"When I look back on all the crap I learned in high school; it is wonder that I can think at all."

Direction of this Discussion

- Definition of EBM
- What EBM is not
- What is the genesis of EBM?
- EBM-Why now?
- What categories of question can best be answered?
- What is the general approach to EBM?
- What are EBM's limitations?
- Resources for EBM

EBM Definition #1-Most Quoted

- "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patients"
- Sackett DL et al. Evidence Based Medicine: What it is and What it isn't. BMJ 1996; 312: 71-2

EBM Definition-With Modification

- "Evidence-based medicine is the enhancement of a clinician's traditional skills in diagnosis, treatment, prevention and related area through the systematic framing of relevant and answerable questions and the use of mathematical estimates of probability and risk"
- Donald A, Greenhalgh T. A hands-on guide to evidence based health care: practice and implementation.Oxford: Blackwell Science, 2000.

My understanding of EBM

- EBM is a tool. It is not for all aspects of Medical decision making.
- It is a structure approach to literature, leading to decisions that are based on probability
- It is important to use in those areas that occur commonly in the practice of individual physician.

Probability in Patient Care

- Most people including Physicians would prefer things in “black and white” and not in “Kodachromes”
- There are very few things that are certain- the Chicago Cubs will not win the World Series

What EBM is Not-Other Approaches to Decision Making

- Decision making by anecdote
- Decision making by press cutting
- Decision making by expert opinion (eminence based medicine)
- Decision making by cost minimization

What is the genesis of the EBM movement?

- Most think that the ideas have around for a long time.
- First expression in post-revolutionary Paris (when clinicians like Pierre Louis rejected the pronouncement of authorities and sought the truth in systematic observation of patients)
- In this current era, they were consolidated and named EBM in 1992 by a group led by Gordon Guyatt at McMaster in Canada

Four Realization leading to the spread of EBM

- 1. Our daily need for valid information about diagnosis, prognosis, therapy and prevention.
- 2. The inadequacy of traditional sources for this information because they are out of date (textbooks), frequently wrong (experts), ineffective (CME) or too overwhelming in their volume and too variable in their validity for practical clinical use. (medical journals)
- 3. the disparity between our diagnostic skills and clinical judgment, which increase with experience and our up-to-date knowledge and clinical performance, which decline
- 4. our inability to afford more than a few seconds per patient for finding and assimilating this evidence or to to set aside more than half an hour per week for general reading and study.

Five Developments that have permitted the development of EBM

- 1. the development of strategies for efficiently tracking down and appraising evidence (for its validity and relevance)
- 2. the creation of systematic reviews and concise summaries of the effect of health care (epitomized by the Cochrane Collaboration)
- 3. The creation of evidence-based journal of secondary publication.
- 4. the creation of information systems for bringing the foregoing to us in seconds
- 5. the identification and application of effective strategies for lifelong learning and for improving our clinical performance

What are the categories of Clinical Questions or where do I use EBM?

- 1. Diagnosis and Screening
- 2. Therapy
- 3. Harm
- 4. Systematic Reviews
- 5. Prognosis

“Pecking” order of Studies-Primary Studies

- 1. Randomized Control Trial
- 2. Cohort Studies
- 3. Case-control Studies
- 4. Cross-sectional Surveys
- 5. Case Reports

Secondary Studies

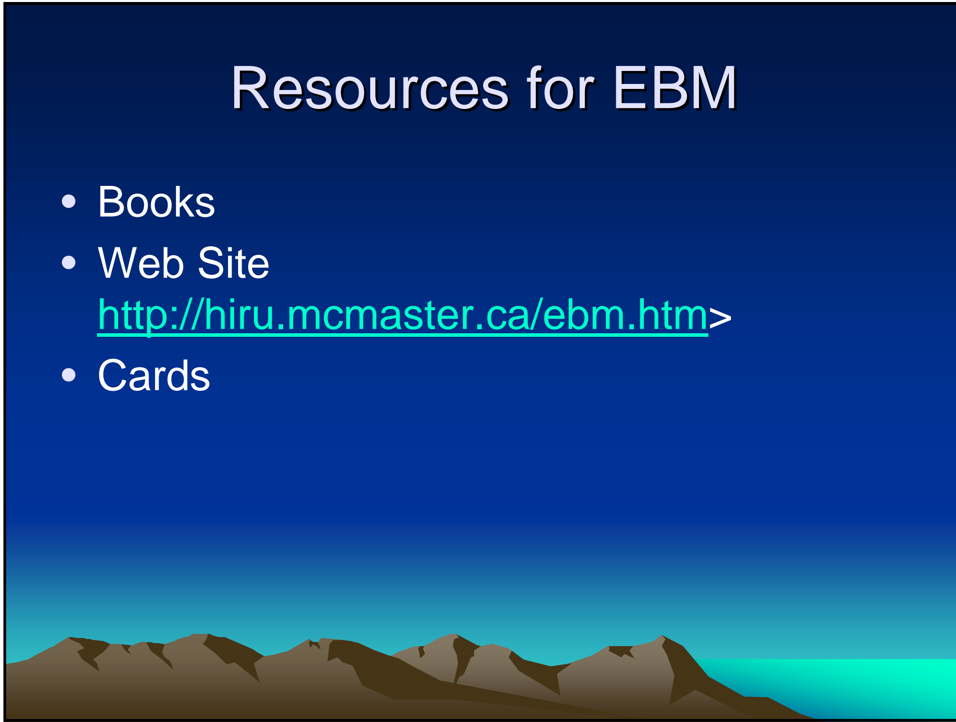
- Overviews-a. Reviews, b. Systematic reviews, c. Meta-analyses
- Guidelines
- Decision Analysis
- Economic Analysis

Steps of EBM

- Step 1- Converting the need for information into an answerable question
- Step 2- Tracking down the best evidence with which to answer that question.
- Step 3- Critically appraising that evidence for its validity, impact and applicability
- Step 4- Integrating the critical appraisal with our clinical expertise and with our patient's unique biology, values and circumstances.
- Step 5-Evaluating our effectiveness and efficiency and seeking ways to improve them for next time.

Limitations of EBM

- Learning the skills of EBM-searching and critical appraisal can be daunting.
- Clinician have limited time to master and apply these new skills
- Resources required for instant access are sometimes inadequate in clinical settings
- Evidence that EBM “works” has been late and slow to come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