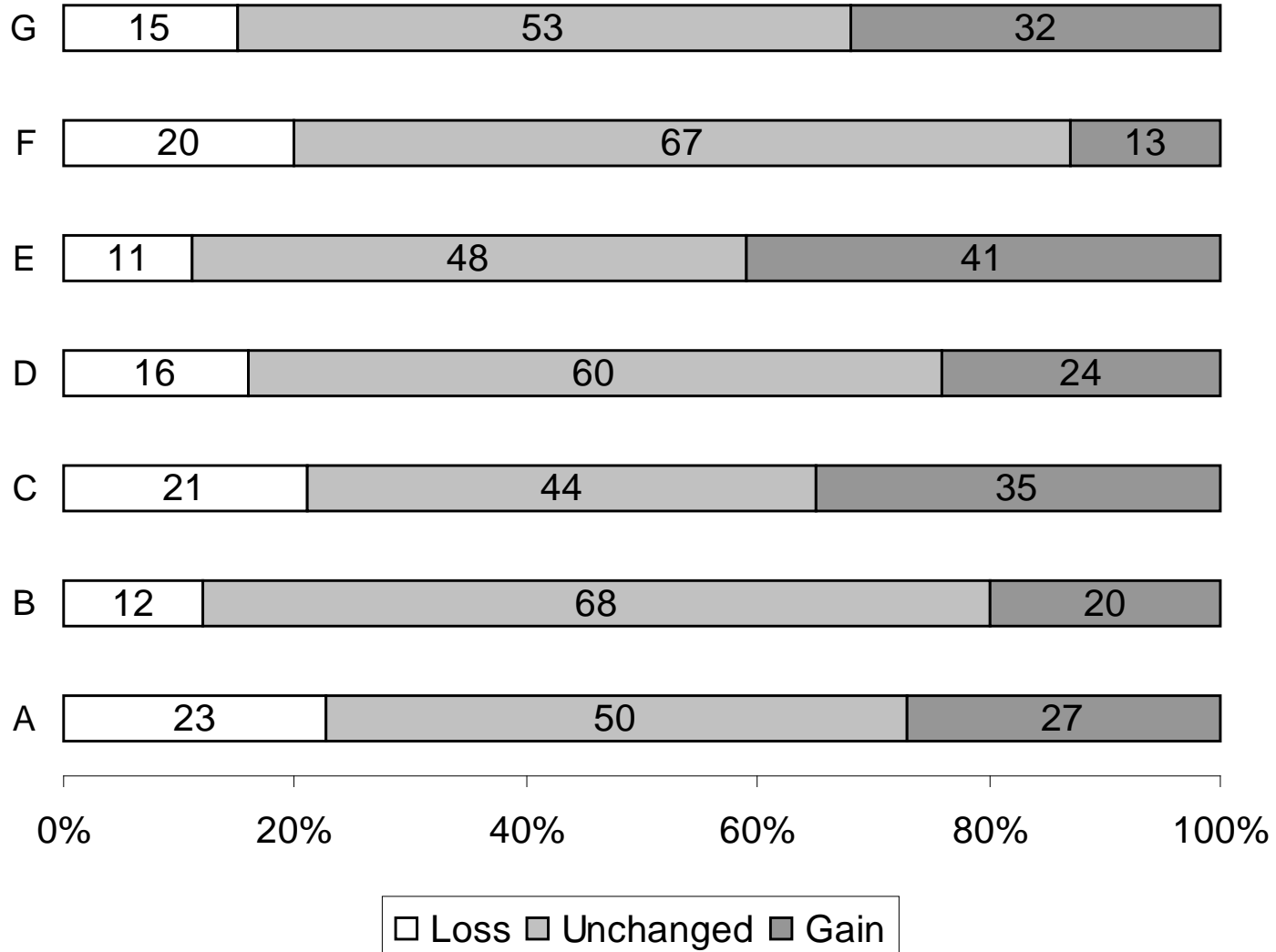


Relative change between pre course and post course scores for MCQ of the five modules according to centre.

