

## Effectiveness of EBP teaching in undergraduate, postgraduate and continuing education

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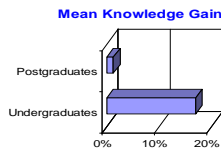


## EBM Teaching for Undergraduate Postgraduate & Continuing Medical Education

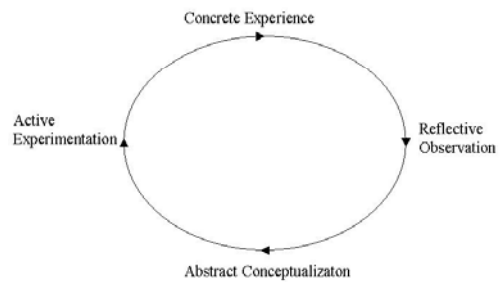
- Formal teaching
- Integration into other teaching
- Incorporation into practice

## Effectiveness of EBHC Teaching

- Norman and Shannon. *CMAJ* 1998;158:177.
- Postgraduate vs undergraduate EBM teaching
- Systematic review of 10 studies (1966 - 1995)
  - 4 studies relating to postgraduates
  - 6 studies relating to undergraduates



## Adult Learning Theory



## What are we doing?

- Research in EBM teaching
- Journal Club
- Evidence based ward round
- Teaching the teachers to teach EBM
- Masterclass
- E-learning in EBM
- EU Learning and Skills Council project
- One-day EBM Workshops (Deanery)
- EU EBM Unity - Leonardo da Vinci

## Postgraduate obstetrics and gynaecology trainees' views and understanding of evidence-based medicine

A systematic review of postgraduate teaching in evidence-based medicine and critical appraisal

Development and validation of a questionnaire to evaluate the effectiveness of evidence-based practice teaching

Critical appraisal workshops to promote evidence-based healthcare

➡ A new approach to teaching and learning in journal club

➡ incorporating the views of obstetric clinicians in implementing evidence-supported labour and delivery suite ward rounds: a case study

Critical appraisal in clinical practice: sometimes irrelevant, occasionally invalid

➡ Assessments in evidence-based medicine workshops: loose connection between perception of knowledge and its objective assessment

➡ What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review

Acid Coomans, Khalid S Khan

## Learning in practice

### What is the evidence that postgraduate teaching in evidence based medicine changes anything? A systematic review

Ami Coomarasamy, Khalid S Khan

#### Abstract

**Objective** To evaluate the effects of standalone versus clinically integrated teaching in evidence based medicine on various outcomes in postgraduates.

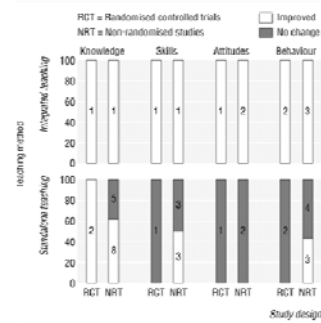
**Design** Systematic review of randomised and non-randomised controlled trials and before and after comparison studies.

**Data sources** Medline, Embase, ERIC, Cochrane Library, DARE, HTA database, Best Evidence, BEME, and SCI.

**Study selection** 23 studies: four randomised trials, seven non-randomised controlled studies, and 12 before and after comparison studies. 19 studies (including two randomised trials) evaluated a standalone teaching method, and five studies (including two randomised trials) evaluated a clinically integrated teaching method.

