Evidence-based medicine and the district general physician

N C M Bacon

Evidence-based medicine: the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. It requires the integration of clinical expertise, external evidence, and patients' values and expectations.

In 1996, as a nephrology registrar, I was clear about my indifference towards those proclaiming the benefits of evidence-based medicine (EBM), and was less than enthused when I became aware that my next rotation would be to a general medical firm practising EBM. After one year on the firm it seemed that EBM offers no more to the district general physician than it does to any other clinician – whether general practitioner in the Outer Hebrides, surgeon in New York or professor in the teaching hospital. Yet this is EBM's great strength: it ensures that the science on which medicine is based is as rigorously tested for the district general physician as for any clinician in any tertiary referral centre or teaching hospital.

Why should the physician in the district general hospital (DGH), content with his/her current practice, make the investment of time and energy needed to adopt EBM principles? Three areas of practice in which EBM can play a significant role are: education, patient management and knowledge dissemination. In all three, the practical application of EBM may enhance clinical practice.

Continuing medical education

Continuing medical education is essential if clinical practice is to benefit from advances in the basic sciences. Combined with this ever-expanding database of knowledge is a shift in patients' expectations; the patients who once accepted a paternalistic medical profession now increasingly demand involvement in management decisions. Empowered by self-help groups and the huge amount of medical knowledge available on the internet (Medline is freely available to anyone with internet access), the interested patient may well be aware of trial results pertinent to their disease before their doctor. How is the physician in the DGH, often with limited library facilities, to meet these demands and keep up-to-date?

The doctor practising EBM knows not only how to access new knowledge, but also how to assess its value. He/she avoids wasting time on textbooks and review articles often hopelessly out of date, and is able to maximise the value of time spent reading (the ever-increasing numbers of journals. Whilst the provision of internet access may provide those working in the DGH with comparable amounts of information to doctors in tertiary centres, the effective use of this knowledge requires a framework. Evidence-based medicine provides such a framework, allowing continuing self-directed medical education regardless of the facilities available in the hospital library or of the frequency of College 'roadshows' or visiting speakers.

Patient management

The second important role for EBM lies in patient management. It is obvious that only those doctors aware of a therapy may consider using it in the care of their patients, but practitioners of EBM go beyond this. Through efficient and regular analysis of the medical literature, they not only have a greater chance of being aware of new therapies, but by applying strict criteria in assessing a publication, they will be able to make rational judgements of its value to a specific patient. An argument often levelled at EBM is that it removes control from the individual physician by dictating management choices. In fact, the reverse is true: whilst EBM does insist that its practitioners assess the evidence to the same high standard wherever they might be, at the same time it allows – even depends upon – absolute freedom to determine the relevance of the evidence to the individual patient. Only by being aware of all current proven management options can the physician truly be said to be making a choice. It is the doctor not practising EBM who has less choice – the doctor who is unaware of the value of a treatment cannot rationally choose it!

Whether treating an uncomplicated myocardial infarction or an unusual connective tissue disease, the EBM doctor can pinpoint the evidence on which his/her decision is based. Doctors (and patients) will know when decisions are based on large randomised clinical trials and, when such evidence is lacking, on experience and gut-feeling. The latter course is not excluded from physicians practising EBM, but they will be fully aware of when management is based on such premises and thus the limitations of their approach.

Knowledge dissemination

The third practical application of EBM is the dissemination of knowledge, whether to fellow clinicians, nursing staff, medical students or – most importantly – to patients and their families. The communication of medical knowledge is a fundamental aspect of the art of medicine: it is of crucial importance that such information is accurate and applicable. Whilst knowledge gained from 'years of

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experience' has an undeniable value, it is much more valuable when supported by results from patient-centred clinical research.

Ensuring wisdom is wise

The roles outlined for EBM above can be seen to support the expertise gained from years of 'hands-on' patient care. Such experience is essential if knowledge is to be converted into clinical wisdom. Effective EBM ensures that the knowledge itself is securely based - only then may the wisdom be wise.

Thus, from the perspective of the district general physician, EBM enhances other aspects of medicine; it does not replace them. Indeed, for many - and perhaps the majority of - medical situations there is only second-rate evidence on which to base decisions. This is appreciated by those advocating EBM, who stress the primacy of the individual's experience and their 'art'. In this respect, the words of William Osler (1849-1919) are as relevant now as when first written: 'We can have both science and faith, if only we keep them separate.'

The practice of medicine in a modern DGH, just as in Osler's time, requires knowledge of both the current scientific findings and the judicious use of 'faith' or the 'art of medicine'. The district general physician practising EBM can, however, keep the art separate from the science. If there is good scientific evidence of the benefit of a particular course of management known to the professor in the teaching hospital, it will be known to (and may be used by) the physician. If this evidence is lacking, then clinical experience will be the key in managing the physician's patients - just as it would for any physician in the world.

The role of EBM is not to challenge or dilute the utility of years of clinical experience but to allow physicians to know when they are practising art and when they are practising the application of science: a distinction their patients would surely appreciate.

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APPETITE AND OBESITY: Disorders of over- and under-eating

Edited by Peter Kopelman

Why do some people eat more than they need, and others less, even though enough food is readily available? And why are some more susceptible to suffer consequentially from the ill effects of over- or under-weight?

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