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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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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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