

Evidence-based medicine and psychiatry

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What is EBM?

Over the last five years the adjective 'evidence-based' has become difficult to avoid. Indeed, a MEDLINE search for articles containing the phrase 'evidence-based medicine' in their titles or abstracts reveals one mention in 1992, rapidly increasing to 53 in 1996. So great has been the increase that the National Library of Medicine now includes 'evidence-based medicine' as a MeSH heading for indexing papers.

But what is evidence-based medicine (EBM)? First and foremost, EBM is a set of strategies designed to help the clinician keep up-to-date and to base his clinical decision making on the best available external evidence.¹ EBM has been espoused by policymakers, purchasers and others – and, although the approach is open to misuse by these groups as a cost-cutting exercise, there are refreshing signs that they will be able to use the approach to help produce real improvements in patient care.² However, the essential focus of EBM is on assisting doctors and other clinicians make decisions about individual patients. The steps involved in EBM include: a precise definition of the clinical problem (a crucial first step – in medical practice it will usually include making a diagnosis), an efficient search for the best available evidence, critical appraisal of the evidence and integration of the research findings with clinical expertise. Finally, the clinician assesses the outcome of the process and continues to improve his EBM skills.

At each stage of EBM, recent developments in information technology and clinical epidemiology and biostatistics are harnessed to make the process as rapid and as efficient as possible. A clear definition of the type of clinical problem is an essential prerequisite for determining the kind of evidence required and the best place to start looking for it. The aim of searching is to find the evidence which provides the least biased (and therefore most likely to be true) information.

For example, to answer a question about the best treatment for a particular problem, the clinician would look for a randomised controlled trial (RCT, or better still, a systematic review of randomised controlled trials) a study design which would be most likely to provide an unbiased estimate of the true treatment effect.³ The best place to start searching for a systematic review of RCTs is the Cochrane Library, which contains the Cochrane Database of Systematic Reviews (CDSR) and the Database of Abstracts of Reviews of Effectiveness (DARE).^{4,5} The Cochrane Library is continually being added to and updated and is published quarterly on compact disk. If no usable review is found in the Cochrane Library or via MEDLINE, the clinician then looks for a single RCT. If no

randomised evidence (systematic review or single RCT) is found, the clinician then looks for the best available non-randomised evidence – recognising that it is more likely to provide a biased estimate of the effectiveness of the treatment. If, as occurs reasonably often, no usable external evidence is found, the clinician will need to base their decision on their clinical experience – but at least they have will have checked to see that there is nothing better!

After finding the best available evidence, the evidence needs to be critically appraised for its validity and usefulness (it's often helpful to use a standard checklist^{6,7}). To help the application of the evidence to the clinical problem, it is usually helpful to translate the results into easily understandable indices such as the *number need to treat* – a measure that clinicians find useful for assessing the effectiveness of treatments.⁸

Why do we need EBM?

From this description, it can be seen that EBM requires a number of skills (efficient searching of bibliographic databases, critical appraisal, numerical and statistical skills) which the average clinician may not have! So why should they embark on the laborious process of developing them? The main reason for using EBM is that clinical practice tends to lag behind research. This leads to helpful treatments not being used, harmful treatments being overused and widespread and unjustified variations in clinical practice. For example, in psychiatry, unexplained variations in practice have been reported in the use of ECT.⁹ As Kendell has pointed out, variations in clinical practice for similar patient groups can only mean that there either is no evidence to allow clinicians to choose between treatments or that clinicians are not basing their practice on evidence.¹⁰ Claims that there is little evidence on which to base psychiatric practice are unfounded – the majority of common treatments can be based on evidence.^{11,12} The problem is more one of difficulties in accessing the evidence. EBM is aimed at overcoming these difficulties – by providing a coherent and comprehensive approach to narrowing the gap between research and practice.

How to start using EBM in psychiatry

The practice of EBM requires the acquisition of some new knowledge and skills and improved access to sources of evidence.

Probably the quickest way to get going is to read an introductory textbook,^{13,14} and to attend a workshop aimed at improving skills in both practicing and teaching EBM. Workshops on teaching EBM are now held regularly in the UK in Oxford and London and there is an annual introductory workshop on EBM for psychiatry held in Oxford.

One way to introduce EBM is to modify the nature of existing educational structures. For example, a journal club can be reorganised along EBM lines – this can be a useful way of introducing critical appraisal.¹⁵ At our journal club in Oxford, a structured summary of the critically appraised paper is prepared during the journal club and then added to a computer database in the library. This

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helps the journal club focus on the clinical problem and produce a clinical 'bottom-line'.

