tion by diploma (4 April, p 890). One of the academically brightest men in my own year was fired from four locum jobs within a fortnight of getting his degree. He lasted exactly one morning in one hospital, and in the last, a country practice, a deputation of patients went on the fourth day to the solicitor brother of the holidaying doctor to summon him home.

When my father suddenly died in his 40s, leaving my mother and myself in much reduced circumstances, I had to qualify by diploma for financial reasons. My fellow student, Sir John Charnley, also qualified early by diploma, though for a quite different reason. What matters is not how we first got on to the Medical Register but what we did with our lives afterwards.

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SIR,—Mr Richard Wakeford implies that qualification as a doctor recognised by the General Medical Council should occur only as a result of passing the examinations set by universities. I should like to take a contrary view.

Provided that there is a recognised, respected, and competent body that regulates entry into the profession, as the General Medical Council does, there is no reason why that body should not recognise non-university examining bodies. Indeed, it is probably healthy for an independent service profession such as medicine not to be too closely tied to the university system as this may reduce the influence that the members of the profession as a whole may bring to bear in determining their own professional standards and competences. I would go further and state that the General Medical Council and examining bodies should explore recognising prequalification medical training that could be carried out by non-university bodies (as happened in the past). Clearly, the council must be careful that it does not allow medical training to become too technical or mechanistic.

Interestingly, neither vocational training nor the qualifying examinations to become a barrister or solicitor are carried out in or by universities (though universities confer academic law degrees). In other words, it is not possible to become a barrister or solicitor with the legal equivalent of an MB BS university degree, and the Law Society actually arranges the specific training and qualifying examinations itself.

In the final analysis if a training or examining body with delegated authority fails to apply the standards set by a national "council" it is up to that body to withdraw its recognition. I, for one, am confident that for medicine the General Medical Council now exercises its responsibility in these matters properly and with care.

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Abdominal aortic aneurysms

SIR,—Mr N F Gowland Hopkins (28 March, p 790) is not sufficiently forceful in advocating elective surgery for asymptomatic abdominal aortic aneurysms. This must now be regarded as the only appropriate treatment in all patients except the very old or those with severe coexistent disease likely to increase operative mortality substantially.

At least half of all patients known to have an abdominal aortic aneurysm will die from its

rupture if elective surgery is withheld. Even in patients considered to be too old, too feeble, or too much at risk from associated cardiopulmonary or renal disease to undergo surgery 52% die from rupture of their aneurysm.¹ Similarly, in one study 42% of all deaths in patients rejected for elective surgery because of small aneurysm size or excessive cardiac risk were due to rupture of the aneurysm despite one patient in every six with a rupture being saved by emergency surgery.²

In addition, elective surgery for an abdominal aortic aneurysm now carries an operative mortality of well under 5% in specialist vascular surgical units. The operative mortality of up to 10% quoted by Mr Gowland Hopkins has little relevance for current practice as the studies supporting this figure include patients operated on more than a quarter of a century ago. The Oxford experience illustrates the continuing improvement in operative survival. Between 1979 and 1984 an average of 14 elective aneurysm operations were performed yearly, with an operative mortality of 4.2%.³ Currently, there are 33 elective aneurysm operations a year, with an operative mortality of 2.1%.

No patient with an abdominal aortic aneurysm should now be denied the opportunity of consultation with an experienced vascular surgeon to assess his or her suitability for the lifesaving operation of elective replacement of the aneurysm.

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Inoperable aortic stenosis in the elderly: benefit from percutaneous transluminal valvuloplasty

SIR,—We must emphasise to the correspondents (21 February, p 510) on our paper (10 January, p 83) that we were not advocating valvuloplasty as an alternative in patients suitable for aortic valve replacement but suggesting that it may improve the wellbeing of patients who are not surgical candidates. We adopted a practical but cautious viewpoint.

Dr J E Sanderson and colleagues (p 510) have in a district hospital followed a similar protocol to ours, and we are encouraged by their good results. The natural history of non-surgical candidates is poor, with only a 25% survival at three years, so valvuloplasty may offer not only a better quality but also a better quantity of life.¹ Nevertheless, follow up must be arranged because the nature of the disease, we believe, leads to restenosis.

Early reports suggest a restenosis rate of 20% at six months,² but this is less if the aortic valve area is increased to greater than 1 cm². This is why we do not advocate valvuloplasty for surgical candidates, though when further long term results become available a clinical trial may be justified. We agree that one of the attractions of the procedure is that surgical cover is not necessary.

