Proving the Point: Evidence-Based Medicine

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Methods to critically appraise clinical information, and classify it according to the strength of evidence, were first presented in the early 1980's.[1] Concepts emerging with these ideas have promoted what is called evidence-based medicine (EBM), suggesting that clinicians should use only critically appraised information in their clinical practice for optimal care of their patients. Attempts to implement EBM have generated a controversy that has questioned its value in clinical practice.

Arguments against EBM

Many practising physicians regard EBM as merely an academic exercise for medical students that has no relevance to clinical practice. Some arguments against EBM include:

- there is not enough time to critically appraise the number of articles necessary to answer questions arising in a busy community practice;
- governments, hospitals, and others have used the terminology and jargon of EBM to justify decisions and directives that are seen by clinicians as counter-intuitive;
- EBM promotes "cook book" medicine as population-based, randomized, controlled trials dictate treatments regardless of the physician's judgment, or the patient's wishes;
- family physicians often find EBM products do not answer questions that arise in their practices; and
- the application of evidence in clinical practice may be perceived as different from the community "norm".[2]

These controversies have contributed to making family medicine and other generalist disciplines less attractive to medical students.[3] The perception is: to be a good physician, you must know everything about treating patients. The natural conclusion is that knowing everything is only possible in narrow sub-specialties, thereby eliminating a role for the generalist.

The perceptions surrounding EBM and the conservatism of practicing physicians has created a 15-year gap between the development of research-proven evidence and its subsequent widespread adoption.[4]

The value of EBM

That said, EBM principles may actually make it more practical to implement new ideas in your practice. There are strategies for effectively dealing with the volume of medical information. Understanding the correct application of EBM should allow the practitioner to provide the best available care for their patients.

How should you appraise the literature?

The time and energy required for any clinician to review the appropriate literature, around even the most common subjects seen daily in a busy practice, far exceeds what is practical or feasible.

At the same time, it is uncommon for a week to pass without a major medical controversy in the media that sends patients to their physician with questions about highly-publicized studies. Therefore, it is useful for physicians to be able to scan such a study and quickly determine the validity of its conclusions or recommendations.

The ability to critically assess highly publicized studies and judge the quality of critically appraised information is becoming essential for all practitioners.

Most faculties of medicine provide basic understanding of EBM in their curriculum, and most residency programs promote critical appraisal through journal clubs and courses. There are also some continuing education programs with the objective of providing clinicians with basic critical appraisal skills. Table 1 evaluates some available sources of critically appraised medical information.[5]

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Are there Canadian programs?

Two Canadian programs provide examples of a rapidly growing number of Web sites that are produced using EBM techniques to address different clinician needs.

The Guideline Advisory Committee (GAC) is a good example of a rapidly growing number of Web sites produced using EBM techniques to address different clinician needs. The purpose of GAC is to provide assistance to physicians who have become frustrated with the plethora of guidelines (> 1,000/year) suggesting often conflicting strategies for common clinical problems.[6]

The GAC committee is assisted by approximately 100 community-based physicians who use the "AGREE" instrument, which assesses 26 aspects of guideline production, to score the quality of all guidelines on chosen topics.

The Critically Appraised Practice Reflection Exercise (CAPRE) program provides critically appraised topics on common clinical practice problems primarily for family physicians and medical students.

If the family physician is interested in incorporating recommendations into their practice, they can evaluate the impact on a patient by completing a Web-based report.

The Physician Patient Partnership Program (PPPP) form can be printed from the Web site and given to the patient along with other appropriate information. This step reduces the explanation time for the clinician and allows the patient to carefully consider the recommendations, possibly discussing them with their family, to ultimately determine their decision about the recommended evidence-based therapy.[6]

Info Poems, another widely used Web site, has over 2,000 critcally appraised topics, which arise from clinical practitioners' questions. The topics have been critically appraised and the best available evidence is used to provide answers. Poems, or patient-oriented evidence that matters, excludes a great deal of the literature focusing on biochemistry, pathology, or other aspects of health care that do not improve or directly affect the longevity or quality of life of patients.

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Table 1

Evaluating medical information resources

	Relevance	Validity	Transparency	Information in Context	Overall Value
Newsletters	Moderate	n/a	Low	Inconsistent	Low
Updates					
Audiodigest	Moderate	n/a	Low	Inconsistent	Low
The Medical Letter	Moderate	Moderate	Low	Moderate	Moderate
Prescriber's Letter	Moderate	Moderate	Low	Moderate	Moderate
Abstracting service					
JAMA's abstracts	Low	n/a	Low	No	Low
AFP's "Tips"	Moderate	n/a	Low	No	Low
Journal Watch	Low	n/a	Low	No	Low
Redi-Reference Clinical Update	Moderate-High	n/a	Low	No	Low
Primary Care Medical Abstract	Moderate	n/a	Low	Moderate	Low
ACP Journal Club	Moderate-Low	High	Moderate	Moderate	Moderate
CFP's "Critical Appraisal"	Moderate	High	Low	Moderate	Moderate
Answers to common questions					
JFP's "Clinical Inquiries"	High	High	Low	High	High
BMJ's "Clinical Evidence"	Moderate-High	High	High	Yes	Moderate
Bandolier	High	High	Moderate	High	High
AFP's "Evidence-Based Clinical Reviews	High	High	Low	High	Moderate

ACP: American College of Physicians
CFP: Canadian Family Physician
JFP: Journal of Family Practice
AFP: American Family Physicians
JAMA: Journal of the American Medical Association

How can I incorporate EBM into my practice?

Finding evidence-based suggestions that would change clinical strategies in your practice is only the first step in a process of implementing change. Having found reliable information, you have to determine whether or not you agree with the ideas.

Most clinicians are likely to go through a process of talking with colleagues to see what they think about the evidence. You are likely to feel uncomfortable implementing a therapeutic strategy that is not accepted as the standard of practice in your local community.

If you are the only physician in the community to implement an evidence-based strategy, it is advised to use a patient-centered approach. Documenting that a patient

fully considered the benefits and risks of therapy is your best medico-legal protection if side-effects, or adverse events, occur.

If you decide to go ahead, your next step is providing the information to a patient to assess their reaction. If the first few patients respond well, your growing belief in the benefit of the change will likely lead to a full adoption of the strategy into your practice.

Final thoughts on EBM

All practicing clinicians need to identify trusted and transparent sources of evidence-based information that are easily accessible and in a concise format.

The rapidly-growing number of resources available to the practitioner in user-friendly formats should promote acquisition and use of EBM in clinical work. CME

References
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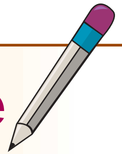
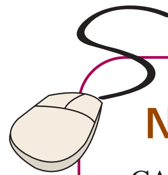


Take-home message

- The ability to critically assess highly publicized studies and judge the quality of critically appraised information is becoming essential for all practitioners.
- When introducing evidence-based therapies that are new to your patient, consider a patient-centred approach that involves the patient in the decision.
- Including a provision for written information provides medico-legal protection.



Net Readings

CAPRE Program
www.meds.queensu.ca/capre

Info Poems
http://www.infopoems.com/sample/sampldownload.cfm