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Evidence-Based Medicine and General Practice

Dr. Ashok Kumar[1]*, Dr. Shivani Bansal[2], Dr. Ravi Kumar[3]

[1*]Professor, Department of General Medicine, Santosh Medical College & Hospital, Santosh Deemed to be University, Ghaziabad.
[2]Professor, Department of General Medicine, Santosh Medical College & Hospital, Santosh Deemed to be University, Ghaziabad.
[3]Assistant Professor, Department of General Medicine, Santosh Medical College & Hospital, Santosh Deemed to be University, Ghaziabad.

Corresponding Author: [1*]Dr. Ashok Kumar

ABSTRACT
Clinical decision making, even in primary care, is aided by evidence-based medicine (EBM). One distinguishing feature of general practise is the link between doctor and patient, as well as biological, individual, and environmental factors in making a diagnosis. The vast majority of GP evidence is biomedical in nature and is therefore often not directly applicable to primary care because it is derived from secondary or tertiary settings. A reductionist approach that ignores the broader context of general practise in favour of the biomedical domain and the randomised controlled trial (RCT) is reflected in this focus. Patient treatment should continue to incorporate a balance of context, narrative, patient accounts of sickness, and personal experience with high-quality, relevant research findings.

1. INTRODUCTION

A proverb says, "A smart man is not learned, and a learned man is not wise."Benjamin Hoff's The Tao of Pooh makes frequent reference to the Tao te Ching. Methuen (London, England) in 1984. Although the foundations of evidence-based medicine (EBM) can be found in fields like critical appraisal and clinical epidemiology, it wasn't until 1992 that EBM was formally characterised in the United States.[1]

Since then, it's become the newest hotspot in the quest for better medical care. A journal has been established to further promote EBM in everyday clinical practise, and subsequent papers have detailed how to apply the ideas in practise.[9] EBM is predicated on the following five principles: Clinical choices should be based on the best available scientific evidence The evidence to be obtained is based on the clinical problem. Epidemiological and biostatistical approaches of thinking are required to isolate the most convincing evidence. Evidence-based conclusions are only helpful if they are used to inform actual health care decisions, either for specific individuals or for entire populations. Monitoring and assessing performance is essential. [9]

Evidence-based medicine in practice

The main principle of EBM is that clinical decision making should be influenced by rational analysis of evidence and previous experience; an approach that has been with the profession since Hippocrates. Recent studies showed that decision making can usually be supported retrospectively by evidence in both primary care and general medicine, even without a prior

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commitment to EBM.[16,17] However, accessing evidence to answer clinical questions is not such a straightforward issue, especially in primary care.

Decision making depends on both accessing and interpreting evidence. In primary care, GPs have less than five hours a week for reading, educational courses, and teaching.[18] When they do access the literature to find evidence about clinical problems, they should be aware of certain limitations, especially in general practice, where until recently there have been few journals publishing primary care work and research. Negative findings are less likely to be published: 25–50% of studies on a given topic may not get published.[19] There are also problems in accessing prior relevant work. Depending on the topic, databases such as

Medline have only a 50–80% recall of relevant literature, and many areas of 'grey literature' (reports, theses, conference proceedings, and press releases) are difficult to access electronically.[19]

Advice on smoking is another example. The most frequently cited study revealed that brief advice to quit smoking, along with a warning of follow-up, led to a 5% increase in smokers quitting. 34 Not all clinicians perceive this as an efficient use of time: while 5% has positive implications for public health, others may view it as too modest a benefit to justify the expenditure of time and discussion with a single patient, given the competing demands of the consultation.

