Implementing findings of research revisited
Toby Lipman and Roger Jones

In 1994 Haines and Jones described and reviewed the reasons for “unacceptable delays in the implementation of many findings of research”.¹ They concluded, from a wide-ranging discussion, that any single approach to enhancing the implementation of research findings was unlikely to be effective, and that a shift in attitude towards a more evaluative culture among health professionals and managers was required. Patients should expect a clear explanation about the effectiveness of the treatments they are offered, and health policy should be supported by evidence from research where available. Changes in health service management and organization should be designed as experiments and evaluated appropriately wherever possible. Methods of promoting the use of research findings require further evaluation, and an integrated approach incorporating techniques of critical appraisal should minimize the possibility of uncritical acceptance of information and guidelines. Clinical practice clearly should be responsive to the best available evidence, but in the absence of evidence, clinicians should recognize and encourage the need for appropriate research rather than the uncontrolled use of unproven interventions. Finally, they recommended that adequate resources be provided to ensure successful implementation and to achieve cultural change.

Since then, clinical effectiveness and evidence-based practice have risen to the top of the health care agenda. The Cochrane Collaboration has established comprehensive databases of systematic reviews, abstracts of reviews of effectiveness and review methodology, and a register of controlled trials. These are now available at low cost both on the Internet and in the quarterly Cochrane Library on CD-ROM. The methodology of constructing evidence-based guidelines has been refined and systematized,² and implementation programmes comprising evidence-based guidelines and audit have been introduced, many of them in primary care.³,⁴

Evidence-based medicine evolved from Sackett and its wider applicability.⁹ Some have expressed grave reservations on the grounds that evidence-based medicine is reductionist, relies too much on randomized controlled trials and neglects the wider psychological and social context of general practice consultations.¹⁰,¹¹ These disagreements often seem ideological in nature, and are sometimes set out in stark terms, as though GPs had to make a choice between either a cold, scientific, ‘biomedical’ approach (evidence-based medicine) or a warm, inclusive, contextual approach to patients’ problems. Greenhalgh has argued that both are important and that evidence-based practice must not take into account only ‘biomedical’ evidence, but also qualitative evidence and the wider psychological and social factors affecting patients.¹²

This debate between the ‘art’ of general practice and the need for practice to be based upon science is not new. Sowerby, writing in 1977 about the influence of Michael Balint on general practice, suggested that “… general practitioners should reaffirm the importance to them of the intellectual discipline of science. If they wish their understanding and practice to be comprehensive, they must also affirm the importance of the arts. What they must not do is to confuse one with the other.”¹³

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¹ Haines A, Jones R. Implementing findings of research revisited. Family Practice Vol. 16, No. 3 © Oxford University Press 1999
³ Lipman T. Evidence-based medicine: the Cochrane Library. British Journal of General Practice 1995; 45:4
⁵ Greenhalgh T. How to read a systematic review and metanalysis. British Journal of General Practice 1995; 45:4
⁶ Sowerby, writing in 1977 about the influence of Michael Balint on general practice, suggested that “… general practitioners should reaffirm the importance to them of the intellectual discipline of science. If they wish their understanding and practice to be comprehensive, they must also affirm the importance of the arts. What they must not do is to confuse one with the other.”¹³
McColl and colleagues, in a questionnaire survey of GPs' opinions, found that, although the idea of “evidence-based practice” was most broadly welcomed, only 5% believed that the most appropriate way of moving towards it was by learning the skills of evidence-based medicine. Over one-third favoured seeking and applying evidence-based summaries, and a further third favoured the use of evidence-based guidelines or protocols. The place of evidence-based practice and the search for clinical effectiveness was the subject of a symposium organized by NoReN, the Northern Primary Care Research Network, in 1998. A number of invited speakers provided a range of perspectives on methods of identifying and implementing research findings applicable to primary care. Original research was presented and group discussions were used to focus on specific problems and potential solutions. Critical issues included the practical difficulties, described by Steve Rogers, for primary health care team members of accessing and critically appraising evidence and translating it into changes in the way that services are delivered. Robbie Foy outlined possible solutions, such as providing protected time for primary health care team members to participate in workshops focused on clinical problems that they have identified as being of particular relevance to their routine clinical practice, and Karen Jones reported the establishment of evidence-based journal clubs for primary care nurses, in which a chronic condition is selected for exploration and proposals for evidence-based management are generated.

