kunnskapssenteret
Norwegian Knowledge Centre for the Health Services

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Pilot study of new course in EBP for hospital physicians:

Will practice-training with portfolio evaluation make a difference?

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Background

- First formal education in evidence based practice (EBP) for hospital physicians in Norway

- Clinically integrated learning by identification of current clinical scenarios and utilization of EBP-steps is likely to bring about changes in skills, attitudes and behaviour

  Coomarasamy A, Khan KS. BMJ 2004; 329

- Portfolio-evaluation represents a promising method to achieve and document EBP performance in practice

  Shaneyfelt T, et al. JAMA 2006; 296

Aims

- To evaluate the feasibility of a new course in EBP for hospital physicians and to evaluate its' impact on EBP performance
- Research questions:

✓ How does practice-training with portfolio evaluation work for study participants?

✓ What is the effect of practice-training on participants EBP performance?

✓ How many scenarios were solved satisfactorily (clinically useful answer) and to what extent did these answers require change in practice?

Design of the course

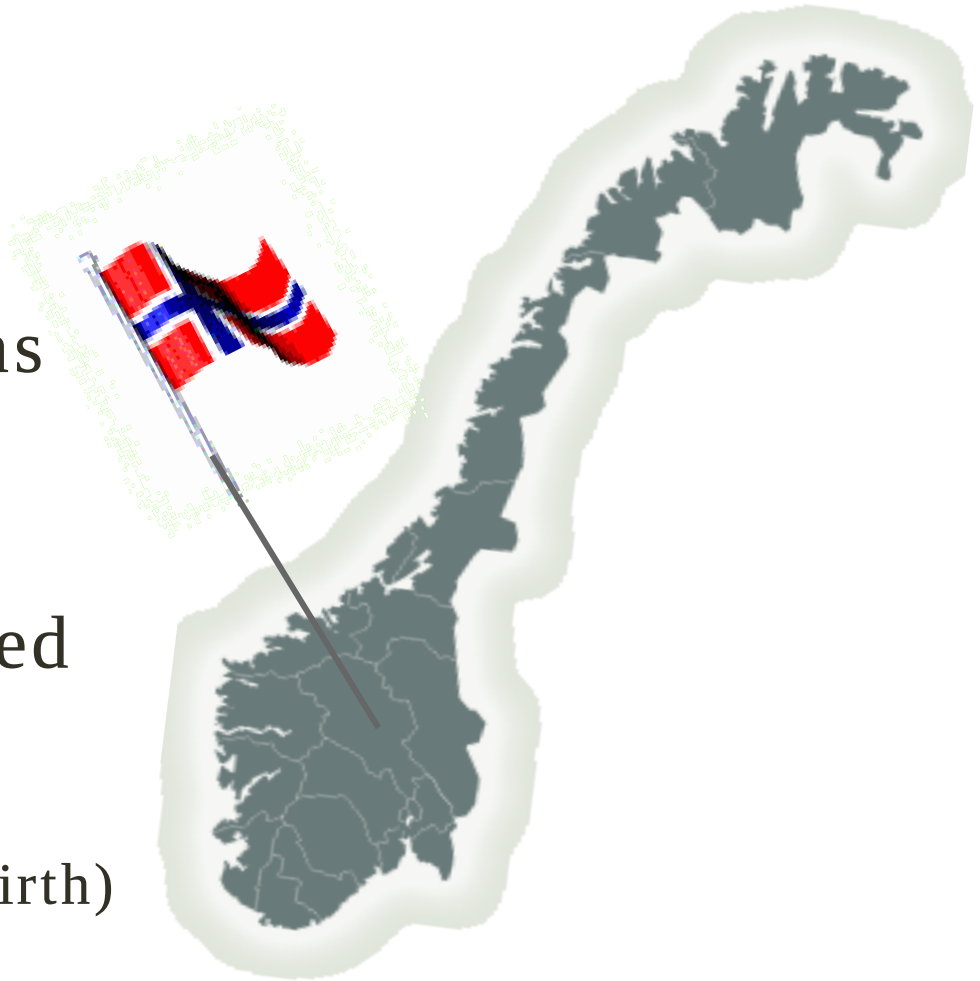
- **Part 1 :** 3 day workshop PBL on EBP-steps
  (asking, assessing, appraising and applying evidence)

- **Part 2:** Practice training, solving 3 current clinical scenarios by EBP-steps, documented in electronic portfolio. Possibility of methodological support

- **Part 3 :** 1 day follow up seminar, emphasis on diagnostic studies and assessment and evaluation (fifth EBP step)

