sulfadoxine-pyrimethamine can be sustained over several years and that once resistance has emerged a rapid decline in sensitivity is not inevitable. Why this has happened in Malawi but not elsewhere is uncertain. The investigators think that this may be due to the high level of transmission of malaria in Malawi, which results in early acquisition of immunity and many asymptomatic infections. Because most asymptomatic infections are not treated, only a relatively small proportion of the parasites circulating in Malawi are exposed to an antimalarial at any one time. This contrasts with the situation in areas where transmission is low, such as Thailand, where nearly all infections cause symptoms and are treated, thus providing any resistant parasites with a strong survival advantage. Although considerations of this kind could explain why resistance seems to have developed more slowly in Malawi than in South East Asia, it does not account for the rapid spread of resistance to sulfadoxine-pyrimethamine in parts of East Africa where the level of transmission is as high as, or higher than, in Malawi.

Although the findings from this study are better than might have been expected, they should not induce complacency about the use of sulfadoxine-pyrimethamine for the treatment of malaria in Africa. Clinical and parasitological failure rates 28 days after treatment of 20% and 70% are not satisfactory, and many of the children with parasitaemia on day 28 will subsequently develop a clinical attack. If these findings are representative of the situation in other parts of Malawi a further change in treatment policy is needed. The results of this study should not be used to justify a switch to monotherapy with sulfadoxine-pyrimethamine by countries in Africa contemplating a change from chloroquine. Strong evidence now exists to support a change to combination therapy with two or more drugs, each of which is highly effective locally.[11] Malawi has been fortunate to obtain 10 years of effective use from sulfadoxine-pyrimethamine; other countries in Africa are unlikely to be as fortunate.

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What's the E for EBM?

Theme issue will question the evidence for evidence based medicine

Interest in evidence based medicine has grown exponentially from one Medline citation in 1992 to more than 13 000 in 2004. Professional organisations and training programmes for healthcare professionals have moved from whether to teach evidence based medicine to how to teach it, resulting in an explosion in the number of courses, workshops, and seminars offered in this practice. Reports describing evidence based rejuvenations of traditional educational events are burgeoning, and case reports and a survey of residency programmes have concluded that some of the determinants of continuing high attendance at postgraduate journal clubs include the teaching of critical appraisal skills and emphasising the primary literature (and not surprisingly, providing free food).[1 2] Familiarity with its terminology has extended into the popular press, as evidenced by a recent article in the *Times* describing the number needed to treat.[3] But all this leads to the question, "What's the E for EBM?"

Discussion about the practice of evidence based medicine naturally engenders negative and positive reactions from clinicians. Some of the criticisms focus on misunderstandings and misperceptions of evidence based medicine such as the concerns that it ignores patients' values and preferences and promotes a cookbook approach.[4] But this debate has highlighted limitations unique to the practice of evidence based medicine that must be considered. For example, the difficulty of developing new skills in seeking and appraising evidence cannot be underestimated. Moreover, the need to develop and apply these skills within the time constraints of our clinical practice must be addressed.

The body of evidence relating to the impact of evidence based medicine on healthcare professionals ranges from systematic reviews of training in the skills of evidence based medicine to qualitative research describing the experience of evidence based medicine practitioners.[5 6] However, studies of the effect of teaching and practising evidence based medicine are challenging to conduct. In many studies, the intervention has been difficult to define. What the appropriate "dose" or "formulation" should be is unclear. Some studies use an approach to clinical practice while others use training in one of the discrete microskills of evidence based medicine such as searching Medline or

BMJ 2004;328:535–6

critical appraisal.[5 7] Moreover, learners have different learning needs and styles, and these differences must be reflected in the educational experiences provided.

Just as the intervention has proved difficult to define, its evaluation has been challenging. Effective interventions involving evidence based medicine produce a wide range of outcomes. Changes in knowledge and skills are relatively easy to detect and demonstrate. Changes in attitudes and behaviours are harder to confirm. Still more challenging is detecting changes in clinical outcomes.

By questioning the evidence for evidence based medicine are we asking the right question? Providing evidence from clinical research is a necessary but not sufficient condition for the provision of optimal care. This has created interest in knowledge translation—the scientific study of the methods for closing the gap between knowledge and practice—and the analysis of barriers and facilitators inherent in this process.[8] Proponents of knowledge translation have identified that changing behaviour is a complex process requiring comprehensive approaches directed towards patients, doctors, managers, and policy makers, and providing evidence is but one component.[9] Moreover, it may be too soon to tell if evidence based medicine changes clinical performance and outcomes because advocates think that it requires lifelong learning, and this is not something that can be measured over the short term.

The *BMJ* will publish a theme issue on "What's the evidence that evidence based medicine changes anything?" in October 2004. We see this as an opportunity to reflect on the challenges of practising and teaching evidence based medicine, highlighting the work that has been done in this field and providing an opportunity to point the way forward. We invite contributions from researchers, patients, health professionals, policy makers, and other stakeholders, to reach us by 15 April 2004. Submissions should be made to www.submit.bmj.com, and the editorial contact is Giselle Jones (gjones@bmj.com).

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Efficiency, equity, and NICE clinical guidelines

Clinical guidelines need a broader view than just the clinical

The stated purpose of clinical guidelines from the United Kingdom's National Institute for Clinical Excellence (NICE) is to "help healthcare professionals and patients make the right decisions about healthcare in specific clinical circumstances."[1] However, what constitutes "the right decisions" depends on your point of view. For individual patients the right decision is that which maximises their wellbeing, and this is properly the concern of the clinician. Yet in resource constrained healthcare systems this will not always coincide with the right decisions for patients in general or society as a whole, thereby leading to some understandable tensions. NICE is a national policy making body whose responsibility is clearly broader than the individual patient.[2] This wider viewpoint is reflected in NICE's technology appraisals by the central role afforded to cost effectiveness. We argue that the methods currently used by the NICE clinical guideline programme confuse these two viewpoints.

Cost effectiveness analysis allows decision makers to improve efficiency by spending the limited healthcare budget on those activities that generate the greatest health benefits per pound spent.[3] Such efficiency considerations are a key part of NICE technology appraisals, and NICE's remit demands that the same principles of assessing societal wellbeing should apply to clinical guidelines work.

Clinical guidelines themselves are not a new concept,[4 5] but the NICE clinical guideline programme is different. Rarely have clinical guidelines been intended to operate at a national level, incorporate both clinical and cost effectiveness, and provide instructions that are mandatory within the NHS (though, unlike technology appraisals, there is no requirement for funding to be provided).[1 6] Currently, development of guidelines is commissioned by NICE from development teams via several national collaborating centres that are largely based at the royal colleges. These teams produce evidence reviews that are presented and considered by guideline development groups, who then produce the guideline recommendations based on the best available evidence.

Guideline development groups consist substantially of senior clinicians with special interest in the disease area.[7] Undoubtedly the understanding of clinical evidence is enhanced by the inclusion of such experts, but the incentives for members of these groups to recommend cost effective practices may clash with their feelings of responsibility to patients and fellow professionals within this disease area. Each development

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