

## **EBM – barriers and opportunities**

Helena Dahlgren, SBU  
Swedish Forum for Integrative Medicine  
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SBU – Statens beredning för medicinsk utvärdering

[www.sbu.se](http://www.sbu.se)



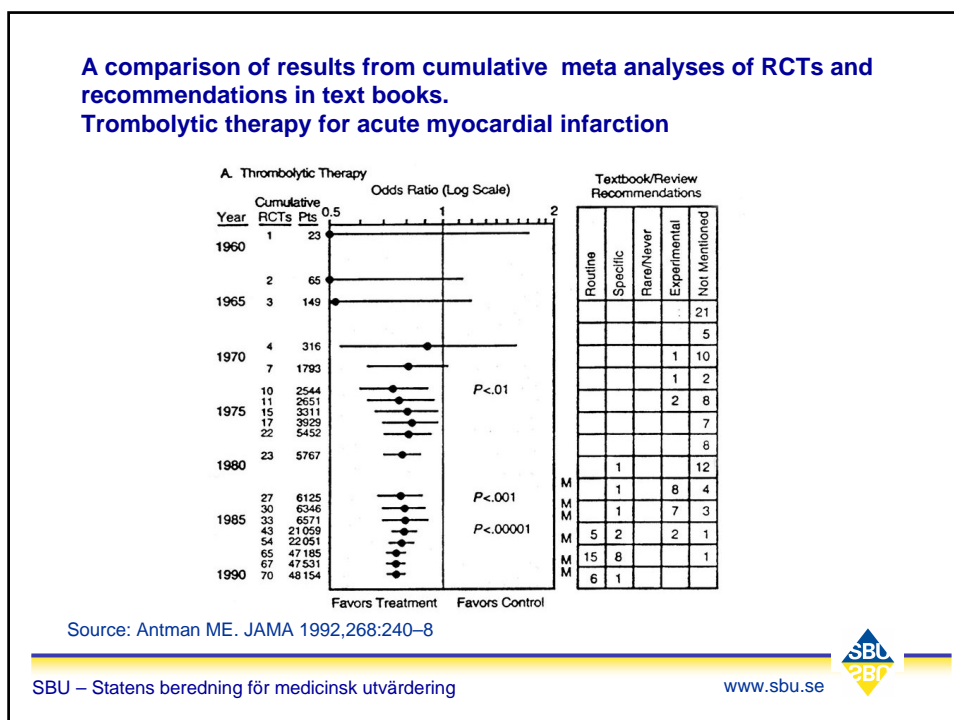
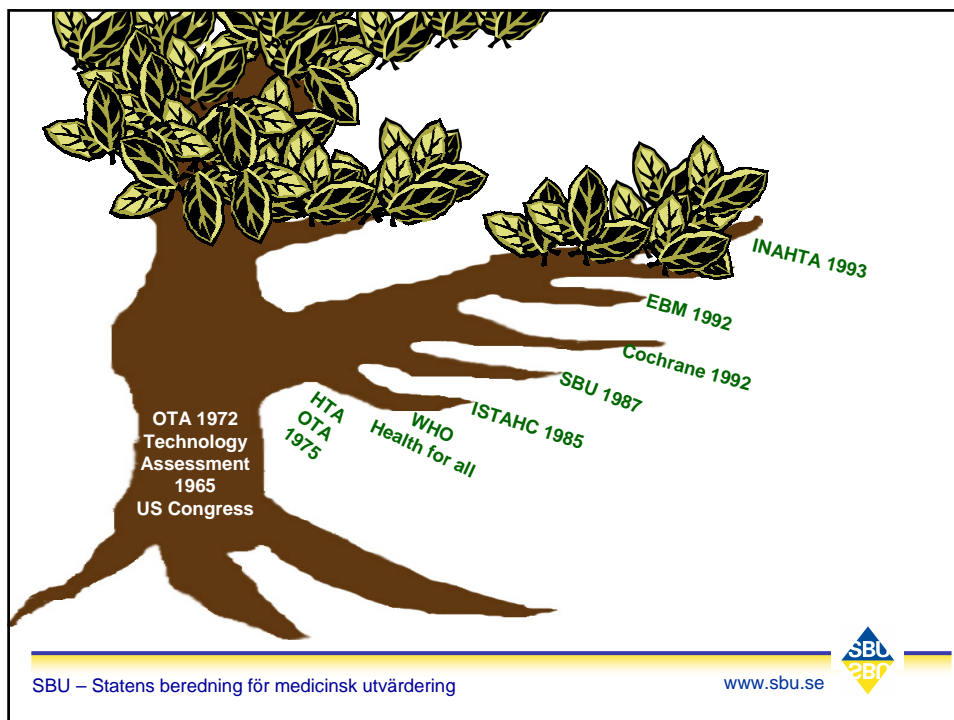
## **SBU – The Swedish Council on Health Technology Assessment**

