prognosis. With reference to this group, the period for which a patient must survive after surgery in order to be considered cured, on the whole, was similar in the two studies (19 v 18 years).

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Testicular cancer and age at puberty

EDITOR,—The paper by the United Kingdom Testicular Cancer Study Group confirmed that undescended testis is a risk factor for germ cell testicular cancer and showed an increased risk with earlier puberty in white men in Britain.¹ The postulated model to explain this was based on an increased exposure to pituitary gonadotrophins.

We have studied the incidence of testicular cancer in New Zealand. We found that Maoris had a higher incidence of germ cell testicular cancer than their white compatriots and than any other non-white race worldwide. We thought that genetic and hormonal factors were relevant and noted that Maori infants had lower birth weights and that there was a higher incidence of maternal obesity.² These factors support the theory that increased exposure to oestrogen during pregnancy may be linked with an increased risk of germ cell testicular tumours.³ This theory also explains the association with cryptorchidism.

In contrast to the findings of the United Kingdom study group that testicular cancer is associated with earlier puberty, Maori boys start and complete pubertal development later than non-Maori boys.⁴ These findings seem to be discrepant, but puberty in boys cannot be assigned to a precise time and the ages at onset and completion are prone to inaccuracy. Furthermore, the United Kingdom study group used variables more indicative of completion of puberty, whereas our data were based on direct inspection and the Tanner scale of pubertal development.⁵

The contribution of the timing of puberty to the incidence of testicular cancer cannot be straightforward, and genetic factors and exposure to oestrogen could confound these observations.

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Risk of death in meat and non-meat eaters

EDITOR,—Margaret Thorogood and colleagues omit what is arguably the most important summary statistic from the abstract of their paper comparing mortality in vegetarians with that in meat eaters.¹ A comparison of total (all cause) mortality after five years (after the well known "healthy volunteer effect" has had time to wear off) shows a relative risk of 0.99 (95% confidence interval 0.76 to 1.30). Classifying (and comparing) cause of death is more subjective than is reporting the fact of death itself.² Jan P Vandembroucke has remarked on the authors' unusual method of selecting controls.³ Burr and Sweetnam compared similar numbers of vegetarian volunteers with non-vegetarian volunteers invited in a comparable manner and found a death rate ratio (all causes) of 0.96 (0.81 to 1.13), which did not alter appreciably after the exclusion of early deaths (those occurring in the first year).³ Vegetarian volunteers clearly have a low standardised mortality ratio, comparable to that of university teachers and ministers of the church but perhaps no lower than that of similarly health conscious meat eating volunteers.

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Information and choice in decisions about cancer treatment

EDITOR,—We support L J Fallowfield and colleagues' conclusions that patients' "desire for autonomy may be less strong than the need for clear and accurate information" and that patients "have the right to decline the opportunity to participate in decision making."¹ In a study of 165 patients treated for Hodgkin's disease within protocols of the British national lymphoma investigation, with a median interval from diagnosis of eight years, we examined patients' participation in decision making and the provision of information and choice. Of special interest was the impact on patients' views of the success or otherwise of treatment. Successful treatment was defined as complete response with no relapse, while unsuccessful treatment was defined as a failure of initial treatment to result in complete response or a relapse requiring further treatment.

Patients' answers to self administered questionnaires indicated that, although 102 patients thought that all decisions about treatment had been made entirely by their doctor, almost half of these were satisfied with this while the other half were not. A

perception of participation in the decision making process did not necessarily mean that patients thought that they had been given choices with respect to treatment: 41 of the 53 who said that they had participated in decision making perceived that no real choices had been available. Satisfaction with the information given to patients at and around the time of diagnosis was significantly linked to satisfaction with the perceived level of participation in the overall decision making process (table). The success or otherwise of treatment had less influence than expected on the relation between satisfaction with the information given and satisfaction with the degree of participation in decisions (sums of squares test), although numbers are small.

These data, like those reported by Fallowfield and colleagues, imply that patients' overall experience of decision making is more positive if they view the provision of information as adequate but not that their involvement in choices concerning treatment is necessarily desired. Many people may actively seek to relinquish the decision making role to the doctor and should be allowed to do so. Moreover, the outcome of a particular choice of treatment may not have any bearing on patients' satisfaction with information or their level of participation.

