has allowed safe and easy access to the upper gastrointestinal tract for feeding. These systems have almost entirely replaced surgical gastrostomy procedures.³ A double channel valve allows separate ports for feeding and stomach drainage. Various kits are now available. Short term follow up studies have shown reduced mortality and morbidity in patients who have had an endoscopic gastrostomy compared with those who have had a surgical gastrostomy, but long term follow up data are limited.⁴

Severe gastroparesis diabeticorum has a high mortality.⁵ This treatment allowed our patient to go home for considerably longer than he had managed previously, and we consider that percutaneous endoscopic gastrojejunostomy feeding is a useful therapeutic option in gastroparesis diabeticorum that has not responded to standard medical management.

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Exercise and diverticular disease

EDITOR,—Minerva's puzzlement¹ at Aldoori *et al*'s paper in *Gut* purporting to show that exercise protects against diverticular disease of the colon³ is well justified. The paper shows no such thing. What it does show is that people who take more exercise are less likely to be diagnosed as having "symptomatic diverticular disease." This diagnosis is dubious, and most of Aldoori *et al*'s patients were probably people with the irritable bowel syndrome who happened to have diverticula in their colon on a barium enema examination. There is no evidence that diverticula cause symptoms except when they rupture or bleed. In the clinic setting the abdominal pains and bowel disturbances of people with diverticula are no different from those of people without them, who get diagnosed as having the irritable bowel syndrome.^{3,4} There is no evidence that people with diverticula are any more or less prone to develop this syndrome than the general population. Since at any time at least 11% of the United States population have irritable bowel syndrome⁵ and diverticular disease affects half of us by the age of 70⁶ it is obvious that the two will often coexist, in which case two diagnoses should be made.

What Aldoori *et al* may have shown is that exercise protects against functional bowel symptoms (or makes people less prone to complain

about them). Alternatively, bowel symptoms may deter people from taking exercise. These are ideas that deserve further investigation.

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Medical profession in US speaks out over abortion

EDITOR,—John Roberts's article on the fact that the medical profession is at last speaking out over abortion in the United States gives an excellent account of the political war over Dr Henry Foster, President Clinton's nominee for surgeon general.¹ The reluctance of American medical organisations to take a stand on the abortion issue is understandable in the light of what President Clinton has called "domestic terrorism."

The gender aspect of the attacks on a medical procedure that is constitutionally legal should also be emphasised. Thus to my knowledge Dr Jocelyn Elders was the first female surgeon general to be forced to resign. The two victims in the latest shootings at abortion clinics were both women, while the assailants on workers at women's reproductive clinics, and clinic bombers and arsonists, have invariably been men.

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Fitness programme for chronic low back pain

Details of the exercises are not given

EDITOR,—Back pain is a major cause of disability, accounting for the loss of an estimated 52 million working days each year.^{1,2} Active management of acute back pain in primary care has been recommended recently.^{1,2} H Frost and colleagues recommend a similar active approach.³ In their clinical trial standard management consisted of backschool intervention and attendance on two occasions, at which patients were taught exercises for home use. The study arm added a fitness programme consisting of 15 progressive exercises undertaken over four weeks, with eight sessions each lasting an hour. The results show a significant reduction in pain scores and disability index, which continued to six months. Two year follow up is awaited.

On the face of it, as the authors suggest, this fitness programme could be established in any physiotherapy department with access to a gymnasium. Indeed, as fitness centres are now common

one might imagine that such a programme could even be initiated in primary care. However, none of this will be possible—nor will others be able to confirm the findings—because the paper does not give specific details of the exercises used in either the treatment or the control arm. Eleven references to different treatment regimens are given in the introduction, but the regimen used in this study is not specified. Perhaps the authors could tell us what they did.

