is it a matter for the General Medical Council, the BMA, or the provident associations.

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SIR,—The general practice trainers in Edgware (27 February, p 640) are to be congratulated on taking a stand against the increasing practice of self referral to consultants and are possibly underplaying their anxieties lest they be accused of self interest.

Every consultant has occasional patients who arrive without any introduction from their general practitioner, and this is not known until the patient is in the consulting room. Sometimes this occurs because a lesion has been picked up at an insurance medical examination or routine occupational health examination, and referral comes that way. It seems only reasonable then to try to help the patient on the strict understanding that the general practitioner is informed by an explanatory letter.

Self referral, however, should be discouraged because it is dangerous. In central London it is common for patients to refer themselves to and receive treatment from physicians and surgeons who are not qualified to deal with their illness.

The other danger of self referral is that a consultant may not receive necessary information. The good general practitioner tells you a lot about the patient and his or her history, medications, and investigations, and also stops one consultant passing the patient on to another consultant ad infinitum. The General Medical Council should look on this matter as one of ethics.

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SIR,—Dr Gerald Michael and his colleagues wish to call down the collective powers (? wrath) of various august and provident bodies to avoid an apocalypse in general practice. The aim is to curtail the unprincipled activities of some patients and some consultants. As it was I who spoke up for the preservation of personal freedom (though totally within the context of the General Medical Council statements)¹ I would argue that the ideas of these authors are misdirected.

Assuming that the general practitioner rightfully holds such paternalistic control over the patient's access to specialist opinion, what guarantee can be given to patients that they can expect and find a really suitable patron? Let us focus on paediatrics—the specialty spotlighted by the authors. Where can the patient be assured that paediatric training is a compulsory part of vocational training now, to say nothing of what came before? Where is developmental screening and immunisation part of every general practitioner's service? Where is the universally applied appointments system that allows for the unpredictable and worrying illnesses of childhood? Where can parents rely on seeing a competent paediatric practitioner covering evenings, nights, and weekends?

Being a parent is a heavy and difficult responsibility, to say nothing of important social trends such as both parents working. Not surprisingly, people are prepared to buy their way out of more difficult choices. Doctors themselves register highly as users of a freer choice of medical (and educational) care for their dependants. And is it that expensive? (A consultant's fee does not cost much more to a health system than an inappropriate course of expensive antibiotics.)

Where good service and competence exist in

general practice there is no evidence of decline and virtually no self referral by patients. Where these do not exist patients (especially parents) should pressurise any of the influential agencies to effect an improvement—but many will probably “invest in providents.”

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¹ General Medical Council. *Professional conduct and discipline: fitness to practise*. London: GMC, 1983:21.

SIR,—One of the best features of British medicine must be the existence of a stable network of general practitioners acting both as gatekeepers to the specialist secondary services and as the most experienced general diagnosticians at the level of primary care. The issue raised by Dr Gerald Michael and others is therefore important, but other changes also threaten to erode the role of the general practitioner.

For example, some districts are now segregating the mentally ill and emotionally disturbed at a local rather than a regional level by developing community mental health centres, which accept “walk in” patients and referrals from all sources. This development may exclude the desirable diagnostic role of the patient's general practitioner and the contribution of his or her direct knowledge of that patient.

In general the use of non-medical practitioners (whether health visitors, community psychiatric nurses, nurse practitioners, or others) in an initial screening role, and the extent to which they accept direct referrals or refer to other non-medical professionals, is likely to occur in a haphazard way. It remains to be seen whether these changes will be beneficial—detecting morbidity and providing more treatment—or merely fuel a form of therapeutic anarchy. The general practitioner is best equipped to moderate under these circumstances, but he may be swept aside.

Any decision to supplant the primary screening role of the general practitioner by those with less training (even if more specialised in some respect) is theoretically reducing the diagnostic quality of the service, although there may be gains in other directions. Such a move would be in contrast to the recommendations for secondary care, where an increase in quality of service depends on more assessment and treatment by consultants.

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SIR,—I agree with the Edgware trainers that the practice of seeing patients without a referral does seem to be increasing. I do not pretend to have any answers to this problem but I do have some questions.

Firstly, the only essential question is where does the best interest of the patient lie? General practitioners do not have any inalienable rights in this area. Our responsibility for continuing care is our only real argument against this behaviour.

Secondly, when patients join our list how much trouble do we take to explain and negotiate the ethos of our practice? Patients have a right to a contract which should include the right to continuing care and the need to seek a second opinion through their general practitioner.

Thirdly, if patients should break this contract and, for whatever reason, a colleague decides he should see them what possible right does he have to make recommendations? The moral responsibility must lie with the consultant who sees the patient to

see that anything that is thought by him to be important is carried out. He has in fact assumed the responsibility for continuing care. The essence of a referral is that an opinion is sought from a colleague whose opinion and judgment are valued. The referral carries the implication that any recommendations will be implemented. In the absence of this there is no referral and no such implication. In this context it should be remembered that under the terms and conditions of service of NHS general practitioners a prescription form FP10 is not allowable after a private consultation. The patient must pay for a prescription issued by the doctor who has been consulted as long as responsibility for the patient continues.