Many patients seem not to distinguish clearly between participation, information, and choice. Further research into understanding the complex relation between patients' desire for information, their need to participate, and choice in medical decision making should be a priority.

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Methadone maintenance in general practice

EDITOR,—Philip Wilson and colleagues reported encouraging health gains in drug users receiving methadone maintenance treatment in general practice.¹ We were concerned, however, that their reported cost of £2000 per patient per year may be seen by general practitioners as too high and thus dissuade them from providing a similar service. In fact, the real budgetary cost is less than that reported and should include only counsellor time, drug cost, and some toxicological costs. In support of this, we illustrate how some costs cited by Wilson and colleagues are superfluous.

Primarily, the general practitioner and practice time represents an opportunity cost unless patients are congregated in one or two practices, while the dispensing fees are paid from non-cash limited monies held at government level. This total is set

Relation between satisfaction with information given, participation in decision making, and success or failure of treatment*

	Satisfied with participation in decision making					
	Yes			No		
	Treatment			Treatment		
	Success	Failure	Total	Success	Failure	Total
Satisfied with information						
Yes	41	26	67†	6	4	10†
No	15	13	28	29	14	43
Total	56	39	95	35	18	53

*Excludes 17 patients who could not remember or did not answer.

†P < 0.001 (χ^2 test).

annually according to an agreed global sum and is not increased with the creation of services such as the one described. Furthermore, there is little in the paper to justify the collection of urine. Although this may be appropriate to a service study, occasional random testing is likely to be as effective and cheaper, especially if counsellors and general practitioners regularly (or routinely) request details of illicit drug use.

Thus the actual cost per patient may be nearer to £1000. Of course, as patients stabilise, costs should reduce further owing to a decrease in the methadone dose and counsellor time. These latter points suggest that cost is not a barrier to managing drug addicts in the primary sector.

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NHS funds for fundholders and non-fundholders

Cost calculations are incorrect

EDITOR,—Jennifer Dixon and colleagues' conclusion that fundholding practices have been funded more generously than health agencies may be valid in the former North West Thames region.¹ There are, however, fundamental weaknesses in the authors' methods.

The average cost per hospital day for a specialty, which is used to cost fundholding activity, is the total cost for that specialty divided by the number of days in hospital for that specialty. The average cost for a specialty is unlikely to be an accurate proxy of costs of fundholding activity as it includes the costs of emergency activity, which may be much greater than those of elective activity, to which fundholding practices are limited. Furthermore, day case activity is not captured in counts of bed days, thus the average cost per day for a specialty will be overstated.

This affects comparisons of prices. The authors used their estimates of comparative prices to invalidate the argument that more generous funding of fundholding practices is justified by the higher prices they pay. The methods' weaknesses mean that the authors cannot be confident that fundholders did not pay higher prices. If fundholding practices receive more generous funding they cannot necessarily purchase more activity.

Comparisons of prices are also difficult to interpret because they are based on specialties. Hospitals' different costing mechanisms mean that large variations by specialty may not correspond to large differentials overall. The average price for all the procedures purchased by fundholders needs to be assessed to establish whether fundholders are being charged more than health agencies.

Outpatient attendances were based on regional ratios of inpatient to outpatient activity for each specialty, obtained from Körner returns for 1990-1. Ratios of inpatient to outpatient activity vary by specialty and provider and may have changed since 1990-1 owing to pressures of cost and quality.

The average cost per outpatient attendance was assumed to be one twelfth of an inpatient episode. Costs vary by specialty and procedure. Unless fundholders' activity is a representative subset of total activity and the referral patterns of fundholders and health agencies are similar this assumption could distort the results.

The authors express reservations about their methods while claiming that the results' consistency

supports their validity. But biases can be consistent. The claimed consistency corresponds to large variations in the results, in particular for outpatients, which raise further methodological doubts. We support the authors' aims and share their concerns regarding inconsistencies and inequities in funding for health agencies and fundholders. Analysis that is not robust, even if it agrees with preconceptions or analyses performed elsewhere, does not help to clarify the issues.

