



Teaching EBM based on a national curriculum in Germany

Yngve Falck-Ytter, Monika Lelgemann, Edith Motschall, Gerd Antes
German Cochrane Centre
Inst. for Med. Biometry and Med. Informatics
University Hospital Freiburg, Germany



Background

- EBM not part of medical school curriculum
 - Reform process very slow in Germany
- Key players developed a national curriculum
 - Agency for Quality in Medicine
- Goal: to standardize teaching efforts



Aims

- Develop and evaluate a problem-based course in EBM
- Based on the national curriculum (basic course)
- Target group: Final year students / first year residents
- Assess feasibility and increase in knowledge and skills
- Long-term goal: To increase the use of original articles and pre-filtered evidence or systematic reviews
- Develop methods to assess changes in behavior
 - E.g., reduce reliance on expert opinion / key opinion leaders / pharmaceutical representatives



Methods

- 9 week course
- 2 hours a week
- Supported by course website and email
- Teaching staff:
 - Methodologists from the German Cochrane Centre
 - Full time clinicians from the University Hospital
 - Information retrieval specialist (librarian)



Course sequence

Tuesday		Wed Thu	Students search PubMed at home	3
7	10 min	PubMed		
8	30 min	Critical appraisal		
	10 min	Break		
1	30 min	EBM Topic		
	10 min	Break		
2	30 min	Standardized patient		
		Fri	Search strategy online Study sent via email	4
		Sat Sun	Careful reading of study over the weekend	5
		Mon	ACP Journal Club critical appraisal retrievable online	6

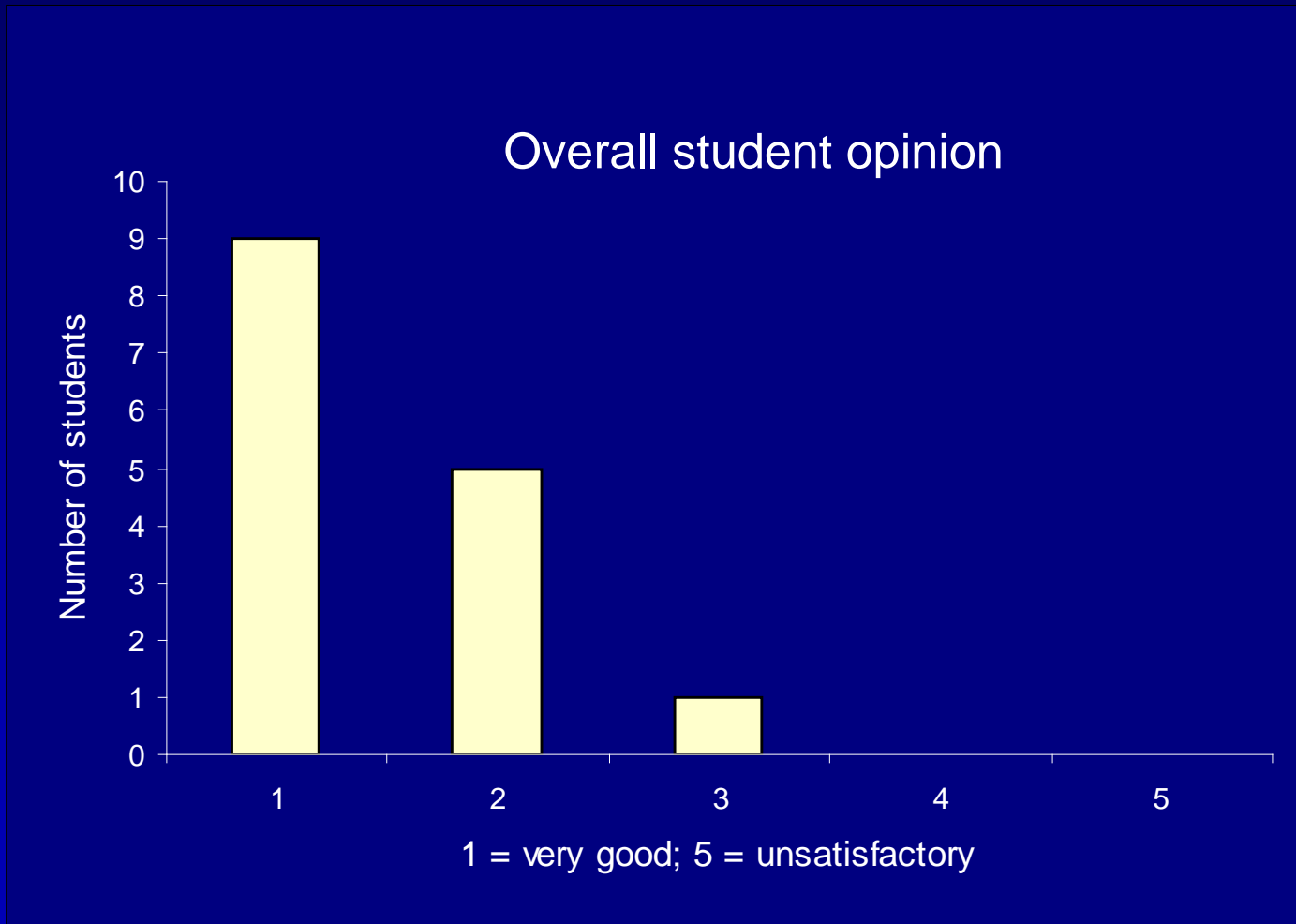


Results: Knowledge acquisition

- Pre- and post-test: 12 items (MCQ, write-in)
- Mean correct pre-test: 47%
- Mean correct post-test: 72%
- Mean increase: 2.5 correctly answered items
[CI 1.3; 3.6] $p < .001$
- Difficulty range (post): .42 – .92
- Item discrimination: .20 – .80
- Reliability (KR 20): .77