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

Attitudinal changes



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

All countries

Switzerland

Germany

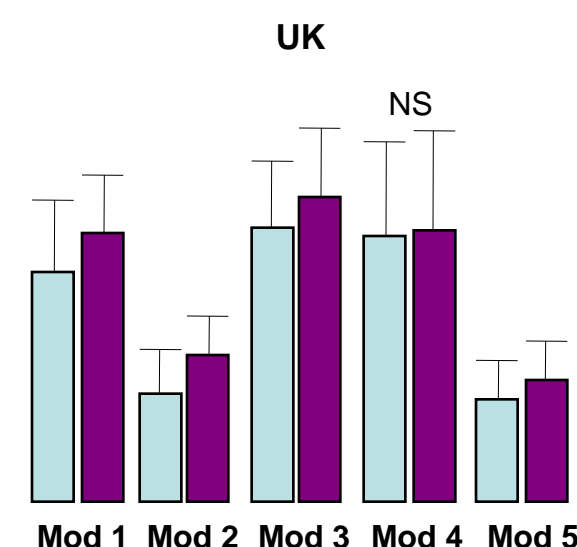
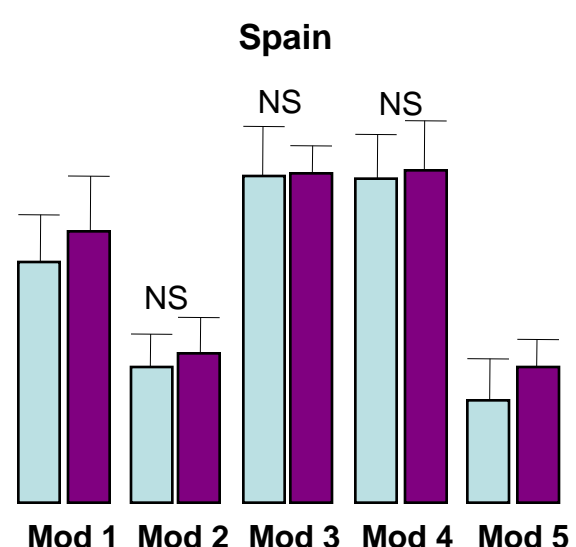
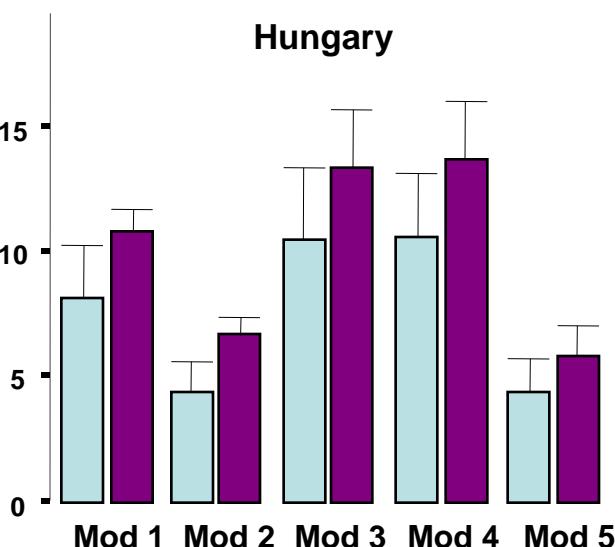
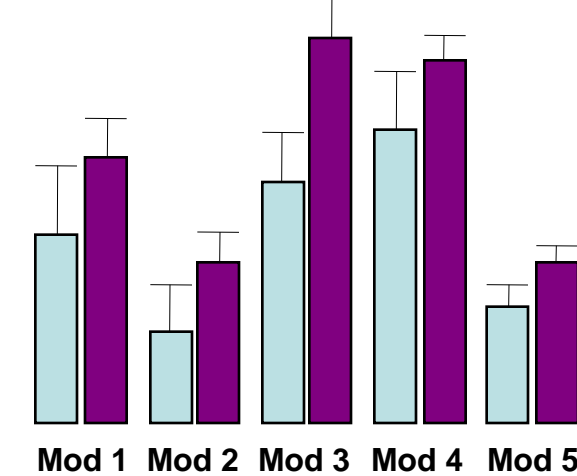
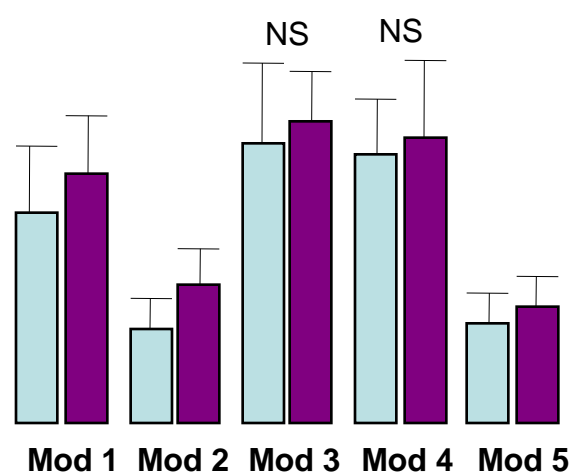
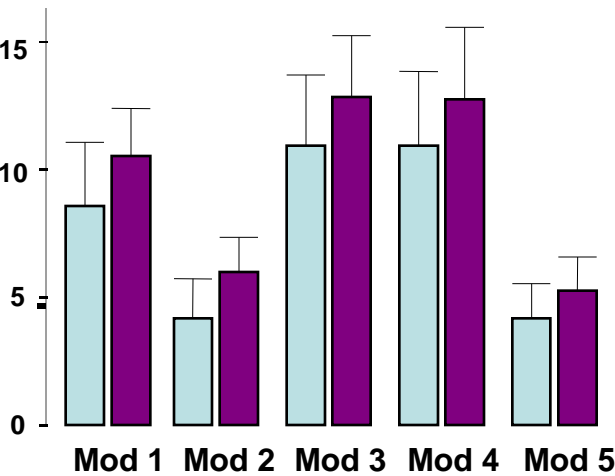
Hungary

Spain

UK

Knowledge score

Knowledge score



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

Pre-course
 Post-course

Time Remaining
0:09:27

MODULE 1 - Attempt 2

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)?