It is in the best interest of the patient to be guided through a possible maze of medical opinions by a good general practitioner. I doubt whether the behaviour that the Edgware trainers describe will ever appeal to a substantial number of our consultant colleagues as most of them see these arguments very clearly. Certainly I do not see it marking the end of general practice as we know it. The survival of general practice depends only on patients preferring to see general practitioners most of the time because they know them, feel more comfortable with them, and trust their judgment. Perhaps we should be concentrating on this.

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Hypomagnesaemia and muscle function

SIR,—Dr I Dørup and others (13 February, p 455) do not present data on muscle power assessed objectively in the subjects studied. We have described a young woman with anorexia nervosa who abused diuretics and developed modest hypomagnesaemia which caused profound muscle weakness and cardiac failure.¹ She responded to an intravenous infusion of magnesium but died two years later of cardiorespiratory failure, which was again associated with hypomagnesaemia.

The muscle weakness in our patient was probably associated with severe depletion of magnesium and potassium in skeletal muscle. Although a study on cardiac muscle would be difficult, it is conceivable that similar changes occur there. Furthermore, the down regulation of sodium potassium pumps described by Dr Dørup and others would contribute to the development of cardiac failure as the importance of these pumps in the physiology of cardiac muscle contraction is well established. It is important to recognise that mild degrees of hypomagnesaemia may be associated with significant depletion of this ion in muscle. Prompt correction of any abnormality may reduce morbidity and mortality.

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¹ Fonseca V, Havard CWH. Electrolyte disturbances and cardiac failure with hypomagnesaemia in anorexia nervosa. *Br Med J* 1985;291:1680-2.

Prevalence of microalbuminuria in patients with insulin dependent diabetes

SIR,—We found a similar percentage of positive tests for microalbuminuria to those found by Dr H H Parving and others (16 January, p 156) in both insulin dependent and non-insulin dependent diabetes using the more easily obtained single early morning urine specimen.

We screened 596 insulin dependent diabetics

and 413 non-insulin dependent diabetics whose duration of diabetes ranged from 0.5 to 40 years. Urinary albumin was measured by rocket electrophoresis. For our normal range we measured albumin to creatinine ratios in 250 non-diabetic healthy volunteers (mean 0.75 (SD 0.93)). The upper limit of normal was defined as 2.6 (mean + 2SD). Twenty per cent of the results obtained from insulin dependent diabetics and 25% of those from non-insulin dependent diabetics were positive. Interestingly 19% of both groups were found to be positive within two years of diagnosis. Repeat sampling on at least three occasions showed, however, that positive results were far from consistent. Results were considered to be true positives if there were three consecutive positive results; transient positives occurred when a positive result was followed by negative results. True negatives occurred when there were three negative results, and transient negatives occurred when there was a single negative result with at least two positive results. On this classification and assuming that the patients with true positive results represent those more likely to develop macroalbuminuria and renal failure, then 6.6% of insulin dependent diabetics and 13% of non-insulin dependent diabetics were at risk after two years. When true positive and transient negative results were combined then 13% and 23% respectively showed positive values.

These studies emphasise the high proportion of transient positive results (21% in insulin dependent and 19% in non-insulin dependent diabetics), and we strongly recommend that at least three samples should be tested over several weeks to confirm truly positive microalbuminuria. Whether "transient" negative microalbuminuria is of any importance must remain more speculative.

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Collars and corsets

SIR,—We are concerned at the implication in Dr G J Huston's article (23 January, p 276) that physiotherapy is a physical placebo in the treatment of neck problems, especially those resulting from road traffic accidents.

The main reference used by the author in coming to the conclusion that "soft collars may be a less expensive means of providing a physical placebo than physiotherapy" is concerned mainly with acute nerve root problems rather than those associated with road traffic accidents and was published 20 years ago.¹

While a regimen of early treatment of whiplash injuries by ice and heat, Maitland mobilisations, and hourly exercises within pain limits as advocated by Mealy *et al* appears to be a more expensive option, their study showed a significantly greater improvement in cervical movement and decrease in intensity of pain at eight weeks.²

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- 1 British Association of Physical Medicine. Pain in the neck and arm: a multicentre trial of the effects of physiotherapy. *Br Med J* 1966;i:253-8.
- 2 Mealy K, Brennan H, Fenelon GCC. Early mobilisation of acute whiplash injuries. *Br Med J* 1986;292:656-7.

SIR,—Dr G J Huston (23 January, p 276) concluded that collars and corsets acted as a less expensive

physical placebo than physiotherapy, which itself is unstudied.

The references he used were rather out of date (1957 and 1966). I would refer him to more recent works, such as those of Mealy *et al* and of Kopp *et al*.¹ Both of these papers, with others, refute the placebo effect of physiotherapy theory put forward by Dr Huston.

On the question of fitting corsets, this is frequently done by physiotherapists as there are often no orthotists available. It is a great pity that these outmoded statements are allowed to be perpetuated as they do nothing for the relationship between chartered physiotherapists and doctors.