Access to high quality sources of evidence is crucial to the feasibility of EBM. As well as improving the sources of evidence themselves (by improving MEDLINE, expanding the number of subjects covered in the Cochrane Library etc.), there is a need to facilitate access to them. One strategy is the production of journals of secondary publication which search large numbers of clinical journals, select the best quality articles using explicit criteria and produce easily assimilable structured abstracts. These enable the clinician to keep up with current advances much more efficiently than attempting to read all the important papers themselves (always a difficult task – there are approximately two million articles published annually in the biomedical literature, in over 20,000 journals, and traditional reviews are often unsystematic and biased, with no description of methods¹⁶). The first two such journals were the *American College of Physicians Journal Club* and *Evidence-Based Medicine* – a CD cumulative compilation of the contents is also produced – *Best Evidence*. Because neither of these publications is aimed specifically at the needs of the mental health specialist, a new journal, *Evidence-Based Mental Health* will be produced in late 1997/early 1998. This will include abstracts of papers concerning therapy, diagnosis, prognosis and other issues as well as providing a forum for the development of the application of EBM to the field of mental health.

With the advent of these resources, EBM is now feasible for most clinicians.¹⁷ It augments traditional clinical skills

and provides psychiatrists with a practical and efficient approach to maximising their clinical effectiveness and meeting the increasing demands of their clinical work.

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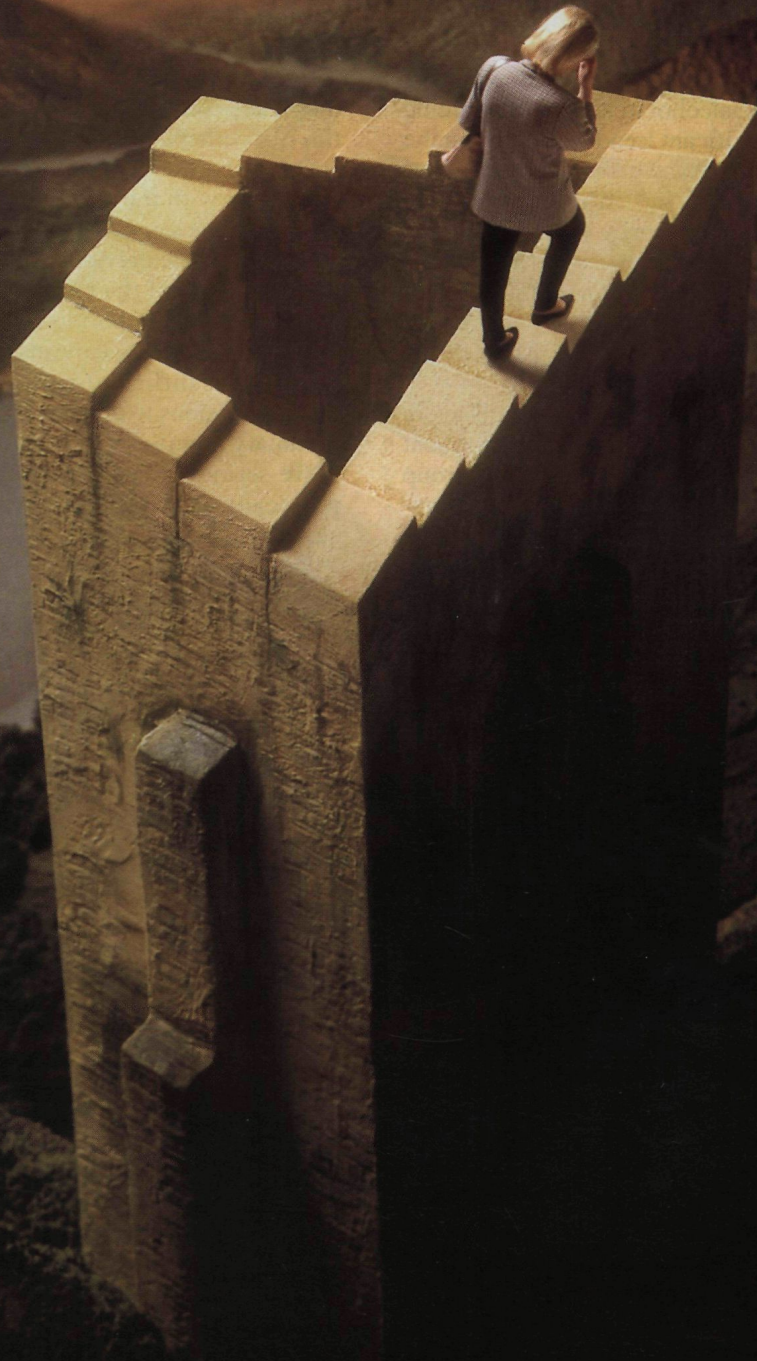
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