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Compulsory audit projects for medical students

Sir,

Compulsory audit of clinical activity will be the norm for doctors in the 1990s¹ and at Dundee medical school it was felt important to equip students, regardless of their eventual career choice, to cope with the planning, execution and presentation of a clinical audit project. An audit project was thus introduced as a standard and assessable component of the four week general practice teaching block attached to a tutor in the fourth year. The choice of topic is left to students and tutors but a list of suggestions is available.

Students must complete their project within the four-week period, submit a written report of approximately 1000 words, and present their findings at the end of block departmental seminar. The diversity of topics chosen is remarkable and examples include 'Peoples' attitudes to smoking', 'Hypertension audit', 'The workload generated by a problem patient', 'Practice booklets', 'Are patients frightened of their doctors?' and 'Audit of bereavement visiting'.

Since the publication of the white paper¹ audits of cervical smear rates, practice immunization rates, referral rates per partner and costs of prescriptions have become popular. We expected, and received, some resistance from students when the idea was first proposed, but are now impressed at the widespread level of enthusiasm and high standard shown by students in completing reports. Reaction from department tutors was initially mixed, but most tutors now view the project as a useful component of teaching. It provides an opportunity for the student to work unsupervised (which relieves some of the tensions of a one-to-one teacher-pupil relationship over four weeks), it can be stimulating for tutors to become involved with students' ideas, and most interestingly tutors have begun to see the

potential of harnessing the student as a resource for the practice.²⁻⁴

We think the compulsory audit scheme is an innovation worthy of consideration in all medical schools. Others may find the concept of compulsory projects controversial, or may object to students being 'exploited' to perform practice audit. We would be interested to receive the views of teachers of general practice.

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Trainee exchanges

Sir,

During the final six months of my vocational training scheme I was offered a short exchange with a trainee from Scotland. I accepted and found my stay in another practice both enjoyable and stimulating. It is surprising that more trainers and trainees do not use this simple means of broadening the experience of all parties.

My exchange caused only minor disruption to each practice and there was no problem about fulfilling the criteria of the Joint Committee on Postgraduate Training for General Practice as both practices were fully accredited and no training time

was lost. Temporary accommodation was organized by each trainer.

I can only recommend trainee exchanges as educationally useful, enjoyable and easy to organize.

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Effect of small group education on the outcome of chronic asthma

Sir,

Dr Fox's condemnation (Letters, September *Journal*, p.391) of the general practitioners who took part in our study of asthma may be a justifiable criticism of all doctors in general practice at the time of this study. For our part we are full of admiration for the general practitioners who subjected themselves to the rigours and scrutiny of our study and we have seen no evidence to suggest that the care of asthma in any part of the UK is better than that provided in Croydon.

Dr Fox may be surprised by the suggestion that there are still major disagreements between doctors on asthma management but the evidence published by us in 1983¹ has been confirmed as relevant today by a recent survey which we have conducted (manuscript in preparation). Indeed as he says agreement in asthma does depend on the doctors you ask.

We agree that there is considerable unmet need among asthmatics and suspect that this is to be found all over the country. However, in contrast to Dr Fox we believe that it is only through the rigour of studies such as ours that it will be possible to make the case for small group learning as an educational method. In addition to this, despite both rapidly increasing sales in peak flow meters and

enormous increases in asthma drug use since 1973, there have been no published reports of a decrease in morbidity.²

The fact that 29 of the 53 general practitioners who were invited agreed to take part in our study suggests to us that general practitioners in Croydon are highly motivated in the care of asthma and are remarkable in wanting to take such steps to improve their own management. The response rate of patients in our study to the questionnaire never fell below 82% despite having to complete six questionnaires over two and a half years, and the 338 patients who completed the last questionnaire represent 74% of the 454 patients who entered the study. Higher targets are rarely reached.