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- 1 Kopp JR, Alexander AH, Turocy RH, *et al*. The use of lumbar extension in the evaluation and treatment of patients with acute herniated nucleus pulposus: a preliminary report. *Clin Orthop* 1986;202:211-8.

AUTHOR'S REPLY.—I am grateful for the opportunity to expand on a very brief article. The trial of treatment of neck and arm pain quoted in my review is large and has not been superseded. The predominantly female population described, who had pain in the neck, shoulder, and arm and were mostly aged between 40 and 60 years, is typical of the patients encountered in a rheumatology clinic and clearly a different population from the young predominantly male group attending an accident and emergency department after whiplash injury, as described by Mealy *et al*. This latter study, while it must be a great encouragement to physiotherapists to progress to further research, described two groups each given a number of treatments. It is impossible to tell whether home exercises (cheap) or manipulative physiotherapy (expensive) contributed to the improvement described in one of these groups. This study cannot therefore be used to support the application of manipulative physiotherapy in patients with non-traumatic neck pain.

I maintain that the cost effectiveness of manipulative physiotherapy in the treatment of neck pain remains an unstudied area.

I will be as delighted as every other physician when an effective treatment for neck pain is defined. Until then I must rely on explanation and encouragement with or without unproved and placebo therapies. I suspect that placebos currently used may perform relatively well if examined for improvement in quality of life per unit cost. I hope that the Chartered Society of Physiotherapy will be able in a few years to define effective treatments for neck pain in different populations as a result of studies stimulated by its members. Such studies would do much for the relationship between chartered physiotherapists and doctors.

I am surprised that the greater part of fitting of corsets is performed by physiotherapists but grateful to Ms Little for this information, as I found it impossible to discover from the DHSS even the gross number of corsets fitted annually in Britain.

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Pancreatic cancer

SIR,—Professor R C N Williamson (13 February, p 445) has highlighted the depressing realities of treating pancreatic cancer. The long term goals are

elucidating the aetiology of the disease and refining diagnostic techniques to detect early lesions. Nevertheless, there are approaches that are worth exploring now.

Tamoxifen is unlikely to have an important impact on outcome.¹ In contrast, there have been two recent and potentially important studies from the North American Gastrointestinal Tumour Study Group. In the first study 43 patients who had had resection of their cancers were randomised to a control group or a treatment group, which received two 2000 rad (20 Gy) courses of supervoltage radiation after surgery and fluorouracil weekly for two years.² This regimen was repeated in a second cohort of 30 patients.³ The two year survival was 43% and 46% respectively in these treated groups with a probable 20% five year survival. These results are superior to anything previously reported.

There may be even better regimens of potential value, but it is vital that the efficacy of this one is assessed. We are about to launch a national study of postoperative radiotherapy and fluorouracil coordinated by the West Midlands Cancer Research Campaign clinical trials unit. We would welcome the participation of all interested surgical and oncological units.

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- 1 Crowson MC, Dorrell A, Rolfe EB, Fielding JWL. A phase II study to evaluate tamoxifen in pancreatic adenocarcinoma. *Eur J Surg Oncol* 1986;12:335-6.
- 2 Gastrointestinal Tumour Study Group. Adjuvant combined radiation and chemotherapy following curative resection. *Arch Surg* 1985;120:899-903.
- 3 Gastrointestinal Tumour Study Group. Further evidence of effective adjuvant combined radiation and chemotherapy following curative resection of pancreatic cancer. *Cancer* 1987;59:2006-10.

Complications of erythema infectiosum in pregnancy

SIR,—Dr P K Buxton (23 January, p 257) mentions that the main complication of rubella is congenital abnormalities in infants of women exposed to rubella during pregnancy. He then discusses erythema infectiosum or fifth disease, caused by parvovirus B19, which, he states, has no reported complications. This, however, is at variance with the experience of obstetricians and virologists. There is now extensive evidence that human parvovirus B19 infection is associated with spontaneous abortions in the first trimester,¹ hydrops fetalis resulting in intrauterine death in the second trimester,² and stillbirth at term.³

Parvovirus attacks the fetal haematopoietic system, destroying the host cell. The resulting haemolysis and leucoerythroblastic anaemia will cause cardiac failure, oedema, and ascites similar to those seen in severe rhesus disease and will result in intrauterine death. Maternal infection in pregnancy does not consistently produce fetal problems; the full extent of fetal infection is unknown, but it appears to complicate about one third of maternal infections during pregnancy.^{1,2} Like rubella and cytomegalovirus, subclinical maternal parvovirus infection does not exclude the possibility of intrauterine infection. Raised maternal serum α foeto-protein concentrations in the second trimester in pregnancies complicated by parvovirus infection may act as a marker of fetal infection and poor fetal prognosis in advance of ultrasonic detection of fetal hydrops.⁴ The fetal leucoerythroblastic anaemia can also be diagnosed by fetal blood sampling.⁴

Parvovirus infection is also not without com-