

EVIDENCE-BASED PRACTICE AND ITS RELEVANCE TO PSYCHIATRY

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Last decade of the 20th century will be recognized in medical history as an era of Evidence-Based Medicine (EBM). It has influenced all spheres of medicine and emerged as an important tool in almost every corner of the medical field. Publication of hundreds of articles, reviews, monographs and numerous books written & printed in different languages on this subject has made it very important and appropriate for discussions in the medical field.

EBM has been defined as the “conscientious, explicit and judicious use of the current best evidence in making decisions about the care of individual patients”.¹ It takes as its starting point every day clinical problems., EBM closes the gap between research and practice by incorporating the advances in clinical research and medical informatics into clinical activities. If there is uncertainty about some aspect of clinical management, four steps are proposed.²

- I: Formulate an answerable clinical question in patient management
- II: Search the literature for relevant evidence.

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- * Received for publication: June 22, 2005
Accepted: August 25, 2005

III: Critically appraise evidence for effectiveness.

IV: Implement the evidence in clinical practice.

The formulation of a clinical question will reflect the “knowledge gap” of a clinician when dealing with clinical problem. It will direct the clinician to carry out a focused, limited and systematic literature search to find the published evidence.

Searching literature and databases for evidence requires skills. It is becoming increasingly important for professionals development. Recent advances in information technology have made it easier to search the medical literature. Access to electronic databases is now widespread in medical libraries.

The critical evaluation is considered as central aspect of EBM. It requires a set of skills to examine the weight of evidence. Appraisal of evidence has three dimensions: validity of the evidence, importance of the results and relevance of the evidence to the posed clinical problem. This process of appraisal is complex and requires different criteria to assess for different type of studies. The text book of by Sackett et al 1992³ and the series of Journal of the American Medical Association articles known as Users Guides,⁴ provide clear and concise criteria for Randomized Controlled Trials (RCT), cohort studies, case control studies and so on. Implicit in the process of critical appraisal is the idea that there is hierarchy in the quality of evidence derived from different types of study, which is inversely proposed to their susceptibility to bias. A commonly used hierarchy of research design for evaluation therapy is as below.⁵

Ia: Evidence from a meta-analysis of RCT

Ib: Evidence from at least one RCT

- Ia: Evidence from at least one controlled study without randomization
- Iib: Evidence from at least one other type of quasi-experimental study
- III: Evidence from non-experimental descriptive studies, such as comparative studies, correlation studies and case-control studies
- IV: Evidence from expert committee reports, or opinions and / or clinical experience of respected authorities.

The practicalities and potential problems in using evidence-based approach in psychiatry:

As psychiatry is a branch of medicine where subjective opinion dominates most and with the emergence of many different schools of thought, wide variation in psychiatric practices is observed world wide. It has been argued that evidence-based approach can play an important role in minimizing the subjectivity and bringing out standardized treatment protocols.

However the relevance of evidence-based approach to psychiatry can be criticized on several grounds. The validity and relevance of randomized controlled trials, ignorance of qualitative evidence in evidence-based approach, time constrains by busy clinicians, lack of resources and skills to search and appraise the evidence are the pragmatic issues which need to be examined in relation to psychiatry.

Evidence, which is deemed acceptable by the Evidence-based approach, is mainly derived from Randomized-Controlled Trials (RCTs), and meta-analysis. However, the use of such evidence in standardizing care has the potential to undermine the value of the clinical experience and the role of the clinician, with the psychological and social aspects of medicine becoming neglected by EBM.⁶ The personal qualities of doctors as well doctor patients' relationship have an important bearing on the outcome of the patient's condition. Similarly outcome of psychotherapy depends largely on the empathy, warmth and genuineness of the therapist.

This narrow approach of EBM also dimin-

ishes consideration of other type of evidence available from qualitative research, case studies & experimental sources.⁶ This qualitative research has an important place in psychiatry. Mays & Pope⁷ have described the application and usefulness of qualitative research methods in different settings and outlined how this alternative to quantitative research is coming to be accepted increasingly in health care research.

RCTs are cited as gold standards for detecting treatment efficacy. However, they often can be flawed in design and are not immune to bias. The relevance of RCTs has been widely criticized on the ground of small group size, selection bias and improper random assignment of treatment to groups. The selection of patients in RCTs is known to be a powerful factor affecting the results of clinical trials, little is known about recruitment issues. Many patients who are screened for clinical trials are ultimately not included in the study. Patients in RCTs are likely to be different from the majority of patients encountered in real-life clinical practice, as in many trials patients with comorbid condition, history of substance misuse and women of childbearing age are invariably excluded. RCTs also only provide us with information about groups, not about the individuals. Randomly allocating patients to two or more treatments should eliminate both selection bias and confounding, however confounding can still occur by chance in an RCT. Repeated attempts have been made to improve standard of RCTs, in this regards with the use of Consolidated Standards of Reporting Trials (CONSORT).⁸ However it is difficult to implement these guidelines as only a very few journals follow such guidelines.