Mr Francis Wells and colleagues do our caution a disservice. We accept that immediate mortality in suitable cases is now just under 5% but there is also a recognised morbidity in this age group. We are, however, not proposing valvuloplasty as an alternative procedure and we are dealing with sick and frail people with severe disease whose valve areas average 0.3 cm². Mr Wells and colleagues

know they are wrong to quote a 12.5% mortality figure in our series as they are aware of our 15 cases presented at the American Heart Association and British Cardiac Society with still only the one death. We have now a series of 30 patients with one early death and have refined the procedure to a 30 minute exercise with x ray exposure of less than 10 minutes. We do not wish to claim a better mortality figure (3.3%) than surgery because we are not dealing with the same patients. We do not subscribe to the more generalised use of aortic valvuloplasty which appears to be advocated by the French.³ We agree that inflation time should be brief and currently use 10-15 seconds with 20 mm balloons.

Dr I R Starkey and colleagues share with us the need to monitor results and carefully select patients. We will shortly be reporting our one year follow up and would like to invite anyone interested in performing valvuloplasty to observe a procedure in our unit. We have learnt to circumvent the difficulties and see no reason why others should not benefit from our experience. We have established a register and hope as many operators as possible will join us in defining precisely the indications for, benefits of, and long term success of aortic valvuloplasty.

Drs D F Ettles and J L Gibbs (7 March, p 648) mention the difficulties of recording transaortic Doppler blood velocities when a catheter is in place across the aortic valve. In our patients the effects of intracavity acoustic interference were limited because intraoperative recordings were made only with a guide wire positioned across the valve. In addition, continuous wave Doppler^{4,5} rather than pulsed Doppler mapping was used to monitor changes in aortic regurgitation. The integrity of the intraoperative measurements was verified by comparison with the relevant Doppler recordings before and after the procedure and prevalvuloplasty aortography. An increase in the intensity or rate of deceleration of the aortic regurgitant flow velocity pattern was considered compatible with deteriorating aortic regurgitation. While accepting that pulsed Doppler does have limitations in measuring aortic regurgitation, we believe that continuous wave Doppler (as used in this study) is likely to be superior, especially when measuring changes within individual patients.

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Overuse of monitoring of blood concentrations of antiepileptic drugs

SIR,—Dr David Chadwick's leading article on circulating anticonvulsant monitoring (21 March, p 723) is timely, but overuse of the service is only a symptom and not the disease.¹ The fundamental flaw lies in the unrealistic view taken by the

profession of the value of a single anticonvulsant assay and the consequent overinterpretation of the plasma concentration obtained. Too often the "Everest" factor takes over: measure it because it's there. Many doctors believe that the "therapeutic range" is writ large in tablets of stone, and herein lies the root of the problem.

The term "therapeutic," as applied to a range of drug concentrations, begs the question of efficacy, refers to populations rather than individual patients, and should be discarded. Even with phenytoin, the drug for which there is most evidence to support a concentration-effect-toxicity relation, a substantial minority of epileptic patients remain free of fits, with concentrations below the quoted range,^{2,4} while in others complete control of seizures may be obtained only with serum phenytoin concentrations greatly exceeding the recommended upper limit.⁵ Moreover, the diagnosis of central nervous system toxicity is also made on clinical grounds. The doctor must ask the patient, not the biochemist, whether an anticonvulsant concentration is therapeutic or toxic.

Measurement of circulating anticonvulsant concentrations may be useful when a specific clinical question needs to be answered, particularly in assessing compliance or estimating the likely leeway for an increase in dose.⁶ Ideally, this information should be available immediately. In an ongoing prospective evaluation of anticonvulsant monitoring at the epilepsy clinic at this hospital one third of nearly 700 assays performed over a year showed a plasma concentration that surprised the requesting doctor. The numbers of unexpectedly low and unexpectedly high concentrations were similar. In more than 20% of these patients an alteration in intended action resulted. This ability to measure anticonvulsant concentrations at the clinic is enormously helpful, particularly for younger doctors with limited experience in the management of epilepsy.

It is our policy to regard the quoted range as a target, around which some sort of clinical improvement might be expected without the production of toxicity.⁶ A further adjustment in anticonvulsant dose may then be made according to the clinical response or the development of central nervous side effects. The target range retains the important elements of therapeutic drug monitoring without assuming a "therapeutic" validity that it does not possess.

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Effect of dietary cholesterol on plasma cholesterol concentration

SIR,—Professor P J Nestel (4 April, p 901) comments on our paper, which suggested that modest changes in cholesterol intake have little effect on plasma cholesterol concentrations in people who have reduced their intake of saturated fat and increased that of fibre rich carbohydrate

(7 February, p 333). He points out that a reduction in cholesterol of around 0.1 mmol/l could, on the basis of epidemiological evidence, be associated with a substantial benefit in terms of reduction of coronary heart disease. From prospective observations on those screened in the multiple risk factor intervention trial, the most recent and largest set of longitudinal data, such change (2%) might be expected to produce a 2.3% reduction in mortality from coronary heart disease over six years. Professor Nestel's comments illustrate the difficulty in interpreting negative findings.

