



Fig 1—Non-inclusive drug costs per prescriber unit for quarter ending September, 1991-4. Figures in parentheses are differences between fundholders and non-fundholders

such as deprivation indices and the proportion of training and singlehanded practices. Our figures have the advantage, however, that they are based on an entire district. Uptake of fundholding in this district has remained low; indeed, no practice in Nottingham joined the sixth wave as standard fundholders.

We would endorse the conclusion that the differences in prescribing costs between fundholders and non-fundholders three years after the introduction of the scheme are small compared with the overall increase in prescribing costs.

Sarah Stewart-Brown and colleagues suggest that the effect of marketing pressure from the pharmaceutical industry is probably the most powerful influence on inflation in drug costs. We would suggest that the increased rate of prescribing of selective serotonin reuptake inhibitors and proton pump inhibitors has been led, at least in part, by our consultant colleagues. It should be recognised that not all prescribing is primary care led. In Nottingham we have proposed that the prescribing and purchasing budgets of non-fundholders should be linked at district level and that it should be possible to move funds between budgets. Knowing that rising drug costs would reduce the funds available to purchase their services, trust hospitals and their clinicians should then be motivated to work in concert with their primary care colleagues to encourage rational cost effective prescribing and end the unedifying spectacle of "cost dumping." This mechanism would exert a greater effect on overall prescribing costs than fundholding.

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### Other factors probably explain differences in prescribing

EDITOR,—Robert P H Wilson and colleagues conclude that fundholding alters practice prescribing patterns and reduces the rate of increase in prescribing costs compared with those of non-fundholders.<sup>1</sup> Though this may be the case in the former Mersey region, a similar study in Avon (of 156 general practitioners) has not reached the same conclusion. Using the same methods, colleagues and I found that, before the introduction of

fundholding, fundholders spent on average less per weighted capitation (prescribing unit) than non-fundholders. The margin in spend between fundholders and non-fundholders has subsequently continued.

Comparison of 1991-2 with 1992-3 showed a large increase in the average spend of fundholding general practitioners. This was due to the relatively high prescribing costs of the second wave fundholders, which have continued to stay high. In Avon, at present, second wave fundholders have the highest drug costs of any group, including non-fundholders.

There has been no significant difference in the rate of increase in the average drug spend per prescribing unit for successive fundholding waves compared with that for non-fundholders. Unlike the authors of the paper, we not only have observed prescribing costs for successive fundholding waves for the year before and the year after practices became fundholders but have followed each wave through to 1995. Our conclusions are supported by Coulter and Bradlow, who found that fundholders were unable to sustain a lesser rate of increase in costs over two years.<sup>2</sup>

Similar work performed by the Audit Office showed that the difference in increases in prescribing costs between fundholders and non-fundholders was not significant.<sup>3</sup> I suggest that other factors explain the differences in prescribing costs between general practitioners in Merseyside and that fundholding is a confounding variable.

Fundholders, like non-fundholders, are not a homogeneous group. Within each group there are variations in prescribing that cannot be explained in simplistic terms of fundholding versus non-fundholding. Within fundholding and non-fundholding groups there are both cost effective prescribers and prescribers who are not cost effective, and generalised comparisons must be viewed with great caution.

Variations in prescribing may involve many factors, such as patient deprivation and morbidity rates; prescribers' sex, age, year of qualification, postgraduate education and degrees, and areas of clinical interest; and the nature and size of the partnership. These factors merit further consideration.

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## Direct access magnetic resonance imaging of the knee for GPs

### Magnetic resonance imaging should be used selectively

EDITOR,—As a result of R Watura and colleagues' paper on direct access magnetic resonance imaging of the knee, use of such imaging may increase inappropriately.<sup>1</sup> We would be interested to know what the clinical indications for scanning the knee were for the orthopaedic surgeons and the general practitioners. What were the rates of arthroscopy in the two groups, and how accurate were the findings of the scan compared with the arthroscopic findings? Magnetic resonance imaging is sensitive and specific for meniscal and ligamentous lesions but less effective in defects of articular cartilage.<sup>2,3</sup>

We believe that magnetic resonance imaging of the knee should be used selectively. Patients who

have obvious clinical symptoms and signs of a meniscal tear do not need such imaging before having an arthroscopy. Imaging may, however, be useful to avoid a diagnostic arthroscopy.

We recently studied the selective use of medical resonance imaging of the knee. Our six criteria for scanning the knee were:

**History**—A good history of a mechanical problem of the knee but little abnormal on examination.

**In children**—If symptoms persisted after conservative treatment and physical examination led to doubt about the diagnosis.

