Critical point learning

Reflection as a method of continuing professional development

and life long learning

EBM

- Day to day clinical practice involves solving questions in a peer supported environment through evidence based medicine and involves critical appraisal of clinical papers and guidelines through the EBM process
- EBM is the conscientious ,explicit and judicious of the current best evidence in making decisions about the care of individual patients (Sackett 1996)

Fallibilism

- **Fallibilism is the philosophical doctrine that all claims of knowledge could, in principle, be mistaken . Therefore, the truth is subject to change.**
- empirical knowledge can be revised by further observation, and any of the things we take as knowledge might possibly turn out to be false

Epistemology

- **Epistemology: *theory of knowledge***

branch of philosophy concerned with the nature and scope (limitations) of knowledge.

It addresses the questions:

What is knowledge?

How is knowledge acquired?

What do people know?

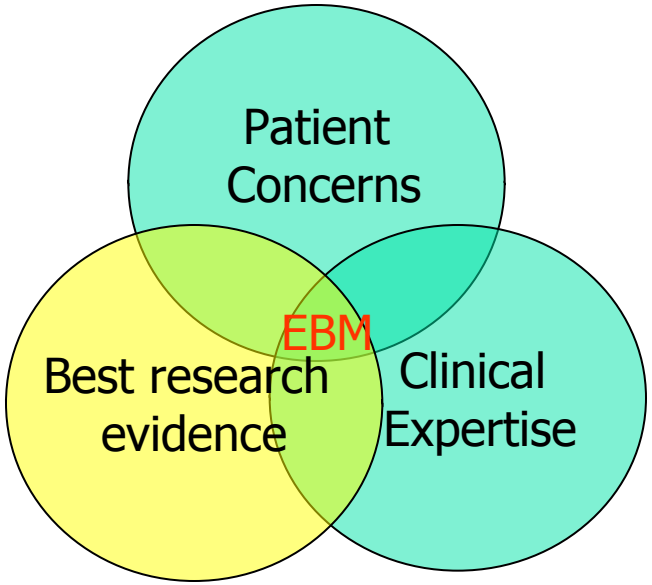
How do we know what we know?

Why do we know what we know?

What is evidence-based medicine?

"Evidence-based medicine is the integration of best *research evidence* with *clinical expertise* and *patient values*"

- *Dave Sackett*

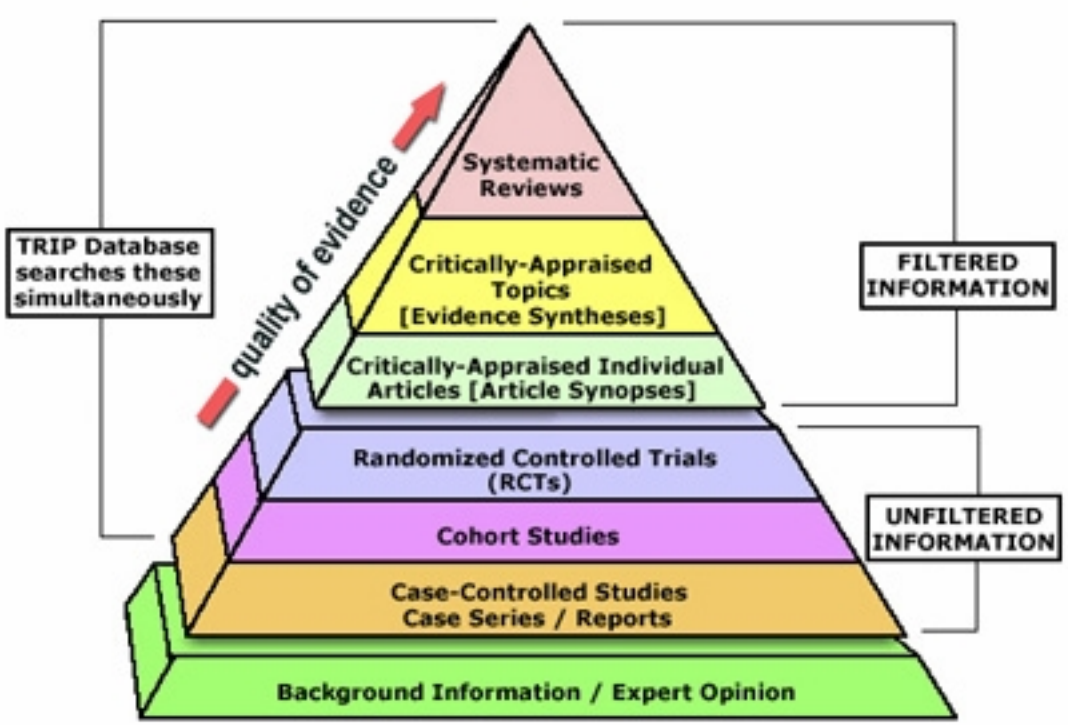


Evidence based medicine

- Integration of clinical expertise, patient values and the best evidence into the decision making process for patient care
- Clinical expertise refers to the clinician's cumulated experience, education and clinical skills
- The patient brings to the encounter personal values expectations and concerns
- Best evidence is found in clinically relevant research conducted through sound technology (Sackett 2002)

Steps in EBM process

The patient	Define a clinical question or problem related to patient care
The question	Formulate a clinical question related to the case
The resource	Select resources and conduct a search
The evaluation	Scrutinize the evidence for its validity and usefulness
The patient	Integrate the evidence with clinical expertise and patient preferences and apply to practice
Self evaluation	Evaluate performance with this patient with this particular problem . The use of audit , reflections and critical case learning