Setting and material: Innlandet Hospital Trust

- 8 district-hospitals
- Non-academic
- EBP-naive physicians
- Invited by e-mail



- 17 physicians included

✓ 8 different specialties

✓ Mean 10 yrs experience

✓ 1 lost to follow up (child birth)

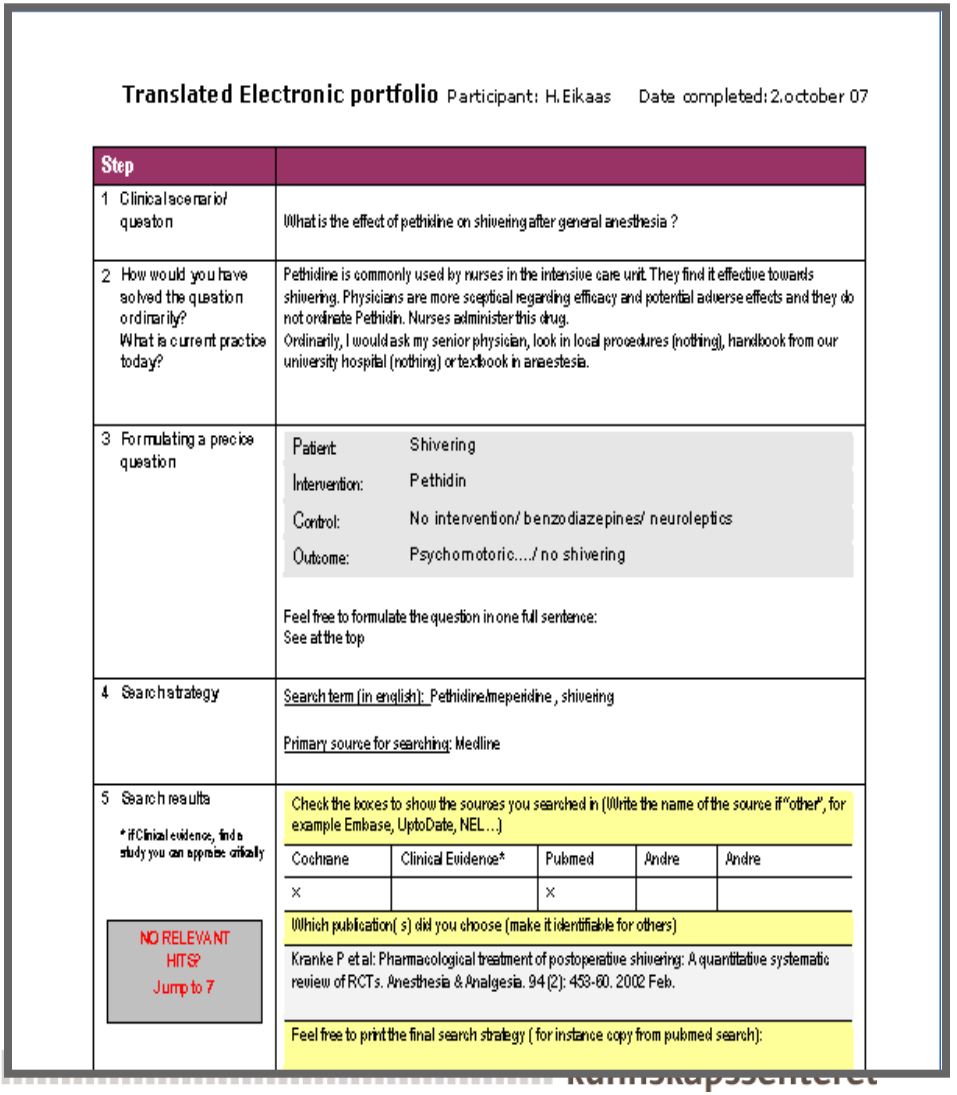
Methods: Outcome measures and tools

- EBP practice performance
  (knowledge, skills, attitudes and behaviour)
- Development of electronic portfolio
- Participants experiences and evaluation
  (questionnaires and discussions)

Results: Practice training with portfolios

- 11 of 16 participants (69%) completed portfolios
- 28 portfolios available for evaluation

  (58% of expected)



Translated Electronic portfolio Participant: H. Eikaas Date completed: 2. october 07

