

EVIDENCE BASED MEDICINE

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Medicine is no considered a mere art but purely a science and it is practiced only if proved by evidence. David Sackett described Evidence Based Medicine (EBM) as the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It has two components:¹ Individual clinical expertise and best available external clinical evidence from systematic research.

EBM comes into existence after a logical integration of the above two components. It is both for the patient and his caretaker. It is the scientific way to do decision making for the patient. Without EBM all decisions are based on anecdotal evidence, which is unacceptable in the setting of modern scientific reasoning. What comes out after the integration of clinical expertise, patient values, and the best evidence on scientific grounds is the logic of decision making and planning of the patient care².

The practice of evidence-based medicine is a process of life long, self-directed & problem-based learning. Patient's care creates the need for clinically important information about diagnosis, prognosis and therapy. These open the venues to further expansion of scientific knowledge and help create an environment conducive for future scientific research³. Without EBM, medical practice would stay stale and without progression, especially in problem solving in a certain scientific riddle.

EBM has two basic components:

Clinical expertise refers to the clinician's cumulated experience, education and clinical skills. The patient brings to the encounter his or her own personal and unique concerns, expectations, and values. This must be matched by the clinician's knowledge to appreciate the concern.

The best evidence is usually found in clinically relevant research that has been conducted using sound methodology. (Sackett D)

The evidence can only be sought by clinical expertise. The evidence in itself cannot be the sole reason for decision-making but it gives you a support towards a decision. The clinician's expertise is therefore mandatory and in the absence of this evidence has no value. All these components are supporting each other in such integrity that the Clinical decisions

made after the integration of the components of EBM enhances the opportunity for optimal clinical outcomes and quality of life⁴.

Interestingly, it is the patient rather than the physician who triggers the whole process of EBM. The practice of EBM is usually triggered by patient encounters that generate questions about the effects of therapy, the utility of diagnostic tests, the prognosis of diseases, or the etiology of disorders.

Evidence-based medicine requires new skills of the clinician, including efficient literature searching and the application of formal rules of evidence in evaluating the clinical literature. It is the basis of compulsory learning and continuous medical education (CME).

EBM has following steps:

1. A clinical problem arises in the care of the patient.
2. This problem is constructed into a well-built clinical question.
3. For evaluation of this problem and to answer the question, resources must be sought which can answer this question.
4. Now sort out if the resource is applicable and valid and what evidence does it provide.
5. Integrate that evidence with clinical expertise, patient preferences and apply it to practice
6. There is self evaluation after the whole process is applied to the patient and results are obtained.
7. EBM starts with the patient i.e. the problem; he presents with and ends with the patient i.e. the solution devised for the problem. The physician work as a moderator in the whole process.

The propaganda against EBM is also severe and clinicians claim that it is an "old hat" with a new name and all of them have been doing what is described as EBM without naming it. They argue that clinicians and statisticians have been doing research for years and they have been using this research published in literature as evidence for their future planning and decision making in patients care. There is nothing new to it. The only thing which is new is that EBM is a way of processing and filtering the loads of literature and making it befitting to an individual case⁵.

Some argue that EBM is "cook book medicine" with clinicians forgetting about improving their clinical skills and going for the recipes to cook a certain "patient".

There are others who argue that EBM is a mindless application of population based studies to individuals who may have unique circumstances and occurrences⁶.

REFERENCES

1. Moyer V. Evidence based medicine: is it practical? *Arch Dis Child*. 2004 May; 89(5): 399-400.
2. Patrick TB, Demiris G, Folk LC, Moxley DE, Mitchell JA, Tao D. Evidence-based retrieval in evidence-based medicine. *J Med Libr Assoc*. 2004 Apr; 92(2): 196-9.
3. Buerger R. The Evidence Thing. *Ann Vasc Surg*. 2004 Apr 21
4. Mac Master-Fay R. Can evidence-based medicine be unscientific? *Aust N Z J Obstet Gynaecol*. 2004 Apr; 44(2): 173-4.
5. Bernstein J. Evidence-based medicine. *J Am Acad Orthop Surg*. 2004 Mar-Apr; 12(2): 80-8.
6. Saarni Si, Gylling HA. Evidence based medicine guidelines: a solution to rationing or politics disguised as science? *J Med Ethics*. 2004 Apr; 30(2): 171-5.
7. Vos R, Willems D, Houtepen R. Coordinating the norms and values of medical research, medical practice and patient worlds-the ethics of evidence based medicine in orphaned fields of medicine *Med Ethics*. 2004 Apr; 30(2): 166-70.
8. Slowther A, Ford S, Schofield T. Ethics of evidence based medicine in the primary care setting. *Med Ethics*. 2004 Apr; 30(2): 151-5.
9. Poole P, Black P. Evidence based medicine reviews. *Respir Med*. 2004 Apr; 98(4): 273-4.
10. Morse LJ. Evidence-based medicine on trial. *JAMA*. 2004 Apr 14;291(14):1697
11. Liberati A, Vineis P. Introduction to the symposium: what evidence based medicine is and what it is not. *J Med Ethics*. 2004 Apr; 30(2): 120-1.