different, probably because of the way the schemes were applied. It is difficult to know how many of the practices participated actively in the Northern region's scheme because entry to the scheme was automatic; the uptake in Lothian was 75%. Table 1 shows the proportion of practices in both regions that achieved their financial target and the proportions in Lothian that achieved the target for generic prescribing and the quality target. The quality target produced 33 audits of prescribing and 12 quality standards for prescribing at practice level.

The disadvantage of applying Lothian's scheme is that it is time consuming for both practices and prescribing advisers, but the results suggest that tailoring a scheme to individual practices is an effective strategy.

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1 Bateman DN, Campbell M, Donaldson LJ, Roberts SJ, Smith JM. A prescribing incentive scheme for non-fundholding general practices: an observational study. *BMJ* 1996;313:535-8. (31 August.)

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Reduction in prescribing cannot confidently be attributed to scheme

EDITOR,—D N Bateman and colleagues set out to examine the effects of a financial incentive scheme on prescribing among non-fundholding general practitioners. We are not convinced, however, that they have shown that these general practitioners responded to such incentives in a manner similar to that of fundholding practices, as the authors claim.

Firstly, from a purely descriptive viewpoint, the proportion of practices achieving the target reduction was relatively modest (23% of all practices). More importantly, however, there are no control data either from practices outside the scheme or in the form of historical trend data from the practices in the scheme. As the authors acknowledge in their discussion—but ignore in their abstract—this means that causal attribution of the reduction in prescribing to the incentive scheme is not possible with confidence. Other, secular, trends may have been responsible. Correcting this important deficit is a question not merely of undertaking further analysis, as the authors suggest, but of acquiring new data and considerably altering the design of this simple "before and after" quasiexperiment.

The second flaw is that all the comparisons between the so called achieving and non-achieving practices are based not on changes in prescribing behaviour but on simple cross sectional data. There is no way of knowing whether the significantly lower prescribing costs for, for example, inhaled steroids and antidepressants in achieving practices were of long standing or developed for the first time during the study.

In summary, having failed to show whether any change was attributable to the scheme and to identify in which drug categories any changes (attributable or otherwise) occurred, this study provides no valid evidence of whether incentive schemes alter prescribing costs and quality.

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Authors' reply

EDITOR,—The proportion of practices achieving financial targets will depend on the target set and whether practices are specifically selected. Prescribing regulations in England and Wales now place a statutory obligation on health authorities to operate incentive schemes that are comprehensive and include all non-fundholding practices in a manner similar to the scheme in our study.^{1 2}

We agree with Philip Rutledge that incentive schemes seem to have some effect in limiting the growth in prescribing costs. Our approach produced worthwhile gain without imposing the demands on advisers' and general practitioners' time that are associated with targeted schemes such as the one in Lothian.

As was clearly stated in the title of our paper, our study was an observational one. Studies of prescribing behaviour may be affected by secular trends and selection bias. It is extremely rare in observational studies to show clear cause and effect, and Elizabeth Robinson and Ian Harvey's criticisms thus seem in part to be based on a misapprehension. Randomised controlled studies are clearly to be preferred, but operational constraints made this impossible. Comparison of non-randomised groups and trends over time and direct comparison with practitioners outside the region are all potentially subject to confounding. All studies of the prescribing behaviour of fundholding practitioners are non-randomised and subject to the same criticisms.

Robinson and Harvey suggest that the changes that we observed reflected existing cross sectional differences. We acknowledged this in our discussion, but the other research that we quoted clearly indicates that practices made conscious decisions with respect to the scheme.³ The region has continued to show good financial performance of non-fundholders relative to the rest of England, which suggests that changes in prescribing have been sustained.

We remain puzzled why Robinson and Harvey adopt such a negative attitude to our report, in which we measured prescribing behaviour in the context of a financial incentive scheme that offered practitioners a modest reward for efforts to promote cost effective prescribing.

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1 Statutory instrument 1995 No 692. *National Health Service (functions of family health services authorities) (prescribing incentive schemes) regulations 1995*. London: HMSO, 1995.

2 NHS Executive. *Prescribing incentive schemes regulations*. Leeds: NHSE, 1995. (FHSL (95)20.)

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Side effects of tamoxifen are distressing and common

EDITOR,—The letters by R D Bulbrook and Michael Baum and Jack Cuzick reflect the medical interest in the long term risks of prophylactic tamoxifen in ostensibly well women who are at risk of breast cancer as well as in the prevention or delay of relapse after surgery for symptomatic

disease.^{1 2} Our research shows that the side effects associated with tamoxifen are neither "overstated" nor "anecdotal."

