to create "win-win" relationships. By extension, critics of competition maintain that the NHS should do the same. These developments have been reinforced by concerns about the increase in management costs associated with the introduction of competition.

Estimates suggest that the NHS reforms may have resulted in up to £1bn extra being spent on administration, although changes in definitions make it difficult to be precise. This is because of the need to employ staff to negotiate and monitor contracts and to deal with the large volumes of paperwork involved in the contracting system. Ministers have responded to these concerns by streamlining the organisation of the NHS and introducing tight controls over management costs. They have also encouraged the use of long term contracts in order to reduce the transaction costs of the new arrangements.

Out of the ashes of competition has arisen a different policy agenda. This owes less to a belief in market forces than a desire to use the NHS reforms to achieve other objectives. The current agenda centres on policies to improve the health of the population, give greater priority to primary care, raise standards through the patient's charter, and ensure that medical decisions are evidence based. These policies hinge on effective planning and coordination in the NHS and all have been made more salient by the separation of purchaser and provider roles on which the reforms are based.

In particular, the existence of health authorities able to take an independent view of the population's health needs without being beholden to particular providers has changed the way in which decisions are made. To this extent the organisational changes introduced in 1991 have served to refocus attention on those whom the NHS exists to serve, even though the effects were neither anticipated nor intended when the reforms were designed. Like a potter moulding clay, only in the process of creation has the shape of the product become apparent. The effect of this policy shift has been to open up common ground between Labour and the Conservatives, notwithstanding the differences that remain.

Yet before the obituary of competition is written, the consequences of a return to planning need to be thought through. The NHS was reformed precisely because the old command and control system had failed to deliver acceptable improvements in efficiency and quality, and the limitations of planning must also be acknowledged. While competition as a reforming strategy may have had its day, there are nevertheless elements of this strategy which are worth preserving. Not least, the stimulus to improve performance which arises from the threat that contracts may be moved to an alternative provider should not be lost. The middle way between planning and competition is a path called contestability. This recognises that health care requires cooperation between purchasers and providers and the capacity to plan developments on a long term basis. At the same time, it is based on the premise that performance may stagnate unless there are sufficient incentives to bring about continuous improvements. Some of these incentives may be achieved through management action or professional pressure, and some may derive from political imperatives.

In addition, there is the stimulus to improve performance which exists when providers know that purchasers have alternative options. This continues to be part of the psychology of NHS decision making, even though ministers seem reluctant to use the language of markets. It is, however, a quite different approach than competitive tendering for clinical services, which would expose providers to the rigours of the market on a regular basis.

The essence of contestability is that planning and competition should be used together, with contracts moving only when other means of improving performance have failed. Put another way, in a contestable health service it is the possibility that contracts may move that creates an incentive within the system, rather than the actual movement of contracts. Of course for this to be a real incentive then contracts must shift from time to time, but this is only one element in the process and not necessarily the most important. As politicians prepare their plans for the future it is this path that needs to be explored.

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Evidence based medicine: what it is and what it isn't

It's about integrating individual clinical expertise and the best external evidence

Evidence based medicine, whose philosophical origins extend back to mid-19th century Paris and earlier, remains a hot topic for clinicians, public health practitioners, purchasers, planners, and the public. There are now frequent workshops in how to practice and teach it (one sponsored by the *BMJ* will be held in London on 24 April); undergraduate[1] and postgraduate[2] training programmes are incorporating it[3] (or pondering how to do so); British centres for evidence based practice have been established or planned in adult medicine, child health, surgery, pathology, pharmacotherapy, nursing, general practice, and dentistry; the Cochrane Collaboration and Britain's Centre for Review and Dissemination in York are providing systematic reviews of the effects of health care; new evidence based practice journals are being launched; and it has become a common topic in the lay media. But enthusiasm has been mixed with some negative reaction.[4-6] Criticism has ranged from evidence based medicine being old hat to it being a dangerous innovation, perpetrated by the arrogant to serve cost cutters and suppress clinical freedom. As evidence based medicine continues to evolve and adapt, now is a useful time to refine the discussion of what it is and what it is not.

Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice. Increased expertise is reflected in many ways, but especially in more effective and efficient diagnosis and in the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care. By best available external clinical evidence we mean clinically relevant research, often from the

basic sciences of medicine, but especially from patient centred clinical research into the accuracy and precision of diagnostic tests (including the clinical examination), the power of prognostic markers, and the efficacy and safety of therapeutic, rehabilitative, and preventive regimens. External clinical evidence both invalidates previously accepted diagnostic tests and treatments and replaces them with new ones that are more powerful, more accurate, more efficacious, and safer.

Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without current best evidence, practice risks becoming rapidly out of date, to the detriment of patients.

This description of what evidence based medicine is helps clarify what evidence based medicine is not. Evidence based medicine is neither old hat nor impossible to practice. The argument that "everyone already is doing it" falls before evidence of striking variations in both the integration of patient values into our clinical behaviour[7] and in the rates with which clinicians provide interventions to their patients.[8] The difficulties that clinicians face in keeping abreast of all the medical advances reported in primary journals are obvious from a comparison of the time required for reading (for general medicine, enough to examine 19 articles per day, 365 days per year[9]) with the time available (well under an hour a week by British medical consultants, even on self reports[10]).

The argument that evidence based medicine can be conducted only from ivory towers and armchairs is refuted by audits from the front lines of clinical care where at least some inpatient clinical teams in general medicine,[11] psychiatry (J R Geddes *et al,* Royal College of Psychiatrists winter meeting, January 1996), and surgery (P McCulloch, personal communication) have provided evidence based care to the vast majority of their patients. Such studies show that busy clinicians who devote their scarce reading time to selective, efficient, patient driven searching, appraisal, and incorporation of the best available evidence can practice evidence based medicine.

Evidence based medicine is not "cookbook" medicine. Because it requires a bottom up approach that integrates the best external evidence with individual clinical expertise and patients' choice, it cannot result in slavish, cookbook approaches to individual patient care. External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all and, if so, how it should be integrated into a clinical decision. Similarly, any external guideline must be integrated with individual clinical expertise in deciding whether and how it matches the patient's clinical state, predicament, and preferences, and thus whether it should be applied. Clinicians who fear top down cookbooks will find the advocates of evidence based medicine joining them at the barricades.

Some fear that evidence based medicine will be hijacked by purchasers and managers to cut the costs of health care. This would not only be a misuse of evidence based medicine but suggests a fundamental misunderstanding of its financial consequences. Doctors practising evidence based medicine will identify and apply the most efficacious interventions to maximise the quality and quantity of life for individual patients; this may raise rather than lower the cost of their care.

Evidence based medicine is not restricted to randomised trials and meta-analyses. It involves tracking down the best external evidence with which to answer our clinical questions. To find out about the accuracy of a diagnostic test, we need to find proper cross sectional studies of patients clinically suspected of harbouring the relevant disorder, not a randomised trial. For a question about prognosis, we need proper follow up studies of patients assembled at a uniform, early point in the clinical course of their disease. And sometimes the evidence we need will come from the basic sciences such as genetics or immunology. It is when asking questions about therapy that we should try to avoid the non-experimental approaches, since these routinely lead to false positive conclusions about efficacy. Because the randomised trial, and especially the systematic review of several randomised trials, is so much more likely to inform us and so much less likely to mislead us, it has become the "gold standard" for judging whether a treatment does more good than harm. However, some questions about therapy do not require randomised trials (successful interventions for otherwise fatal conditions) or cannot wait for the trials to be conducted. And if no randomised trial has been carried out for our patient's predicament, we must follow the trail to the next best external evidence and work from there.

Despite its ancient origins, evidence based medicine remains a relatively young discipline whose positive impacts are just beginning to be validated,[12 13] and it will continue to evolve. This evolution will be enhanced as several undergraduate, postgraduate, and continuing medical education programmes adopt and adapt it to their learners' needs. These programmes, and their evaluation, will provide further information and understanding about what evidence based medicine is and is not.

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For details of the international conference on evidence based medicine to be held in London on Wednesday 24 April 1996, contact the BMA/BMJ Conference Unit, telephone 0171 383 6605, fax 0171 383 6663.