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Non-fundholders are disadvantaged

EDITOR,—Jennifer Dixon and colleagues' paper highlights the lack of available data for accurate comparisons of funding per capita between fundholding and non-fundholding practices.¹ This is an important finding and an indictment of the government's unpiloted implementation of the fundholding scheme without the rudimentary prerequisite of equitable budget setting within a district being ensured. In an internal market anything short of such equity will lead to patients being treated according to differential purchasing capacity and not on the basis of clinical need. The unacceptable phenomenon of fast tracking of fundholders' patients² is possibly explained by the paper's finding that fundholding practices are more generously funded than their non-fundholding counterparts, in the North West Thames region at least.

Health agencies, as purchasers on behalf of non-fundholders, are clearly disadvantaged in the current budget setting process. Firstly, health agencies are funded according to a capitation formula, while fundholding practices are funded on the basis of historical activity. Inequities are heightened in "capitation losing" districts, where the health agency's allocation can be drastically reduced. Secondly, allocations for fundholders are top sliced from the health agency's budget and not from a separate pool of funds, often further reducing the per capita allocation available for non-fundholders. Thirdly, a health agency's budget is not protected, as is the budget for fundholders. For example, the costs of emergency care, which show a rising trend and are incurred by health agencies and not fundholders, reduce the available budget for non-fundholders. Additionally, fundholders are protected from the costs of expensive treatment, with a maximum expenditure of £6000 a year per patient treatment. Any excess cost is again met by the health agency, with a further diminution of the budget available for non-fundholders.

Given the above, the purported success of the fundholding scheme should be viewed with caution. Furthermore, if the substantial savings made by fundholders in the region studied (£7.7m by 31 March 1994) are a result of overgenerous funding their use solely for these practices clearly constitutes misappropriation of NHS funds in the context of unmet need of non-fundholders' patients in the same district.

The delivery of equitable health care demands that health agencies' budgets for non-fundholders are ring fenced and negotiated on the same basis as those of local fundholding practices. It is incredible that the secretary of state has allowed

patients to suffer differential access to health care on the basis of inequitable funding among general practitioners since the inception of the fundholding scheme three years ago.

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Equity of access is needed

EDITOR,—I am disappointed that the *BMJ* should have failed to see how flawed Jennifer Dixon and colleagues' paper on capitation funding for fundholders and non-fundholders in North West Thames region was, but perhaps this is because of political pressure to publish the article.¹ I was a member of the capitation steering group acknowledged by the authors, and it was made abundantly clear that prices for operations were vastly different for fundholders and non-fundholders. What fundholders and non-fundholders need is equity of access, not equity of funding, if prices are different. We have repeatedly pleaded with the regional health authority to ensure that directors of finance of trust hospitals charge the same price to fundholders and non-fundholders for equivalent procedures. Until this is done there will always be inequity of funding as fundholders are charged on average 25% more per procedure than non-fundholders. Therefore, to have equity of access fundholders would need more funding.

If the finance directors were forced to reduce the prices that fundholders are charged then equity of funding would be a laudable aim. These views were well known by the members of the steering group but are not mentioned in the article, which reduces its validity.

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**The *BMJ* came under no political pressure to publish this article; nor did we come under any pressure not to publish it.—ED, *BMJ*.

Authors' reply

EDITOR,—Our paper had one main objective: to develop a method of estimating the distribution of NHS funds between non-fundholding and fundholding practices by using the currently available data on costs and activity.

Because the data were poor our approach relied on several assumptions; Carolyn Spenceley and colleagues are right to highlight these. We agree that the average cost per day for a specialty may not be an accurate proxy of the cost of fundholding activity. But if this resulted in an overestimation of the funds available for non-fundholding practices, as suggested, the differences between practices shown in our paper would be even more starkly in favour of fundholding practices. In contrast, in the commentary published with our paper C Bowie and R Spurgeon suggested that we underestimated the funds for non-fundholding practices because the average cost per day for fundholding activity was likely to be higher than the average cost for a specialty. Without strong evidence to the contrary