- Aim: To make Swedish health care more efficient through assessing and appraising the methods used for prevention, diagnosis, treatment and rehabilitation. The assessment should clarify and evaluate medical, economic, ethical and social aspects
- Founded in 1987
- Employees 35
- Contracted researchers 250
- Budget 5,7 €

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## EBM – what it is and what it isn't\*

“Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of EBM means integrating individual clinical expertise with the best available external clinical evidence from systematic research.”

“Evidence based medicine is not “cookbook” medicine.”

\* David Sackett et al. BMJ 1996;312:71-72

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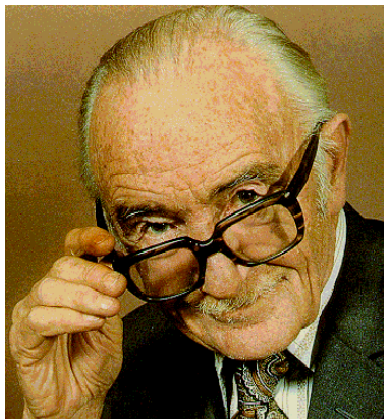


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**"All effective health care must be free"**



**Archibald Cochrane**

Källa: Effectiveness and Efficiency av AL Cochrane

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**Content in Cochrane Library  
May 27, 2007**

4 801	Reviews
793	of these dealing with alternative or complimentary medicine
495 002	Controlled Trials Register
6 817	in HTA Database
21 149	Economic Evaluations
9 458	Methodology Register

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### Why do we need HTA and EBM?

- There are now more than 15 million medical articles
- There are more than 20 000 medical journals
- There are 2 million new articles every year
- Around 10–15 % of these will have a lasting scientific value

How can people in health care keep in pace with this development?



Professional good intentions and plausible theories are insufficient for selecting policies and practices for protecting, promoting and restoring health.

Iain Chalmers



### **The assessment should avoid bias**

- Presuppositions
- Publication bias
- Study method and performance
- Interpretation and compilation of results



### **The assessments should be objective**

- The assessments should be based on all available research chosen with predefined criteria for inclusion and exclusion
- The quality of the studies should be reviewed with preset standards for internal and external validity



Grading of the evidence cannot  
be done if it isn't based on a  
systematic literature review!



### **Systematic literature review**

**A critical appraisal of all relevant literature:**

1. Define the questions  
Population  
Intervention  
Control  
Outcome
2. Systematic literature search
3. Selection of studies based on all available literature according to criteria for inclusion and exclusion
4. Evaluating the internal and external validity and precision of the studies
5. Dataextraction and making evidence tables
6. Synthesis and evidence grading



## Grading the evidence

Grading according to the GRADE system – 4 criteria:

- Study design
- Study quality
- Consistency
- Directness



## Grading the evidence – GRADE

- **High** – Further research is very unlikely to change our confidence in the estimate of effect
- **Moderate** – Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
- **Low** – Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
- **Very low** – Any estimate of effect is very uncertain



### Preconditions, limitations

- A sufficient supply of studies of the area (lack of is also an interesting find)
- Methodology is time and resource consuming
- Conclusions always uncertain
- To motivate undertaking the work, there must be a possibility to improve practice
- The supply of studies unevenly distributed
  - A lot of drugs
  - Less of surgery
  - Nursing and caring usually qualitative studies



### Distribution of types of studies of elderly–cognitive diseases

Treatment	RCT	CCT	Other
Drugs	137	44	6
Physiotherapy	3	1	3
Memory training	5	–	2
Different stimuli – sound, light, touch	6	4	10
Other, relatives, training of personnel	23	5	5
<b>Total</b>	<b>194</b>	<b>54</b>	<b>26</b>

Source:SBU-report 163:2003