The observed difference between those eating two and seven eggs a week was 0.13 (95% confidence interval 0.03 to 0.23) after four weeks and 0.12 (0 to 0.23) after eight weeks. This study included far more participants than most other investigations of the relation between dietary cholesterol and cholesterol in the blood. It is difficult, at least for us, to contemplate the much larger study that would be necessary to be more certain about the absence of an effect or to show with greater certainty a small effect.

We agree that our findings cannot be extrapolated to subjects who have not appreciably reduced their intake of saturated fat or to more extreme contrasts of dietary cholesterol intakes, under which conditions most previous studies have been carried out. Many dietary recommendations for reducing blood cholesterol give considerable prominence to the role of dietary cholesterol. We wished to emphasise the central role of restricting saturated fat intake, that modest changes in dietary cholesterol in those who have already restricted their saturated fat intake seem to have no, or little, effect, and that in the circumstances of our experimental design there is no evidence of a population of hyper-responders to dietary cholesterol. Permitting a little flexibility in intake of dietary cholesterol may help to enhance compliance with other and more important recommendations.

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Health care for travellers

SIR,—I am very pleased to see that the health of travellers is now being taken seriously (Dr Allison Streetley, 21 February, p 492).¹ West Glamorgan Health Authority has been taking an interest in travellers' families for some time.

For over three years a team composed of one health visitor and one clinical medical officer (child health) has offered health facilities to the travellers' families, concentrating on the needs of children and mothers. We thought that having one designated health visitor, who made regular visits, would increase the take up of services by mothers. The services provided on the site are counselling, check ups for children, immunisations, and referrals to other services (chiropody, audiology); recently a family planning and cytology programme has been planned.

Our main problems are caused by the terrible conditions of the sites, which are illegal and have none of the usual facilities of legal sites. The county council has so far been unable to open a site under the Caravan Sites Act 1968 because of the hostility of the local population. Another difficulty has been access to general practitioners' surgeries because few local general practitioners will agree to take travellers on their lists, and even fewer will visit them.

Lack of medical records and unsatisfactory liaison with other agencies are another source of

headaches for the team. It is encouraging to see that other health authorities are starting to provide for the travellers. The development of liaison between these different areas will, I hope, allow the provision of better services for the travelling population.

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- 1 Walker PC. The health of travellers. *Br Med J* 1986;293:1322.

Consultant accountability

SIR,—I should like to congratulate Mr James Owen Drife on his comments on consultant accountability, a difficult and controversial issue (28 March, p 789). Though several other useful reminders on the subject have been published recently there is a danger that the medical hierarchy will close ranks on the problem of accountability in the hope that it will disappear. It will not. We live in a highly competitive world that is actively pursuing systems of accountability in all its spheres—governmental, financial, industrial, educational, etc.—and medicine is not exempt. We must never forget that we exist first and foremost to provide a service for our patients.

The reluctance in medical circles to criticise is deep rooted and continues to be taught by example, or rather by the lack of it. Reluctance to accept criticism is even more entrenched and more sinister. Too often "clinical freedom" is upheld as the underlying phenomenon behind this reluctance, but we all know of cases where this is totally inappropriate. No one will deny the importance of clinical freedom for the practitioner, but this does not encompass abuse of the system, patients, or colleagues.

Let us step down from our imaginary pedestals and admit that we are human and fallible. Consultants, by virtue of their position at the top of the ladder, must take the lead, and, out of necessity, the rest of us will follow.

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SIR,—Consultants are already accountable to their licensing authority, the General Medical Council, as well as to every other law of the country in common with other citizens.

As the wife of a doctor who has been the victim of the HM (61)112 procedure and the 190 procedure for almost five years, may I suggest that the major reason for long delays, injustice to doctors, distress to their families, and great expense to the National Health Service and the defence societies is the incorrect use of disciplinary procedures. In my husband's case, and others I know of, I believe that disciplinary procedures are being used for management disputes of a political nature^{1,2} and disagreements within specialties.³

Mr James Owen Drife (28 March, p 789) mentions the possibility of regular appraisal of consultants' work being linked to the distinction award system, but the weakness of this system stems from the fact that the criteria by which some consultants are judged worthy of extra pay is secret and, therefore, others cannot emulate them. It is not unknown for consultants who are recipients of distinction awards to fall foul of the HM (61)112 procedure.

Mr James Owen Drife has not one word of sympathy for an innocent doctor debarred from his or her vocation and isolated from colleagues, patients, and public by the ignominy of suspen-