We carried out a questionnaire study of women with advanced breast cancer and were surprised by the frequency and severity of side effects due to this drug as well as other to hormonal agents. The level of problems was very different from the toxicities associated with most chemotherapies but was nevertheless substantial.

We collected prospective information on side effects in 161 patients taking adjuvant tamoxifen and 38 controls matched for postmenopausal status. When we compared symptoms between the two groups we found significant differences ($P < 0.01$) for hot flushes (75 (47%) patients v 6 (16%) controls), weight gain (71 (44%) v 7 (18%) respectively), and vaginal discharge (45 (28%) v 1 (3%)). Patients often described the symptoms as "worrying."

The lesson from this is that one should never underestimate the potential for well tolerated drugs to cause problems. The drug datasheets are often more worrying than reassuring. The severity of adverse effects is not the only consideration: the side effects identified in this study are for the most part not dangerous but nevertheless distressing and common. Accurate information about side effects must be disclosed to patients.

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1 Bulbrook RD. Adjuvant treatment with tamoxifen. *BMJ* 1996;313:493-4. (24 August.)

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Value of milk tokens for breast feeding mothers should be increased

EDITOR,—In the deprived housing estates on the periphery of Glasgow roughly 7% of babies are breast fed at the end of the first week of life. Much research has related infant feeding to maternal background and socioeconomic status,^{1 2} and, despite promotional efforts, breast feeding continues to decrease in these areas.

Families receiving income support are eligible for milk tokens, which can be exchanged for 7 pints (4 litres) of milk a week by breast feeding mothers or for one 900 g tin of infant formula a week by mothers who bottle feed their baby. The financial value of the milk token is about £2.45 for breast feeding mothers, compared with £6.95 for mothers who bottle feed. It has been suggested that milk tokens may discourage breast feeding.³

Information was collected from women attending for their first antenatal appointment who lived in an area of urban deprivation. (The area's deprivation category score was 7; this measure of deprivation in small areas is based on the percentage of households with no car, overcrowding, male unemployment, and low social class, as defined by Carstairs and Morris.⁴) Altogether 704 women completed a questionnaire asking whether they intended to breast feed or bottle feed their baby and examining influencing factors. They were asked whether they received milk tokens and whether this affected their choice of feeding.

Most women stated that their choice was unaffected by the receipt of tokens, though a few remarked that they would not be able to afford to bottle feed if they did not receive tokens. Statistical analysis of the data in table 1 shows that

Table 1—Number of women who intended to breast feed or bottle feed their baby, by eligibility for milk tokens

Eligible for milk tokens	Intended feeding practice		
	Breast	Undecided	Bottle
Yes (n = 323)	44	42	237
No (n = 381)	83	70	228

$\chi^2 = 14.5$, $P = 0.001$.

women who were eligible for milk tokens were just over half (0.6) as likely to want to breast feed as women who were not eligible.

As mothers perceive the token for powdered milk to have a greater value than that for fresh milk they may believe that they gain more by bottle feeding their baby. It seems illogical that mothers who attempt to provide the best for their infants receive less support from the government. In areas of urban deprivation, where some mothers think that their diet is insufficient to support breast feeding, equal recompense might enable mothers to improve their diet and succeed in breast feeding. The cost to the government of increasing the value of the breast feeding token would be minimal as nearly all women who receive income support bottle feed and already receive the more costly token. Eventually, if more mothers chose to breast feed, any additional costs would be offset by savings made on treatment of illness caused by bottle feeding.⁵

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Medical Practices Committee's surveys of vacancies in general practice look at all vacancies

EDITOR,—In their study of factors influencing the response to advertisements for vacancies in general practice Robin Carlisle and Sue Johnstone used a questionnaire based on that used by the Medical Practices Committee in its study of 1994.¹ Their references also include one to the committee's recruitment survey report of 1995.²

The committee's aim is to ensure that, when account is taken of the total number of general practitioners available, there is an adequate number in all parts of England and Wales. It does this mainly by using its discretionary power to refuse applications for inclusion where the number of general practitioners is already adequate. This process of negative direction has resulted in an equitable distribution of general practitioners.

The situation is changing, however. For many years the total number of general practitioners available increased annually. Now, though more doctors are being admitted to medical lists than are resigning, the total whole time equivalent number of general practitioners has remained constant for the past four years. This reflects a

different and changing pattern of work, with more doctors entering general practice having a part time commitment.