TRIP Database searches these simultaneously
quality of evidence
Systematic Reviews
Critically-Appraised Topics [Evidence Syntheses]
Critically-Appraised Individual Articles [Article Synopses]
Randomized Controlled Trials (RCTs)
Cohort Studies
Case-Controlled Studies
Case Series / Reports
Background Information / Expert Opinion
FILTERED INFORMATION
UNFILTERED INFORMATION

Decision making in clinical practice using evidence

Decision-making is the cognitive process resulting in the selection of a course of action among several alternative possibilities


Individual Cinical Expertise
Patient's Values & Expectations
Improved Patient Outcomes
Best Available Clinical Evidence

EBM

- Two types of evidence-based medicine
- **Evidence-based guidelines** the practice of evidence-based medicine at the organizational or institutional level. This includes the production of guidelines, policy, and regulations
- **Evidence-based individual decision making** (EBID) is evidence-based medicine as practiced by the individual health care provider.

Guidelines

EVIDENCE OR OPINION?

source of friction :”whether guidelines should be largely based on evidence or from opinion based on the consensus of a panel of experts. "

Clinical guidelines

there is a distinction between those that have a strictly defined, procedure-specific orientation (critical pathways) and those that are used to confirm diagnoses and attempt to set broad boundaries of acceptable care, within which the practitioner chooses the optimal approach(boundary guidelines).

Evidence –based medicine

Sackett

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

Evidence-based medicine

Using techniques from science, engineering, and statistics, such as meta-analysis of medical literature, risk-benefit analysis, and randomized controlled trials, EBM aims for the ideal that healthcare professionals should make "conscientious, explicit, and judicious use of current best evidence" in their everyday practice.

EBM

Evidence-based medicine has demoted *ex cathedra* statements of the "medical expert" to the least valid form of evidence. All "experts" are now expected to reference their pronouncements to scientific studies

Application to Medical Knowledge

Two types of knowledge are involved in good medical practice.

knowledge concerning the (patho)physiological mechanisms underlying the disease, and the way treatment influences these mechanisms(background knowledge). The knowledge involved could be causal in nature, and is an example of object-knowledge.

knowledge concerning good practice in treatment selection; this is meta-knowledge

Continuous medical education

- Embodies professional learning and growth and self directed
- Hope of CME is to integrate knowledge into practice
- Forms basis of knowledge translation which moves a physician from awareness to agreement, adoption, adherence to practice guidelines and a change in clinical behaviour

Caveat

Does the acquisition of knowledge translate into behavioral change which improves clinical outcomes?

What is the driving force for CME?

Are physician performance indicators and patient outcome scores a measure of competence

Conceptual change and practice

- As self directed learners, physicians must set goals and utilize appropriate educational strategies to achieve these goals
- Physicians must recognize the need for change in their behaviour and develop the knowledge ,skills and attitudes to achieve this
- There must be an identifiable reason for change prior to implementation (Fratesi 2007)

Which doctor do you want?

William Osler, 1900

Smart young doctor

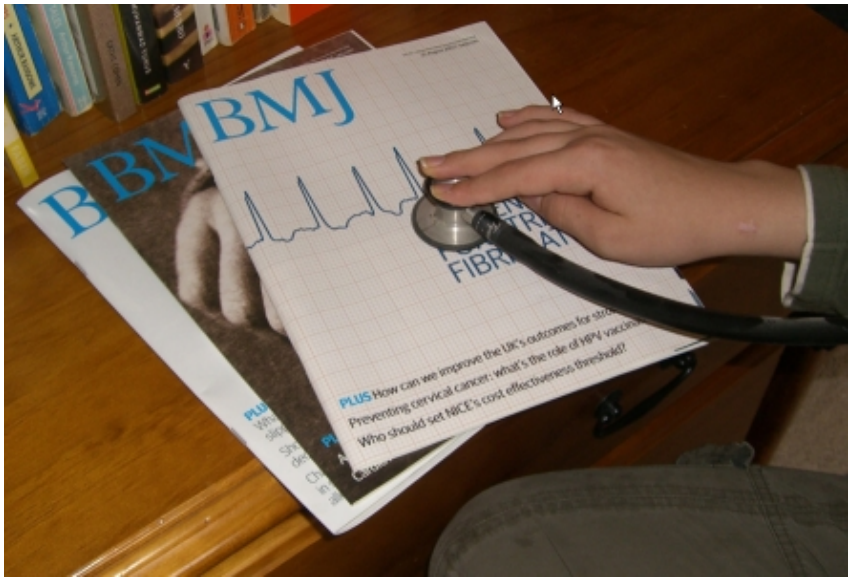
Which doctor do you want?

Wise & experienced smart young doctor

"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."

The 4 steps of EBM

1. Formulate an answerable question
2. Track down the best evidence
3. Critically appraise the evidence
4. Individualize, based clinical expertise and patient concerns



Applying to the individual

What do the results mean on average?

What do they mean for <u>this</u> individual?

Clinical effectiveness through EBM

- Evidence through research and scientific reviews
- Evidence based clinical guidelines
- Implementation through education and change management
- Audit compliance and outcomes

Critical appraisal in EBM

- Ask patient specific questions
- Search the literature
- Critically appraise the literature by evaluating clinical trials and using critical appraisal tools
- Apply the evidence and integrate clinical experience and patient values