Evidence-based psychiatry: 'Beguiled by certainty'

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Evidence-based medicine (EBM) is defined as the process of systematically finding, appraising and using contemporaneous research data as the basis for clinical decisions.[1] Being against EBM has the same moral connotations as being against motherhood or in favour of sin. There has long been a tension between research and clinical practice, which are viewed respectively as inhabiting 'an ivory tower' and 'the real world'. EBM seeks to remedy this by joining research to best clinical practice.[2] The suggestion that anybody could be against evidence to back up clinical practice is tantamount to subscribing to ad hockery. Treatments should not be whimsical, neither should they be driven by fashion, tradition or advertising. Yet many clinicians are deeply uneasy with the construct of evidence-based medicine – why is this?

Many will argue that no treatments, at least those that are pharmacological, are prescribed without having been tested in double-blind, placebo controlled trials. Thus the cry of "we do it anyway" is a common rejoinder to accusations that treatments are arbitrary. Proponents of EBM point to the inadequacy of selecting isolated studies since 'evidence' so adduced may be nothing more than a reflection of the biases and prejudices of the individual psychiatrist. Even the traditional review of a specific treatment is nothing more than a narrative of a conglomerate of different studies using different methodologies. In addition to the flaws of human prejudice and bias, there are also methodological problems which compound the difficulty faced by the clinician in search of the holy grail of knowledge.

One eminent statistician has pointed to the poor quality of much medical research[3] and he outlined "the general failure to appreciate the basic principles underlying scientific research, coupled with the publish or perish climate... the huge sums of money spent annually on research that is seriously flawed through the use of inappropriate designs, unrepresentative samples, small samples, incorrect methods and faulty interpretation". Even in high impact journals such as the *British Journal of Psychiatry* it is argued that there are statistical errors of the order of 40%,[4] casting serious doubt on the conclusions drawn in at least some of the studies. It is this worrying criticism, which has given impetus to the EBM movement, arguing that the solution to the conundrum posed by these difficulties lies in systematic reviews and meta-analysis. Systematic reviews, by specifying the criteria for the inclusion of each paper, potentially overcome some of the problems associated with individual studies and with the disparity between papers that are evaluated in a traditional review. The goal of achieving this ideal is the *raison d'etre* of the Cochrane Collaboration[5] which includes the Cochrane Database of Systematic Reviews (CDSR), the Database of Abstracts of Reviews of Effectiveness (DARE) and the Cochrane Controlled Trials Register (CCTR). All of these databases provide compilations of systematic reviews and meta-analyses, published either by the Cochrane Centre itself or by other experts. This rigorous approach has intuitive as well as clinical appeal but also has its critics.

Firstly there is the question of which evidence is chosen as the 'gold standard' of treatment. At the heart of EBM is the conviction that the evidence adduced and presented is objective, transparent and value free. One perspicacious letter writer to the *British Journal of Psychiatry*[6] posed the question "Which evidence to believe?". He drew attention to two simultaneously published systematic reviews of lithium in the *British Journal of Psychiatry*.[7,8] Rigorous criteria were applied to paper selection, quoting 72 and 93 references respectively. However, only 14 were common to both reviews and diametrically opposing conclusions were reached! This illustrates the danger of accepting uncritically the conclusions of a particular systematic review if the reader is not alert to the assumption and interpretations which underlie meta-analysis. Another limitation to systematic reviews is publication bias. Since only trials with positive findings are published, the results will be skewed in favour of the intervention under study. This may promote more optimism than is warranted and also fail to identify features that are associated with a poor or non-response.

There are other more mundane difficulties with EBM. Extrapolating from the rigidly controlled environment of the controlled clinical trial, in which diagnostically homogeneous and often previously untreated samples are recruited, to the vagaries of the doctor's surgery poses further problems. For example most psychiatric drug trials are conducted on the under 65 age group. Those with life threatening symptoms are excluded, as are those with co-morbid conditions such as personality disorder. Since the systematic review is likely to be even more controlled than the controlled clinical trial it poses the question "Is it possible to generalise from this type of review to my patient"? Problems such as these have led to accusations that EBM is really cookbook medicine and by its Procrustean nature restricts rather than enhances clinical practice.

Even the proponents of EBM accept that many areas of clinical practice cannot be evaluated for ethical or other reasons. Also there are some areas where particular interventions cannot wait for a randomised trial to give the result as in the emergency interventions for otherwise fatal conditions.[9] What is the clinician to do in these circumstances? Should the intervention be avoided due to the

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absence of evidence or should treatment be offered on the presumption of efficacy? In this borderland between the rigidity of EBM and the art of psychiatry lie many psychiatric interventions including the emergency admission of those who are suicidal. Indeed it is highly unlikely that any ethics committee would approve a study investigating the effectiveness of admission in preventing suicide. EBM thus has limited applicability in some important areas of psychiatry.

What of the serendipitous discovery of the efficacy of a particular treatment? It was in this manner that the MAOIs were shown to be potent antidepressants when used initially in the treatment of tuberculosis. The use of anticonvulsants in bipolar disorder has entered mainstream practice in a similarly fortuitous manner and only recently has been shown to be efficacious in placebo-controlled trials. It is sobering to consider that if EBM had been promulgated in the 1940s psychiatry might not have had the benefit of ECT, which almost certainly would have been proscribed due to lack of evidence at that time. With the benefit of hindsight and anecdotal evidence accumulated over the years, suitably designed controlled clinical trials during the 1970s and 1980s have confirmed its place in the treatment of a limited number of severe disorders.

These considerations have lead to a war of words between EBM enthusiasts and critics. A recent debate in the *Lancet* drew words such as 'oligarchic and closed' to describe the traditional approach[10] and "inexcusable delays and inexplicable variations in the incorporation of evidence into traditional medical practice".[11]

Equally forceful counter-responses were also forthcoming, describing EBM as an "example of newspeak" that "would have delighted George Orwell"[12] and castigating its advocates for "their arrogance, their jargon and their penchant for denigrating others...reek(ing) of obfuscation and platitudes".[13] These polarised positions point to the passion that drives this debate.

An ideological conflict has also raged with the advocates of EBM castigating health service purchasers for their emphasis on efficiency arguing that the plank of any intervention could be efficacy. One advocate referred to Nazi Germany where clinical ethics were subjugated to the interests of fascism – the remark was later withdrawn. An attempt to diffuse the passion in the efficacy versus efficiency debate has led to the development of evidence-based purchasing. It is argued that clinicians must behave ethically and take into account several factors including efficacy, as measured by a target outcome, while also incorporating patient evaluation and cost-effectiveness, if scarce resources are not to be wasted.[14] This approach is still in its infancy.

Neither the verbiage between the two camps nor the arguments above should be reason to dismiss EBM out of hand.[15] Treatment should never be based on fashion or intuition alone and therein lies the strength of EBM – its adherence to the scientific method. However, EBM should also facilitate us in honing our critical faculties when evaluating its findings and we should be conversant with its limitations.

Uncertainty is inherent in medicine in as much as it is part of the human condition – EBM may help us to confront the vagaries of the treatment process but it cannot give us complete mastery. As one commentator on the subject recently observed: "We are often beguiled by the promise of certainty and tend to find it where there is none".[16] Ideally EBM should propel its adherents and opponents to a mutually respectful marriage between art and science.

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