Even more complex is data interpretation for patients, who typically obtain medical information from the media and may bring their concerns and requests for additional information to their general practitioner. The fear around oral contraceptives of the third generation and venous thrombosis is an illustration. [15-19] Early research findings were provided to the British public prior to the publication of the original papers, causing a controversy disproportionate to the 'risks' discovered by the researchers. Without addressing the potential benefits in terms of lipids and cardiovascular risk, and without considering the repercussions of likely noncompliance, which typically follow such shocks, these data were given. 40 Genetic testing is another increasingly controversial topic. [21]

General practice: biomedical, personal, and contextual

Particular focus is placed on the doctor-patient connection and on biological, personal, and contextual factors in diagnosis in general practise (the triple diagnosis). 43,44 Practitioners are accustomed to holistic clinical decision making, which integrates a vast array of different forms of knowledge and emotions,45 treating patients in their customary setting, and addressing their specific concerns regarding the scenario. 44 EBM's application is constrained by specific characteristics of general practise that are revealed by an analysis of these characteristics.

EBM focuses primarily on the biological aspect of diagnosis from a doctor-centered perspective. The profession identifies a problem, acknowledges a lack of evidence to support a proposed remedy, and then commissions research to supply this proof. A role for patients in determining the most critical questions they want answered and a place for 'quality-of-life' measurements are more difficult to attain. In contrast, certain illnesses, including headache, blood pressure control, diabetes control, and breast cancer, respond better to patient-centered care.

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The triple diagnosis

The above discussion demonstrates that more is required than a simple biomedical approach or the use of RCTs to assist practitioners in decisions on managing excessive drinkers. The evidence should be accrued using different methods, each appropriate to a different aspect of the triple stage diagnosis. We have provided one example but there are countless others, such as 'minor' illness or chronic disease management, where the triple stage diagnosis (and therefore triple stage research planning) needs to be considered.

However, the costs and commissioning of research are likely to focus on more obviously cost-effective treatments, primarily using biomedical indices as definitive outcome measures. This may be to the detriment of studies looking at 'softer' measures of psychosocial well-being, such as quality-adjusted life years, [15] where relative novelty adds to the difficulties in interpretation. The pharmaceutical industry is also likely to direct its finances towards trials of specific therapies, and these will probably be based on drug treatments at the expense of exploring non-pharmacological approaches. [17] Biomedical data are easier to research in general practice, which hinders the acquisition of evidence from the other two dimensions.

Appropriate evidence

Concerns concerning the application of the current biological evidence to general practise compound the issues caused by the absence of evidence pertinent to personal and contextual diagnoses, as most of the information is not gained from primary care. There are numerous instances in which hospital-based evidence is mandated for use by primary care practitioners. Starfield provides examples (such as paediatric anaemia and the management of pelvic inflammatory disease) in which textbooks use numbers from hospital-based clinic settings that are directly translated into the vastly different primary care situation. [22] McWhinney presents instances of how the differing denominators of populations might render some procedures (such as ECGs for chest discomfort and examinations for rectal bleeding) obligatory in hospitals but at best difficult to interpret in primary care settings. [24]

Evidence-based medicine can imply a simplistic and mechanistic worldview in which the distinction between cause and effect is straightforward. Systems theory teaches us that the world is increasingly complicated and that we must understand the context, structure, and environment in which decisions are made. We must investigate the applicability of secondary or tertiary care evidence in primary care.

The art of medicine

Medicine has long been noted as a profession that combines the best knowledge available with an appreciation of a good 'bedside manner'. The motto of the Royal College of General Practitioners (Cum Scientia Caritas) enshrines this, promoting science and caring as the twin bases of good quality general practice. Balint showed that GPs are not uncaring, unemotional professionals, but can use emotions and a sense of awareness of all that takes place in meetings with patients to assist diagnosis.63 Much of this work is difficult to investigate with traditional scientific methods, but is still relevant today, especially in this era of increasing knowledge.

Recently, it has been re-emphasized that primary care medicine combines a rational scientific method and a less rigorous 'art'.64-67 The art of medicine is founded upon context, anecdote, patient stories of illness, and personal experience; these are classified as 'lower

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quality' in the hierarchy of evidence, but have an equally valid contribution to medical decision making and should be integral to our practice.

2. CONCLUSIONS

The proponents of EBM acknowledge that it does not provide solutions to all issues because research delivers incomplete evidence for each specific circumstance. Doctors should assess the data in each case, weighing the evidence for and against specific therapy and adapting their recommendations to the patient's context and preferences. The doctor will ultimately form an opinion based on the evidence.

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