undergo a particular line of treatment which is also dangerous. We wish the treatment to be as safe as it can be made, but it is still up to the patient or his relatives to decide whether to accept it or not. If things go wrong, and especially if one had more or less forced a decision, it is the surgeon who gets the blame, not the patient.

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Children's rights—parents' responsibilities

SIR,—It is unfortunate that your leading article on this subject (2 October, p 775) perpetuates the myth that doctors cannot apply for a place of safety order when they believe children to be abused or at risk. In fact, section 28 of the Children and Young Persons Act 1969 places no restriction whatsoever on the categories of person who may apply to a magistrate for such an order. Doctors should also be aware that the grounds on which a care order (and a fortiori a place of safety order) may be sought are less restrictive than your article suggests. The 1969 Act has always admitted as a ground the *probability* that a child will be abused, neglected, etc, if another child in the household has previously been so treated, and the Children Act 1975 enables this probability to be established by the child's being (or being likely to become) a member of the same household as someone convicted of a relevant offence laid down in the Children and Young Persons Act 1933. This strengthens the protection of children, by either care or place of safety orders, from known abusers, even if a child in their household has not yet been ill-treated.

Finally, it is worth mentioning that (although one hopes that any decision about applying for a care order would be taken only after a case conference discussion in which paediatrician and general practitioner were fully involved) doctors are not wholly dependent on social workers to apply for care orders under the 1969 Act, since both the police and the NSPCC also possess statutory powers to make applications.

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New kinds of doctors

SIR,—The interview with Dr Julian Tudor Hart on new kinds of doctors rambled around the subject without advancing concepts in any way. In fact, the advocacy of a return to the Gladstone bag, and the provincial view that London patients are endowed with greater understanding of pathology and the position of their organs, and are rendered able to give a history in medically significant terms from contact with the teaching hospitals, is plainly provincial bunk and regressive thinking.

If I thought I knew what Dr Hart meant by "very few GPs who have been in practice for 15 years or more can hold their own at the level at which consultants and registrars operate their gamesmanship" I would disagree with it. But then I don't know what it means except perhaps that Dr Hart considers himself to be one of these few.

When he says that "in North America

health consciousness has become egotistical," "a market commodity that is bought and sold," while here "we have an opportunity to set a real value on health," I suspect he knows little about the matter and expresses a view tinged by resentful socialism from the Welsh valleys. We could do with more of the North American view of health, and my own observations confirm at a London swimming club that American students do their lengths while the British lads stand in the water and talk. What does it indicate?

Dr Hart must not mind my being so critical, since he believes "we need to move closer to the hospital pattern, where it becomes possible to have mutual criticism in a way that is not damaging." Fine! Here he shows himself not to be a very new kind of doctor, for small group meetings are being held here—why not in Port Talbot?

What is health, then? I would say you are healthy when you wake up each morning, stretching and feeling By God! It's good to be alive! Doctors, and their drugs, whether charged for on prescription or not, are not in the market for this type of health. Just as Dr Hart rightly states, "Education should not be a prerogative of teachers alone," so should concepts of health be promoted not only by doctors. Doctors are taught to understand by analysis into components. The degradation products thus considered are always less than the sum of the parts in action. It is the comprehension, or should I say apprehension, of fully aspirant living that the new doctor needs. It seems to be coming strangely enough through attempts to become more adequate when dealing with the dying patient and his family.

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Management of acute myocardial infarction

SIR,—Dr P J Baxter and his colleagues (14 August, p 423) comment on the article by Professor J F Pantridge and Dr J S Geddes (17 July, p 168). They consider that information on the extent of myocardial infarction occurring in industry would be helpful in deciding whether lay or medical personnel working in factories should be trained in cardiac resuscitation techniques. This question concerned me for some while, when I was medical officer in a steelworks. The works employed 12 500 people and during the two years 1973-4 13 men suffered acute myocardial infarction while at work. Of these, four were dead when I saw them on site or immediately on admission to the works surgery and one died in surgery. The other eight survived the journey to hospital. The one man who died in the works surgery failed to respond to resuscitation; ECG monitoring showed irregular and feeble ventricular beats and he eventually died in asystole. At post-mortem he was found to have a massive occlusion and no resuscitative measures would have succeeded.