**Best Evidence Medical Education (BEME), and Science Citation Index (SCI) using the following search terms and their word variants: "evidence", "critical", "appraisal" or "journal club" combined with "AND" to "teach", "learn", "improve", or "enhance". We also searched reference lists of known systematic reviews.<sup>1,4</sup> The final electronic search was conducted in April 2004.**

We included studies that evaluated the effects of postgraduate BEME or critical appraisal teaching compared with a control group or baseline before teaching, using a measure of participants' learning achievements or patients' health gains as outcomes. Learning achievement was assessed separately for knowledge, critical appraisal skills, attitudes, and behaviour. Knowledge relates to issues such as remembering materials



Coomarasamy, A. et al. *BMJ* 2004;329:1017

[bmj.com](http://bmj.com)

### Formal teaching: does knowledge really improve?

Correctness of Knowledge	Correct		Incorrect	
	Level of Confidence	Sure	Unsure	Sure
Usability of Knowledge	Useable	Unusable	Useable	Unusable
Level of Decision Making	Well informed	Uninformed (ignorance)	Misinformation	Misinformation

### Formal teaching: does knowledge really improve?

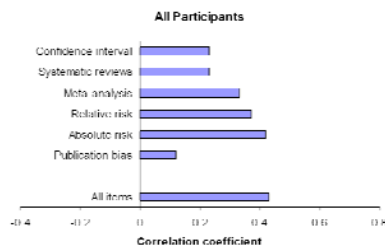
#### Subjective and objective assessment of knowledge

**Subjective assessment:** Participants were asked to circle the number that most closely fitting their understanding of an term on a 1 – 5 rating scale, where 1 referred to "Unaware of the term" and 5 referred to "Understand it and could define it"

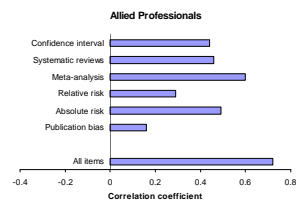
**Objective assessment:** For the terms subjectively assessed, participants were asked to circle "True", "False", or "Don't Know" about statements such as "Any difference in treatment outcomes between patients receiving the new and the old treatments can be attributed to the new treatment"

Taylor et al. *Med Educ* 2001;35(6):544-547.

### Formal teaching: does knowledge really improve?

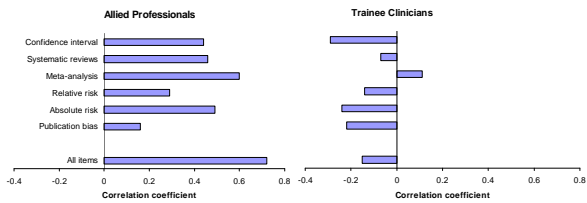


### Formal teaching: does knowledge really improve?



Khan et al. *Med Teach* 2001; 23(1):92-94.

### Formal teaching: does knowledge really improve?



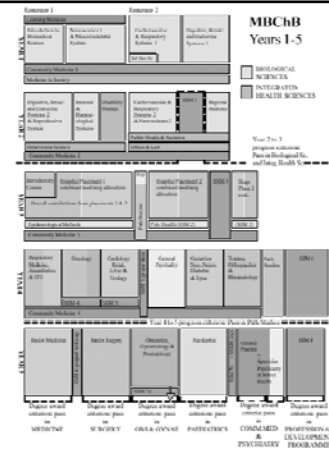
Khan et al. Med Teach 2001; 23(1):92-94.

### EBM Teaching for Undergraduate, Postgraduate & Continuing Medical Education

- Formal EBM teaching
  - Workshops, lectures, courses, journal club
- Integration into other teaching
  - CPD/CME/PGME, Specialty-based modules, journal club
- Incorporation into practice
  - Evidence-based ward round

### EBM Teaching for Undergraduate, Postgraduate & Continuing Medical Education

- Formal EBM teaching
  - Improve knowledge & skills
- Integration of EBM into other teaching
  - Improve comprehension & adaptation / Change attitude
- Incorporation of EBM into practice
  - Improve application / Change behaviour (improve patient care)



### EBM Teaching for Undergraduates How we do it in Birmingham

- Learning Outcomes
- Curriculum
  - Formal teaching
  - Integration into other teaching
  - Incorporation into practice
- Electronic Curriculum

### EBM Teaching for Undergraduates How we do it in Birmingham

- Learning Outcomes
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