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Authors' reply

EDITOR,—Because we were limited to 2000 words it was not possible to describe all the exercises used in the programme. Details of these are available from HF on request. The overall aim of the fitness class was to encourage normal movement without unduly stressing the spine and thereby progressively to increase the patients' confidence in their back. The class followed a general exercise programme, which aimed at including all the main muscle groups with the use of minimal gym equipment. As we stated, stretching exercises and light aerobic exercises were also included.

There is little evidence for the effectiveness of any specific exercise programme for back pain.¹ This could be because of the problems of classifying back pain syndromes,² since most studies have been carried out on heterogeneous samples of people with back pain with varying needs, for which one specific exercise programme is unlikely to be suitable. For this reason physiotherapists are reluctant to provide specific exercise leaflets for patients with back pain without prior assessment.

The two year follow up data are now available, and we plan to publish details of all the exercises used in the programme and these follow up data at the same time.

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Biological influences on criminal behaviour

EDITOR,—In his editorial on biological influences on criminal behaviour Joseph S Alper lists some examples of simply inherited metabolic defects that may be associated with criminal behaviour. He also casts doubt on the genetic interpretation of family studies of criminality (and does not point out that this is clearly an insensitive approach in

view of the heterogeneity of criminality).¹ He does not, however, mention food intolerance despite the widespread recognition that hyperactivity in children is often followed by criminality (this is acknowledged in the preceding editorial on preventing crime and violence²). The fact that many hyperactive children can be cured by diet has been established by two controlled trials, so if such treatment also prevented subsequent criminality this would provide more reason for optimism than the ones that Alper lists; more work on this is therefore needed.^{3,4}

The fathers of several of the patients I successfully treated with diet for this condition had criminal records and a similar history in childhood. One patient abandoned his diet in mid-teens and burnt his school down. I visited him in prison, when he said that he would like to try the diet again, but I do not think that this was achieved.

I believe that this food intolerance is allergic and is likely to be familial but of complex inheritance. I have no idea how commonly it causes criminality, but it is important for those in whom it does.

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Sedation in fiberoptic bronchoscopy

EDITOR,—I wish to reply to the letters¹ on the paper on sedation during fiberoptic bronchoscopy of which I was an author.² S P Hanley is correct in stating that nasal anaesthesia with lignocaine is unpleasant: patients often comment that this is the worst part of the procedure. Although some studies have been published in which nasal lignocaine has been given before sedation,³ it was our routine practice to give sedation first.⁴ M R J Parker and colleagues question the amount of topical anaesthesia used during the bronchoscopy. This was not formally measured but did not seem to differ among the three bronchoscopists or among the patients regardless of sedation.

Several letters discuss the recent report on sedation by the Royal College of Surgeons; owing to insufficient space this reference was not included. The report highlights the provision of monitoring equipment and staff trained in life support. This is important for chest physicians, who often perform bronchoscopy in isolation from other medical staff and need to be responsible for both the sedation and the bronchoscopy. Adequate nursing support is essential if sedation is used.

Gareth Thomas and Christine McBeth and Parker and colleague discuss the depth of sedation. This was not formally assessed, but a combination of reassurance and sedation was used to ensure that the patients were relaxed and cooperative—level 2 on the suggested scoring system.⁵ Patients received broadly similar amounts of sedation, and some were more sleepy than others after the procedure; nevertheless, the bronchoscopists had some difficulty in identifying patients who were sedated.

The use of sedation has financial implications and direct risks to patients' welfare,⁶ as Fraser W H Sutherland suggests. Patients who remain sleepy after the bronchoscopy, especially if they live alone, may need to stay in hospital overnight, which increases the costs of the procedure. Alternatively, patients may be allowed home after the sedation has been reversed by specific antagonists,

although differences in the half lives of the sedative and antagonist need to be considered. If sedation is used patients should be given clear instructions not to drive after the bronchoscopy, which potentially increases costs further if transport home needs to be provided.