After collecting these cases for the two-year period I asked two questions: (1) Is the delay in reporting symptoms and in obtaining medical aid less in industry than at home? (2) What facilities should the industrial medical service provide?

The answer to the first question was very interesting. McNeilly and Pemberton¹ reported a median delay in seeking medical aid

of 1 h 17 min and a delay in reaching hospital of 8 h. In the steelworks both these times were very much less, being 30 min in each case. It was clear that in industry with a medical service the patient knows that he can seek help very much more quickly, he reports his symptoms very early, and there is a very reasonable chance of getting him to expert help in hospital within an hour of the commencement of symptoms.

I discussed the second question with the consultant physician who would eventually see these cases. We came to the conclusion that a rapid but calm evacuation to hospital was the best measure. We kept adrenaline, atropine, and lignocaine always ready, but on only one occasion during the two years did we use the adrenaline.

Admittedly this was a very limited experience, but during the same time a colleague was collecting data from a number of steelworks with a total population of 56 000. During the same two-year period there were 100 cases of myocardial infarction occurring at work. Eleven patients were dead on arrival at the works surgery, six died within 1 h and nine between one and 24 h of reporting, and ten died later within the same year, giving a one-year mortality of 36%. Of the six who died within 1 h of reporting, five died in the works surgery (this included the one case in my own study). Two of these victims died before a doctor arrived, in one case after 80 min. In the other three cases resuscitation was attempted, including the use of external cardiac massage. Only my own patient was monitored; I do not know whether the other two had ventricular fibrillation.

I came to the conclusion that it is best to get the patient to hospital, even if the diagnosis is uncertain, as quickly and calmly as possible. It is very unwise to keep a patient in the works surgery while waiting for a doctor to arrive. The chance of a doctor or a specially trained nurse reaching a patient in time to use a defibrillator successfully seems very remote.

My former colleague, Dr John Watkins, who was collecting these data, tells me that he has continued this survey. It is still incomplete and it will be some time before the results can be published.

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¹ McNeilly, R H, and Pemberton, T, *British Medical Journal*, 1968, 2, 139.

Diets for diabetics

SIR,—Your leading article (2 October, p 780) summarises the recent tendency to increase the carbohydrate content of diabetic diets. It stated that insulin requirements would be "relatively little affected by an increase in carbohydrate intake provided that the calorie total remains unchanged." A recent study,¹ not included in the review, suggests an important exception: unrefined starchy carbohydrates decrease the requirement of hypoglycaemic drugs and insulin in many but not all mild maturity-onset diabetics, who may recover eventually normal carbohydrate tolerance even if either the hypoglycaemic agent or insulin has been discontinued.

Previous US studies had reported that a high carbohydrate diet improved glucose tolerance in normal individuals^{2,3} and in mild diabetes.^{2,4} The recent study¹ compared

results obtained in the treatment of hyperglycaemic diabetic men by the recommended weight-maintaining American Diabetes Association (ADA) diet with an isocaloric high unrefined carbohydrate diet. The ADA diet contained refined starch 23%, sucrose 20%, fat 34%, protein 23%, crude fibre 4.7 g/d. The high unrefined carbohydrate diet contained unrefined starch 55%, sucrose 20%, fat 9%, protein 16%, crude fibre 15 g/d. Daily estimations of fasting plasma glucose monitored the response and permitted a safe reduction of insulin or hypoglycaemic agent in many patients. Among 13 hyperglycaemic diabetic patients who ate the high carbohydrate diet for two weeks five insulin-treated men, previously receiving for many years from 15 to 25 units a day, had insulin discontinued, and all five sulphonylurea-treated men had this therapy discontinued. Three men, previously receiving a higher dose of insulin from 40 to 55 units a day, remained unaltered in their requirements. Mean fasting serum cholesterol and triglyceride levels both fell significantly.