**Previous arthroscopy**—Persistent symptoms after an arthroscopy.

**Reconstructive surgery**—Patients who had had reconstructive procedures and developed a complication—for example, rupture of a graft.

**Lumps, cysts, and swellings around the knee**—To assess any intra-articular disease.

**To avoid arthroscopy**—Patients who had had conservative treatment with little or no improvement but in whom it was thought that results of an arthroscopy would be normal.

When these criteria were used 100 scans were carried out over two years; 37 patients went on to have an arthroscopy. This represented only 10% of all patients seen in the knee clinic. In 90% a diagnosis could be made accurately from an adequate history and competent clinical examination. If medical resonance imaging had not been available then all 100 patients would probably have had an arthroscopy. This would have meant a 16% increase in the number of arthroscopies listed each year.

The selective use of medical resonance imaging helped us to avoid unnecessary operations, plan surgical procedures, and save money. These benefits would be lost if demand for inappropriate scans increased. We do not believe that magnetic resonance imaging should be used as a blanket test; it would be a shame if such imaging replaced the need for accurate clinical skills.

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- 1 Watura R, Lloyd DCF, Chawda S. Magnetic resonance imaging of the knee: direct access for general practitioners. *BMJ* 1995;311:1614. (16 December.)
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### Patients should be seen by an experienced orthopaedic surgeon

EDITOR,—R Watura and colleagues' recommendations regarding direct access to magnetic resonance imaging of the knee for general practitioners merit further discussion.<sup>1</sup> The appropriate use of such imaging for knee problems is the subject of considerable research. In selected patients magnetic resonance imaging can help with management decisions and an expensive, invasive arthroscopy can be avoided.<sup>2,4</sup> It is less certain whether recommending direct access magnetic resonance imaging to avoid an orthopaedic consultation is appropriate.

Watura and colleagues found "similar pick up rates for meniscal and ligamentous injury between patients referred by general practitioners and those from orthopaedic teams." Given that patients referred by general practitioners may have clinically obvious lesions whereas those referred by orthopaedic specialists tend to present difficult problems, this observed similarity may be misleading. The authors do not give statistics on diagnostic performance or the proportions of patients with

knee problems referred for imaging in the two groups. In any evaluation such variations in case mix must be carefully controlled for,<sup>1</sup> particularly if results form the basis of recommendations for clinical practice.

It is curious that there was no orthopaedic input to the study. An orthopaedic consultant with an interest in the knee should be able to sort out most patients with knee pain on clinical grounds. Indeed, for some clinical diagnoses, such as anterior knee pain, magnetic resonance imaging has little proved clinical value.<sup>2-4</sup> Not all general practitioners will understand the implications of the findings of magnetic resonance imaging. The sensitivity of imaging for a lateral meniscal lesion, for example, is not particularly high (approximately 0.8).<sup>3,4</sup> Similarly, loose bodies may be missed. The patient may be falsely reassured and appropriate treatment delayed or denied.

From the above it might be assumed that we are not enthusiastic about magnetic resonance imaging of the knee. On the contrary, we expect the use of this type of imaging for knee and other problems to continue to increase. We are merely suggesting that widespread use is likely to lead to increased rather than decreased overall costs. When used judiciously, magnetic resonance imaging of the knee has a proved diagnostic and therapeutic impact and is associated with improvements in quality of life.<sup>4</sup> We consider that patients with knee problems are best served by being seen quickly by an experienced orthopaedic surgeon, who can make appropriate referrals to a radiologist.

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## Paper highlights shortage of orthopaedic skill

EDITOR,—I am concerned at R Watura and colleagues' recommendation that general practitioners should have direct access to magnetic resonance imaging for knees with suspected internal derangement.<sup>1</sup> The basis of this suggestion was the observation that the findings on scanning for patients referred by general practitioners did not differ significantly from those for patients referred by orthopaedic teams. The claimed justification for the considerable expense involved was that patients with negative findings (26%) were not referred to orthopaedic clinics, which thus resulted in reductions in outpatient referrals and waiting lists. The authors imply that those patients referred to an orthopaedic surgeon would have required a scan anyway, but this is questionable. The authors fail to observe that the cost of a consultation with an orthopaedic surgeon with an interest in the knee is only a small fraction of the cost of a magnetic resonance imaging scan.

It can also be argued that magnetic resonance imaging scans often show spurious abnormalities, which, through doctors' lack of experience and sometimes a deficiency of clinical examination, may result in an increased number of outpatient referrals. Excessively easy access to special investigations may, at any level, be seriously detrimental to the declining art of clinical examination.

