who later developed chronic fatigue syndrome were not sedentary, although relying on self reports of chronic fatigue syndrome might have weakened predictions by including misdiagnoses.

If the finding was not a chance one, could being sedentary itself predispose people to chronic fatigue syndrome, or is being sedentary a marker for something else? We know that ambulant patients with chronic fatigue syndrome are at least as physically deconditioned as sedentary but healthy people, even though studies have excluded the most physically disabled patients because of the difficulty in measuring their fitness.⁹ Lack of fitness and inactivity consistently predicted the later development of chronic fatigue syndrome after infectious mononucleosis,^{5 w19} suggesting that either premorbid or early deconditioning is a risk factor in some patients. Getting fitter is not necessary to feel better after a graded exercise programme,⁹ so is there another explanation?

Patients with chronic fatigue syndrome perceive activity as more of an effort than healthy controls and underestimate their cognitive and physical abilities, while being more aware of their internal physiological state, a phenomenon called interoception.^{1 3 9 10 w2 w15}

^{w20-22} How might this be related to being sedentary or having a disabling illness in childhood? Inactivity increases perception of effort with exercise, through both physiological deconditioning and the related cognitive, emotional, and sleep disturbance from being sedentary.^{11 w23 w24} This may enhance or sensitise interoception, perhaps in a similar way to that hypothesised in the related disorder of fibromyalgia.^{w25} The corollary is that this enhanced bodily awareness or interoception may itself cause sedentary behaviour. When an appropriate trigger supervenes in later life, enhanced interoception may predispose some people to chronic fatigue syndrome.⁵ Trials of prevention are required to test this idea.^{11 w26} Treatments that "reprogramme" inte-

roception and increased activity, such as graded exercise therapy and cognitive behaviour therapy, seem to help most patients.¹²

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Reforming the consultant contract again?

Issues related to financial incentives have changed little and need to be addressed

After protracted negotiations, the BMA and the consultant body voted in favour of a new contract, implemented with effect from April 2004. This contract applies to new practitioners and existing consultants who choose it. During negotiations, the Department of Health sought, but failed to obtain, professional support for a system of fee for service payments, for surgeons in particular. Despite this rejection, professional support among surgeons may now be emerging for the introduction of such a system.

The government's NHS Plan requires considerable increases in medical and surgical activity.¹ This can be achieved by changing the size of the medical workforce or by using incentives to stimulate existing doctors to produce more activity. Contracts of NHS hospital consultants include systems of reward and regulation, and both influence activity. Regulation has developed with the evolution of job plans and appraisal, and it will

develop further with revalidation and more performance management by trusts. Reward systems and financial incentives, however, have changed little in the new consultant contract.

The current lack of transparent accountability of consultants is unlikely to be altered by the new contract. This concern, together with fundamental changes in the private healthcare market, may lead to a revision of the consultant contract. Consultants' income from private practice is currently being undermined in terms of volume of private activity and the price paid for it. The government's ambitious access targets, in reducing waiting times, could affect the volume of activity by reducing private purchase of health insurance, the attractiveness of company health insurance, and the number of people who pay out of pocket. Fees derived from private practice, currently higher in Britain than in Germany, the United States, and Australia, are also under threat.² The government

has contracted with the private sector at price levels that imply fee reductions for practitioners. Some NHS independent treatment centres have contracted for extra activity at fee levels below the rates charged by the private health insurer BUPA. BUPA announced in June 2004 that it was cutting its fees to consultants because, with its markets under threat from the NHS, it has to increase competitiveness.³

Thus government policy has, probably unwittingly, undermined professional and insurance cartels that have held private fees high for decades. In doing so, it has increased the feasibility of fee for service payment in the NHS. Surgeons, facing reductions in their private sector earnings, may be offered the possibility of compensating for this through fee payments in the NHS. There is scope to pilot the use of fee for service payments to stimulate activity levels and deliver NHS modernisation targets.⁴

Currently, considerable variations exist in surgical activity rates.⁵ Some evidence shows that relatively small incentives can have considerable effects on behaviour.⁶ Introducing fee payments could increase average activity levels and influence variations in activity as clinicians respond to financial incentives—for example, by identifying and removing local activity bottlenecks and by allocating more of their time to care for patients.

Any introduction of fee payments requires a very cautious approach and will result in considerable debate. Current nominal equality in the payment of surgeons and physicians would be explicitly destroyed by selective fee payments for surgeons, anaesthetists, and some diagnostic specialties, creating differentials in pay within the profession. Fees for service are less appropriate for physicians and others, for whom a lower rate of admission (hence lower productivity, in its crudest sense) may be a sign of higher quality of care. The focus of other health reforms is currently the creation of integrated care for patients with chronic illnesses. This could be complemented by careful design of payment mechanisms aligning the financial incentives faced by physicians. Similar systems are currently being introduced in the United States and Germany.⁷

Increases in activity resulting from financial incentives would have to be managed with a cautiously designed fee schedule, as differences in relative prices of procedures would affect case mix. Monitoring effects

on the quality of care may require better measurement of the success of practitioners by using health related quality of life measures.⁸ Once introduced, fee for service systems of payment are difficult to change and may undermine NHS efficiency and cost control, introducing rigidities that are difficult to alter and potentially marginalising interventions for which there are no incentives.⁹ Finally, as Germany and France wish to abandon fee for service payments because of their cost, any NHS scheme would have to be capped to avoid undue cost inflation, and be subject to careful monitoring and evaluation to minimise unwanted effects.

Advocates of radical change in policy may generate superficially attractive ideas,¹⁰ but, like the quality framework for general practitioners, fee for service for consultants offers opportunities for gaming and the requirement for much more detailed management of practice. Any changes should be piloted and thoroughly evaluated, to show that patient care is demonstrably improved: a challenge that may not be embraced by impatient policy makers nearing a general election.

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Computed tomography in children

Statements about the damaging effects of radiation on learning were erroneous

A paper published recently in the *BMJ* reported results from a historical study of intellectual capacity in people receiving head and neck radiotherapy before the age of 18 months.¹ Hall et al concluded that the severity of intellectual impairment was a dose dependent result of radiotherapy. They further commented that radiation doses associated with contemporary diagnostic computed tomography of the head were comparable with radiotherapy doses

quoted from their study and concluded that this was a cause for concern. The "What this paper adds" box stated: "Diagnostic evaluation of children with minor head injuries by computed tomography needs to be re-evaluated." We believe that the data presented in the paper do not support that conclusion. For "This week in the *BMJ*," the chosen headline was: "Computed tomography scanning in infancy may affect later learning." This was unfortunate, as the paper did not address

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