To carry out its statutory duties effectively the committee needs to know about the availability of doctors to fill vacancies. That is why it carried out a pilot study of recruitment to partnership vacancies in 1994 and undertook a survey in 1995. It has now repeated the exercise, and the results of the 1996 survey will be published in the next few weeks.

As Carlisle and Johnstone's paper acknowledges, one third of vacancies in general practice are filled without advertisement. Of those that are advertised, not all are advertised in the *BMJ*. Accordingly, the authors' study, which followed up advertisements in the *BMJ*, did not include all advertised vacancies. The committee's surveys include all the vacancies approved in a five week period, regardless of whether they are advertised or not and regardless of the place of advertisement.

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- 1 Carlisle R, Johnstone S. Factors influencing the response to advertisements for general practice vacancies. *BMJ* 1996;313:468-71. (24 August.)
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Skin storage

Skin banks would not benefit from being taken over by National Blood Service

EDITOR,—S R Myers and colleagues suggest that existing skin banks should be incorporated into the infrastructure of the National Blood Service.¹ The Stephen Kirby Skin Bank at Queen Mary's University Hospital, Roehampton, has been operating for just under a year. Although not described as a national skin bank, it has provided cadaveric skin to major burns units in both England and the Republic of Ireland. It is a purpose built skin bank and adheres closely to the standards issued by the British Association of Tissue Banks in 1995. It provides cryopreserved and glycerolised cadaveric skin and also offers a keratinocyte culture service.

Running in conjunction with the skin bank is a research unit supported and supervised by senior scientists at University College London. I am aware of at least three other units in Britain that also provide cryopreserved skin.

The case in which HIV was transmitted by donor skin, which Myers and colleagues mention and which was reported by Clarke,² occurred under exceptional circumstances. Since that time lessons have been learnt. The Dutch Euroskin Bank, which has 17 years' experience in skin banking, has not identified any further cases of transmission of HIV.

I agree that in Britain skin donation is perceived as distasteful. I am confident that this can be improved by education. The general public regard both skin and cornea as a tangible element of their bodies and, more especially, of the bodies of their loved ones. It is this that can lead to the withdrawal of donations. The Stephen Kirby Skin Bank has a dedicated retrieval team and works closely with transplant coordinators. It can procure some 45% of the total body surface area of the donor with no visible disfigurement. Neither the Netherlands nor Britain has an opt out policy for donor consent. Despite some withdrawals of consent the Stephen Kirby Skin Bank performs three to five retrievals a week.

I contend that skin banks should be sited adjacent to burns units because the main use of

cadaveric skin is in the treatment of major burns. For the past year I have worked independently of the National Blood Service, and I do not believe that skin banks would benefit from being taken over by the service. I do support the role of the British Burns Association in the control of skin banking and storage.

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- 1 Myers SR, Machesney MR, Warwick RM, Cussons PD. Skin storage. *BMJ* 1996;313: 439. (24 August.)
- 2 Clarke JA. HIV transmission and skin grafts. *Lancet* 1987;i:983.

Demand has outstripped supply in Sheffield's skin bank

EDITOR,—We support S R Myers and colleagues' call for skin banking to be put on a formal footing under the aegis of the National Blood Service.¹ In Sheffield we have five years' experience of skin banking; over this period we have banked 80 000 cm² of skin, of which 44% was stored as viable cryopreserved skin and the remainder as glycerolised non-viable skin. Three quarters of this skin has been used locally, while the rest has been used by burns units in northern England and Scotland. Demand for skin allografts has outstripped the supply from our small scale skin bank, and the bank was transferred to the National Blood Service's centre in Trent at the end of September.

The skin bank has been helped greatly by the local renal transplant coordinators, and this has allowed us to take part in the regional transplant awareness course. Recent reductions in retrieval of skin allografts have been related to a more general reduction in organ donation.

We use glycerol for processing non-viable skin allografts, but we have reservations about the Euroskin Bank's protocol of using 85% glycerol for skin sterilisation. This concentration of glycerol will inactivate extracellular viruses, but our work has shown that skin needs to be in 98% glycerol for at least three weeks at room temperature for intracellular viruses to be inactivated (in practice we leave the allograft in 98% glycerol for four weeks).^{2 3}

We have found banked allograft skin to be invaluable in the management of severe burns with the Cuono technique and also in buying time to allow graft donor sites to heal before re-cropping.⁴ We now regard the availability of allograft skin as an essential part of the management of major burns.

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