Our study suggests that the power of small group discussion to change our behaviour in the absence of directly elicited information about patient morbidity should not be overestimated. We are not aware of any small groups which currently use surveys of patient morbidity as a basis for their discussions and we have not seen any controlled trials of the effectiveness of educational interventions with doctors in the care of asthma.

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Sir,

We read the study by Dr White and colleagues (*May Journal*, p.182) with interest. However, the analysis suffers from statistical weaknesses which are all the more important for being quite common.

The results of 54 separate significance tests are reported. There is a one in 20 chance of obtaining a *P* value less than 0.05 and so rejecting the null hypothesis when it is true. Repeated testing seriously increases the risk of such type I errors.¹ While not influencing the conclusions of this study, it is poor practice and should not be copied. If there had been a different pattern of significant tests in-

correct inferences might have been drawn.

Table 5 of the paper gives the results of analysis of variance between the two intervention groups and the control group for every morbidity measure and for each of the six times that the patients were questioned. This form of analysis (univariate) assumes that the results in each period are independent of the next. However, this assumption does not appear to have been tested. The measures of asthma morbidity in one period are likely to be related to those obtained six months earlier. Analysis which ignores the relationship between repeated measures and uses univariate when multivariate analysis² is more appropriate will tend to overlook significant trends and differences and thus miss important results.

As the patients' results are subsumed under their respective general practitioner's score some trends among patients over time may have been missed. Thus, the analysis should explicitly acknowledge that the data are from patients who are 'nested' within general practitioners who are in turn 'nested' in groups (intervention or control).

With the availability of microcomputers and better training, general practitioners should increasingly come to regard themselves as clinician researchers. It will be a shame if the potential blossoming of research activity in general practice is not accompanied by a comparable growth in statistical understanding.

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Comparison of the workload of a trainer and trainee

Sir,

We were interested to read the paper by Pearson and Goss (*August Journal*, p.320). We carried out a similar, although smaller, audit halfway through one training year.

The practice is situated in an inner city area and at least 6% of the patients are of Asian or Arabic origin. The practice is atypical since 40% of the population

registered are aged between 15 and 24 years. The principals are all lecturers in general practice fulfilling research and teaching as well as clinical commitments. The trainee was the only woman in the practice at the time of the audit. The practice list size is approximately 7500 and lists are shared.

Consultations carried out by the trainer (C.R.W.) and trainee (C.C.) in January/February 1989 were audited. Each consultation was coded according to type — newly registered patient (first consultation in the practice), new problem, review of new problem, chronic disease or chronic problem — and a summary of the main problem dealt with was recorded.

Over seven weeks the trainee saw 526 patients and in six weeks the trainer saw 330 patients — 58% of the trainer's consultations were with female patients compared with 80% of the trainee's. This confirmed the trainee's suspicions of her workload but contrasts with the results of Pearson and Goss.

Twenty per cent of the trainee's consultations were with newly registered patients compared with 4% of the trainer's. This reflects the high turnover of patients within the practice and indicates that the trainer's surgeries were usually well booked in advance so that any gaps which existed were in the trainee's surgeries and were filled with 'extras', often new patients.

Eighteen per cent of the trainee's consultations were for review of recently presented problems, compared with less than 3% of the trainer's. No record was made of whether these were doctor or patient initiated consultations but if they were the former they indicate the trainee's greater uncertainty and need to monitor the natural history of self-limiting disease.

Consultations for chronic problems comprised approximately 40% of trainee and 45% of trainer workload. Analysis of the type of problem seen revealed that nearly 10% of both the trainer's and trainee's consultations were for chronic psychosocial, drug or alcohol problems. This contrasts with Pearson and Goss's study where 6.4% of the trainees consultations and 11.3% of the trainer's were with patients with mental and social problems. The percentages of consultations for other chronic problems, such as diabetes and asthma, were similar to those of Pearson and Goss for the trainer but were lower for the trainee, supporting other studies which draw attention to this deficit in training.¹

The percentages of consultations that were for gynaecological problems were much higher in our study than in that of Pearson and Goss. Thus 18% of the