The secondary care analogue to this approach was described by David Sackett, who reported on the “evidence cart”, a substantial wheeled device containing an infra-red simultaneous stethoscope with 12 remote receivers, a physical diagnosis textbook and reprints from the Journal of the American Medical Association, a notebook computer, a computer projector and a pop-out screen. 125 hard disk files of 1–3 page summaries of evidence appraised by clinical teams (“critically appraised topics” or “CATs”) and CDs of Best Evidence, the Cochrane Library and WiNspires, a core collection of leading biomedical journals. The Cart was used on hospital ward rounds whenever evidence about a clinical decision already made was challenged or needed to be confirmed, or when it was judged that a patient might benefit by a change in or an addition to a current decision. The physical diagnosis textbook was the most frequently used component of the Cart, with the CATs and WiNspires in second place. Most of the searches were for evidence that would affect diagnostic or treatment decisions; only half of them confirmed diagnostic or management decisions, while 23% led to changes in existing decisions and 25% to new clinical management decisions.

Paternalism will no longer do when we are discussing treatment options with patients, describing the side-effects of therapy or the risks and benefits of different procedures. Using the telling example of prostatism, and the choice between watchful waiting, drug therapy and prostatic resection, Glyn Jones Elwyn took us through the layers of clinical epidemiology that we have to master if we are to deal appropriately with our patients' expectations. They may bring to us material gathered from the Internet, often poorly contextualized, and some of the tensions between truth telling and beneficence are likely to generate substantial ethical difficulties. Clinicians will have to learn a formidable body of new skills and knowledge in order to be comfortable and competent both in interpreting evidence and explaining it clearly to patients without disrupting the established obligations, traditions and tasks of the consultation. However, many different perceptions of ‘shared decision making’ were held by discussants at this symposium, including incorporation of patients’ values, whole practice team involvement and strategic sharing of decisions. Ethical dilemmas are likely to arise when information is imparted in stark terms to patients (which might increase their anxiety), although it was recognized that this might sometimes be appropriate. Who would benefit from introducing scientific evidence into the consultation—the patient or the clinician? Would this interfere with the placebo effect of the clinician’s behaviour, Balint’s “apostolic function”? Many clinicians understand that patients sometimes genuinely do not want to know, and expect the clinician to take sole responsibility for making decisions about treatment. There were concerns about how to convey meanings, particularly of risk reduction, in plain language. Numeric representation of facts, ratios and odds are often difficult for patients to grasp, and a more visual approach to the depiction of risk might be useful. The use of evidence within the consultation should not be regarded as replacing traditional consulting skills, but rather as requiring the integration of a further skill.

Some clues about ways to influence the behaviour of individual clinicians come from recent work which indicates that there may be three possible models of behavioural change, derived from a series of studies on the factors influencing the prescribing behaviour of GPs. The ‘accumulation model’ describes the situation of gradually accumulating evidence, derived from various sources, which eventually reaches a threshold beyond which change occurs and is sustained. The second, the ‘conflict model’, describes a situation in which habitual prescribing habits are challenged by a critical event, such as new prescribing by a new colleague, which is found to be efficacious and leads to a sustained change in prescribing behaviour. The third, the ‘continuity model’, applies to GPs who constantly update their clinical practice, are amenable to outside influences and are prepared to make changes in response to evidence. It is also important to remember that involvement in research studies is
itself associated with sustained change in the behaviour being researched.

If evidence-based practice skills are to be widely disseminated, there must be adequate resources to train and support clinicians; information will need to be easily accessible in many forms, including evidence-based guidelines, summaries of evidence and quick reference databases such as Martin Duwes’ “Best Answers” (which he described at the symposium), in which evidence (from the Cochrane Library, Best Evidence, etc) is used to construct answers to likely questions from primary care practice, which are assembled in a searchable database. Implementation of evidence of clinical effectiveness must not be allowed to override the humane character of general practice and primary care, but should be integrated with it. The patient–doctor relationship is still central to general practice, and patients should be drawn into the process of clinical decision-making based on evidence rather than have it imposed upon them. Much more research is needed into the characteristics and effects of evidence-based consultations as well as on purely clinical outcomes.

References