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Albumin in the nephrotic syndrome

EDITOR,—We challenge Fehmi Akcicek and colleagues' argument against the use of albumin in the nephrotic syndrome on two counts.¹ The first concerns the selection of patients. The urinary protein loss, plasma creatinine concentration, and prior drug treatment are not given in their report, but we assume that the patients had not received either corticosteroids or diuretics. The mean excretion of 2.96 litres of water and 275 mmol of sodium after intravenous frusemide, implying weight loss of about 2 kg in 24 hours, indicates that these patients were not resistant to diuretics. The absence of synergy between albumin and frusemide in such patients is not surprising and confirms that changes in oncotic pressure have no impact on the natriuretic response to loop diuretic.² We agree that albumin infusion is neither useful nor necessary in unselected nephrotic patients. Patients resistant to diuretics do, however, exist; they fail to achieve natriuresis despite strict bed rest, supervised restriction of sodium, and maximal intravenous diuretic treatment. Albumin infusion may be beneficial in these uncommon cases,³ and data from nephrotic patients who are sensitive to diuretics² should not guide management.

The second point concerns the timing of administration of albumin and diuretic. Akcicek and colleagues gave parallel infusions. Optimal efficacy of the combination occurs when loop diuretic is given at the end of a one hour infusion of 40 g salt poor albumin, possibly because the peak diuretic concentration then coincides with maximal expansion of intravascular volume. The table shows the results of this regimen³ in five compliant nephrotic patients, who satisfied our criteria for resistance to diuretics given above and attended our unit during 1994. Only one patient had minimal change disease. Satisfactory and sustained natriuresis was readily achieved; all

of the patients who had a deteriorating serum creatinine concentration improved within one week.

Patients with the nephrotic syndrome are haemodynamically heterogeneous. Measures of plasma volume and oncotic pressure correlate poorly with response to treatment. Albumin infusion is not routinely indicated in the nephrotic syndrome, and, as with all blood products, use should be minimised. In selected cases, however, an appropriately administered combination of hyperoncotic albumin and loop diuretic facilitates removal of extracellular fluid and can ameliorate uraemia induced by diuretic.

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Advance directives

EDITOR,—George S Robertson acknowledges the considerable work of the BMA's medical ethics committee in refining the concept of an advance directive in Britain.¹ Following the recommendation of the House of Lords Select Committee on Medical Ethics that a code of practice for health professionals should be developed, the BMA, the Royal College of Nursing, and the medical royal colleges have worked together to develop such a code; it was published at a special conference on 5 April after the final report of the English Law Commission. Both the Department of Health and the English and Scottish Law Commissions have participated in the drafting of the BMA's code of practice. The medical ethics committee will consider the finalised version of the code and present it to the BMA's council for approval.

The working group and the medical ethics committee do not share Robertson's conclusion that a standard form offers the best way forward. In our view, an advance directive must be tailored to the needs of the individual patient rather than the patient being constrained by the necessary rigidities of a standardised form. It is often assumed that patients wish to make detailed arrangements about all aspects of their care or, alternatively, to express a general wish to avoid overenthusiastic medicine. In our experience, however, patients often wish to use an advance directive to control only a small and apparently minor aspect of their terminal care, leaving all other decisions to the doctor. A patient may, for example, wish to signify only a desire to die at

Details of five patients given loop diuretic at end of one hour infusion of salt poor albumin

Case No	Age (years) and sex	Diagnosis	Urinary protein (g/day)	Serum albumin (g/l)	Dose of intravenous frusemide before infusion (mg/day)	Serum creatinine (μmol/l)		Weight loss (kg)	
						Before infusion	After infusion	In first week	Total*
1	68 F	Diabetic nephropathy	15	18	100	107	112	4	10
2	20 M	Focal sclerosing glomerulosclerosis	21	16	330	235	169	4	7
3	77 F	Membranous glomerulopathy	8	15	200	122	105	4	10
4	54 M	Minimal change disease	14	21	200	263	172	3	8
5	58 F	Focal sclerosing glomerulosclerosis	16	26	250	287	199	6	16

*Determined retrospectively after treatment.