The final indications for, and the usefulness of, magnetic resonance imaging of the knee have yet to be determined by knee specialists. It is surely sensible to try to contain unnecessary costs until these are established. I suggest that this paper highlights the fact that there is a serious shortage of orthopaedic skill. Improvement in the provision of orthopaedic teaching for many present, and all future, general practitioners is needed. Much greater availability of properly trained and specialist orthopaedic surgeons is required if expensive, short sighted distractions such as direct access to magnetic resonance imaging of the knee are to be discouraged.

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## Authors' reply

EDITOR,—We recommend magnetic resonance imaging for investigating suspected ligamentous or meniscal injury. In response to Jeremy Southgate and Neil Thomas, our study suggests that general practitioners are as capable as hospital doctors of requesting magnetic resonance imaging and using the results appropriately. Altogether 12% of patients with normal scans were referred to an orthopaedic surgeon and 25% of patients with cruciate meniscal tears were not referred, which indicates that general practitioners will use their clinical judgment in assessing the importance of the findings on magnetic resonance imaging. More work needs to be done to determine whether selection of patients can be improved in both groups to minimise inappropriate requests for scans. Monitoring of referrals is essential.

There are not enough consultant orthopaedic surgeons with an interest in knees to see all patients, and many patients who are referred are seen by junior staff. To employ new consultant orthopaedic surgeons with the back up of an arthroscopic theatre would have more resource implications than access for general practitioners to magnetic resonance imaging.

Mackenzie and colleagues suggest that orthopaedic surgeons may take patients direct to arthroscopy. General practitioners too may refer patients with appropriate signs and symptoms direct to an orthopaedic surgeon.

Reference is made to the skill of clinical examination by orthopaedic specialists. Unfortunately, the apparent decline in clinical skills is not just due to the availability of imaging techniques as a short cut but also because better imaging has shown the limitations of even good clinical examination.

With regard to justifying the cost of our recommendations, there are potential savings in orthopaedic referrals and value for money in improved and prompt management. A single consultation with an orthopaedic surgeon may at present be cheaper than magnetic resonance imaging, but many patients who are seen also require imaging. Having the result of imaging available at the initial consultation may save on follow up appointments.

Finally, general practitioners need to keep up to date with modern imaging, which forms an increasingly important part of patients' management. Radiologists can provide advice and guidance when appropriate.

Open access for general practitioners to such investigations as ultrasonography and endoscopy was initially opposed by hospital consultants, but few would now suggest a reversal of that policy. It would be absurd to suggest that general practitioners are capable of prescribing expensive

drugs with complex interactions and side effects but not capable of selecting patients for magnetic resonance imaging of the knee and using the results appropriately.

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## Cochlear implantation is controversial among deaf people

EDITOR,—Richard Ramsden and John Graham's editorial on cochlear implantation makes it clear that, from a medical perspective, this treatment represents a great advance in the management of deafness.<sup>1</sup> I am surprised that the authors fail to mention the reaction that this issue has provoked among deaf people.<sup>2</sup> There is no opposition to restoring hearing to children or adults who have become deaf after learning spoken language, but in promoting cochlear implants for children who are born deaf doctors have lost the confidence of many deaf people.<sup>3</sup>

The editorial's authors point out that a deaf infant given a cochlear implant may be expected "to acquire intelligible speech" and "be educated in mainstream schools." Unfortunately, speech that is intelligible to a sympathetic listener and hearing that will never be completely normal may not be enough to enable the child to thrive in a mainstream school.

Hearing people assume that to be provided with limited speech and hearing is necessarily better than being deaf. Others have argued that the most reliable way for a deaf child to attain normal development and education is for sign language to be accepted as the child's first language. In social development, too, children with cochlear implants will fall into the group who are neither deaf nor hearing, unable to be fully integrated into a hearing world but set apart from the vibrant culture of deaf people.

There is no doubt that we live in a world that handicaps deaf people. We should not assume that the answer to this problem lies in surgery, especially when deaf people themselves are challenging such management.

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2 Lively debate at cochlear implant forum. *British Deaf News* 1994;25(9):17.

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## BMA division disagrees with association's stance over advance directives

EDITOR,—Bromley division of the BMA is seriously concerned by the association's stance over advance directives. The BMA originally expressed the view that "mutual respect and common accord is better achieved without legislation" and stated that "the BMA does not support legally binding advance directives." Despite this and the decision of the annual representative meeting in 1993 that "in the matter of advance directives, no doctor should be obliged by patients, relatives or hospital admini-