The meta-analysis has been criticized for lumping "apples and orange" together. Another serious problem with meta-analysis is publication bias. It is a fact of life that researchers and journal editors like to have "positive" results. There is considerable evidence that papers showing one treatment has a clear advantage over another are more likely to be published than those, which do not. Further meta-

analysis can be misleading⁹ and in that interpretation of the same evidence can come up with different conclusion.¹⁰

The evidence-based medicine movement gives an impression that it is a new development in medical sciences, which help clinicians to make the conscientious, explicit and judicious decision based on best available evidence. However psychiatrists like other branches of medicine have been using evidence derived from RCTs for a long time. In the early 1960s there were RCTs carried out to compare efficacy of antidepressants, electro convulsive therapy with placebo.¹¹ Similarly anti psychotics were compared with placebo in other randomized control trials in early 1960s. Since then so many new drugs have been evaluated in the field of psychiatry, with their efficacy being assessed through the use of RCTs.

It is evident that type of evidence accepted be EBM may appear to have some limitations in the field of psychiatry. The treatment decisions in psychiatry, which are based on RCT evidence, represent only one aspect of practice. Most psychiatry lies in 'grey zones' of clinical practice, and may thus lie outside the scope of EBM.¹² Indeed, these grey zones may be considered to be the essences of psychiatry since they include the nature of the doctor-patient relationship, and therapist qualities.¹³ Treating patients in psychiatry requires a holistic approach, in the context of their culture, unique psychological make-up and their relationship with their doctor.

In the last it is worth to analyzing how practical is the implementation of EBM approach in day-to-day practice. There are several pragmatic obstacles, which need to be addressed before we consider implementing the EBM approach.

Busy clinician, hardly find time to search and appraise the literature. In addition to time constraints, appraisal skills are one of the most important barriers to implementation of evidence-based practice. The quantity of research evidence is overwhelming, but not the quality, as there are over two million articles which are published annually in over 20,000 health related journals.¹⁴ It is not clear how much of

the research evidence published annually is of sufficiently high quality to merit decision makers changing their practices or policies in response. However in psychiatry scientific evidence is still lacking or is still controversial, for application to many important problems. It is difficult to address this issue of overwhelming quantity and issue of uncertain quality of research evidence. Systematic reviews were promoted as another way to assemble critically appraised scientific evidence on a given topic.¹⁴ However it is not always possible to get systematic review or every clinical question and again systematic reviews are not immune to biases. In the absence of systematic review it is very important to rely on appraisal skills to assess the quality of evidence.

The other important barrier is lack of resources. As technology to bring the best available evidence to the clinicians, including a mechanism to continually revise research evidence of effectiveness is considered an important tool for EBM. This is still only an aspiration. The access to electronic database may have improved over the years, but it is likely one of the reason that the gap between research and practice in psychiatry is still not closing.

But the overall advantages of EBM are more impressive and require a serious consideration for its application in the psychiatric practices. The current trends argue for the place of EBM's place in medical curriculum as well as in treatment guidelines at all levels of mental health care, from primary through to, secondary and tertiary levels of services. It is hoped that this practice will become an integral part of day to day teaching and training in the entire field of mental health.

REFERENCES

1. Sackett DL, Rosenberg WM, Gray JA et al. Evidence Based Medicine what it is and what it isn't. *BMJ* 1996; 312:71-2
2. Rosenberg W & Donald A. Evidence-Based Medicine: an approach to clinical problem solving. *BMJ* 1995; 310:1122-6
3. Sackett DL, Richardson S, Rosenberg W et al. Evidence-Based Medicine. How to Practice and Teach EBM. Churchill Livingstone, London 1997

4. Oxman AD, Sakett DL & Guyatt GH. For the Evidence Based Medicine Working Group. Users guides to the medical literature I: How to get started. *JAMA* 1993; 270:2093-5
5. Shakelle PG, Woolf SH, Eccles M, Grimshaw J. Developing guidelines. *BMJ* 1999; 318:593-6
6. Williams DDR & Garner J. The case against 'the evidence: a different perspective on Evidence-Based Medicine. *Br J Psychiatry* 2002; 180: 8-12
7. Mays N & Pope C. Qualitative research in health care. Assessing quality and qualitative research. *BMJ* 2000; 320:50-2
8. Begg C, Cho M, Eastwood S et al. Improving the quality of reporting of Randomized Controlled Trials: the CONSORT statement. *JAMA* 1996; 276: 637-9
9. Egger M & Smith GD. Misleading met-analysis. *BMJ* 1995; 310:407-10
10. Jackson RT & Sackett DL. Guidelines for managing raised blood pressure. *BMJ* 1996; 313:64-5
11. Medical Research Council. Report by Clinical Psychiatry Committee. Clinical trial of the treatment of depressive illness. *BMJ* 1965; 1: 881-6
12. Naylor CD. Grey zones of clinical practice: some limits to Evidence-Based Medicine. *Lancet* 1995; 345:840-82.
13. Geddes JR & Harrison PJ. Closing the gap between research and practice. *Br J Psychiatry* 1997; 171: 220-25
14. Mulrow CD & Cook D, Editors. *Systematic Reviews*. American college of Physicians. Philadelphia, PA: 1998