Step	
1 Clinical scenario/ question	What is the effect of pethidine on shivering after general anesthesia ?
2 How would you have solved the question ordinarily? What is current practice today?	Pethidine is commonly used by nurses in the intensive care unit. They find it effective towards shivering. Physicians are more sceptical regarding efficacy and potential adverse effects and they do not ordinate Pethidin. Nurses administer this drug. Ordinarily, I would ask my senior physician, look in local procedures (nothing), handbook from our university hospital (nothing) or textbook in anaestesia.
3 Formulating a precise question	Patient: Shivering Intervention: Pethidin Control: No intervention/ benzodiazepines/ neuroleptics Outcome: Psychomotoric..../ no shivering Feel free to formulate the question in one full sentence: See at the top
4 Search strategy	Search term (in english): Pethidine/meperidine , shivering Primary source for searching: Medline
5 Search results * if Clinical evidence, find a study you can appraise critically NO RELEVANT HITS? Jump to 7	Check the boxes to show the sources you searched in (Write the name of the source if "other", for example Embase, UptoDate, NEL...)

Cochrane	Clinical Evidence*	Pubmed	Andre	Andre
x		x		

Which publication(s) did you choose (make it identifiable for others)

Kranke P et al: Pharmacological treatment of postoperative shivering: A quantitative systematic review of RCTs. Anesthesia & Analgesia. 94 (2): 453-60. 2002 Feb.

Feel free to print the final search strategy (for instance copy from pubmed search):

1. Clinical scenario/ question	All 28 questions were about therapy individual patients (7), common issues (21)
2. How would you have solved the question ordinarily? What is current practice today?	Ordinary problem solving asking senior colleague, looking in local protocols, guidelines, Reading textbooks, search internet (1)
3. Formulate a precice question	Well formulated PICO questions: 28 / 28 Some had difficulties in defining Intervention (4), Control (1) Outcome (3),

4	Search strategy	Search strategy satisfactory: 26 / 28 (93%)
5	Search results * if Clinical evidence, find a study you can appraise critically	Search identified source in 26 / 28 (93%) Sources were: Cochrane systematic review (13) other SR (1) Clinical evidence (3), RCT (8) Retrospective (1) and cohort (1) Relevance of identified sources: 23/26 (88%) Irrelevant outcome measure (1) irrelevant intervention (1) Irrelevant review paper without evidence (1)

NO RELEVANT

HITS?

Jump to 7

Please reflect on why you chose the above mentioned paper and your experiences with the search:
Medline: Chose the newest review with metaanalysis of RCTs. Highly ranked journal. Available in full text at www.helsebiblioteket.no. I also found a review by the same author and in the same journal 2004, but more specific ”Single-dose parenteral pharmacological intervention…” Many RCTs new and old among the other 41 hits.

6	Critical appraisal	Critical appraisal performed* in 24 / 24 4 papers determined invalid after appraisal * Some weaknesses of appraisal: Lacking documentation in portfolio regarding Validity: Particularly Cochrane and Clin Evidence (11) Results: No description of effect sizes (8) Applicability: No explanation (6)
7	Conclusion with clinical solution of problem	Satisfactorily solved scenario: **22 / 28 (79%)**
8	Implementation in practice?	Identified need to change practice: **11/ 28 (39%)**

Methodological support? Participants views?

- Methodological support: Infrequently used
  - ✓ EBP physician (2), librarians (8, 6 paper requests)

- Participants views and evaluation:
  - ✓ Generally very satisfied, but mixed feelings Part 2
  - ✓ Suggestions for improvement: Protected time for practice training, performed within 1 month of part 1

- Attitudes and behaviour: More critical and reflective. We can do this but we don't have time. Some barriers overcome (internet access) but many to adress

Summary

- Promising methodology for EBP performance
- Hospital physicians

✓ Identified relevant clinical questions

✓ Documented EBP steps and performance

✓ Found useful answers in 8 0f 10 scenarios

✓ Identified a need to change practice in 4 0f 10 scenarios

- A range of possibilities for research and practice
- Methodological challenges to discuss:

  Recruitment, design and assessment tools

Did portfolios change practice? Yes, in 39%

1. Meniscus tears: Offer physiotherapy before surgery
2. Hernia: TEP better than open surgery if competent surgeon
3. Colon-surgery: Use stapled anastomoses rather than handsewn
4. Multiple sclerosis: Use intravenous prednisolone instead of peroral. Make procedure
5. Epicondylitis: Use local steroids and not NSAIDS
6. Postoperative DVT: 3 months Warfarin sufficient
7. Hypothermia after cardiac arrest: reserve for pts resuscitaded after Ventricular Fibrillation
8. Cancer and pulmonary embolism (2 portfolios): Use LMWH and not Warfarin
9. 2 portfolios on Menieres disease: National guidelines recommend diuretics and betaserc without evidence
10. Acute Macula Degeneration: Use Ranibizumad and not Vertepine