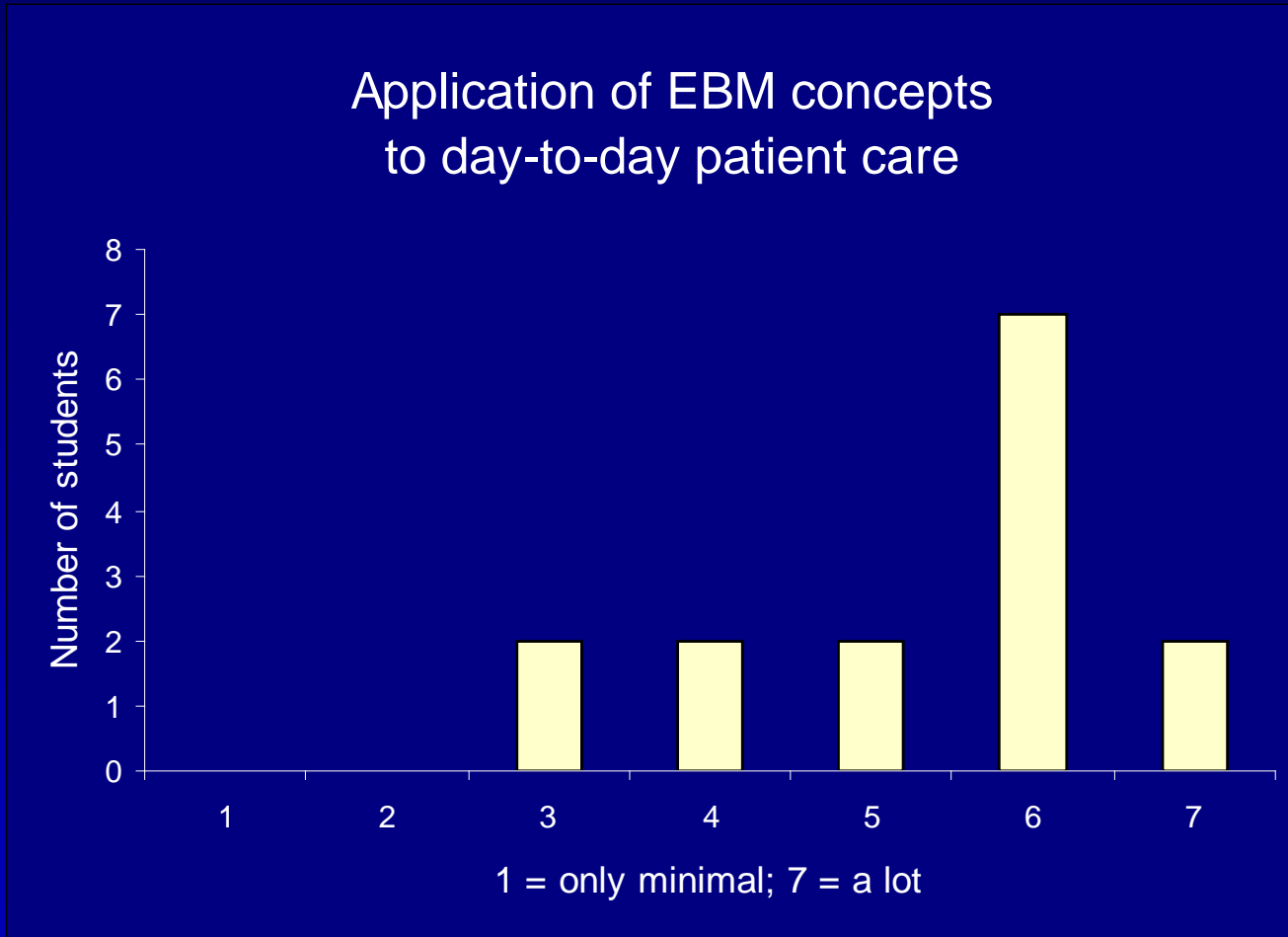


Results: Student opinion





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Results

- Students valued official certificate of completion
 - Because the course was based on a national curriculum, this was felt to legitimize the course philosophy
- Substantial effort
 - Time spent for organizing and running the course
 - Email support
 - Maintenance of the website
 - Construction of test items



Interpretation

- Although students were able to increase their knowledge and skill in EBM, it remains unclear, whether this will have an impact on resident behavior
- Anecdotal evidence suggests continued failure to incorporate evidence in a systematic manner in the German health care system
- Such an environment may be one reason why students in Germany have difficulties applying EBM knowledge and skills



Conclusion

- A nine-week basic course in EBM for final year students/residents can increase knowledge and skills in evidence based medicine
- However, resource utilization was quite high and change of attitude towards systematically using external evidence in day-to-day patient care has to be demonstrated in the future to justify continued resource allocation