Two patients could not tolerate the high-carbohydrate low-fat diet, but only one patient chose not to continue the diet as an outpatient. The main difficulty in eating this diet is one of unpalatability; fat is very low at 9%, sugar is high at 20%, so is protein at 16%. A more palatable diet would be unrefined starch 50%, fat 20%, sugar 15%, protein 15%. Refractory patients might benefit by further increases of unrefined starch but decreases of fat and sugar, but such a diet is less palatable. The dietary change may be sudden or gradual. If gradual, then fat and sucrose percentages of the previous diet could be decreased stepwise and the unrefined starch increased to equalise the calories. Careful questioning would reveal whether fat is missed more than sucrose and would constitute a guide to future stepwise reductions. Unrefined high-fibre starchy foods should come from a wide variety of sources and the scanty fat and sucrose diverted to increase their palatability. Wholemeal bread and flour, potatoes, ryemeal crispbread, whole-grain breakfast cereals rather than those enriched with bran, whole maize, brown rice, bananas, beans, and peas offer a wide choice.

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¹ Kiehm, T G, Anderson, J W, and Ward, K, *American Journal of Clinical Nutrition*, 1976, **29**, 895.

² Brunzell, J D, et al, *New England Journal of Medicine*, 1971, **284**, 521.

³ Anderson, J W, et al, *American Journal of Clinical Nutrition*, 1973, **26**, 600.

⁴ Brunzell, J D, et al, *Diabetes*, 1974, **23**, 138.

Blood sugar and beta-blockers

SIR,—Recently it has been suggested that the selective beta₁ adrenergic blockers may be free of troublesome hypoglycaemic side effects, and therefore potentially safer for use in diabetic patients. However, this hypothesis has been substantiated by studies performed only in normal subjects,^{1,2} and these are not strictly applicable to diabetics. Also, Pinter *et al*³ concluded that the non-selective beta-blocker propranolol produced no predictable or characteristic effect on blood glucose levels in healthy subjects. Hence the actual results obtained using the selective beta₁ blockers in normal subjects may be open to criticism. The report by Dr S P Linton and others (9 October, p 877) showed that the blood glucose was

lowered in exercising normal subjects following the intravenous administration of the selective blockers metoprolol and acebutalol. Although no statistically significant results were obtained, if one uses the areas bounded by the mean blood glucose curves and compares the values for these drugs against that for placebo, it can be seen that metoprolol potentiated hypoglycaemia by a factor of 54% and acebutalol by 95%. These values are large and seem likely to be significant.

In my letter (4 September, p 587) I suggested that the hypoglycaemic effect of a beta-blocker was not related to its ancillary pharmacological properties but was inversely related to its degree of beta₁ specificity. This may explain the differing hypoglycaemic actions of metoprolol and acebutalol observed by Dr Linton, although his results are actually the reverse of those of Dr R J Newman (21 August, p 447), who observed a lesser hypoglycaemic effect with acebutalol than with metoprolol. A league table of beta₁ specificity is needed, since the most specific beta₁ blockers should be the drugs of choice for clinical trials in subjects prone to hypoglycaemia.

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¹ Deacon, S P, and Barnett, D, *British Medical Journal*, 1976, **2**, 272.

² Newman, J R, *British Medical Journal*, 1976, **2**, 447.

³ Pinter, E J, et al, *Lancet*, 1967, **2**, 101.

Increasing work

SIR,—It has been suggested that the work load will inevitably increase in general practice. For this extra work load further payment will be requested. Is this extra work load and payment what the GPs desire?

What is the point of increasing the load, thereby decreasing the time given to each patient? One's standard of work will decline unless one compensates by working longer hours. This can only be to the detriment of one's own health and family life. Finally, what is the point of increasing one's remuneration simply to pay back 50% or more to the Government in taxation?

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Oxytocin and neonatal jaundice

SIR,—Dr B Alderman and Professor J M Beazley's comments (2 October, p 818) on the paper "Oxytocin and neonatal jaundice"¹ puzzle me. Three points require clarification.

Firstly, they misquote when they state that the frequencies of hyperbilirubinaemia in the study and control groups were 10.2% and 7.3%. The figures published showed the frequencies to be 7.3% and 10.2% respectively. Secondly, they are, of course, correct when they state that one would not expect the mean bilirubin concentrations to differ between two groups in which the incidence of hyperbilirubinaemia is low. This is an incontestable mathematical fact which I did not attempt to disprove, nor would I wish to. The third point refers to oxytocin dosage. Here I take the liberty of quoting directly from the paper² Dr Alderman and Professor Beazley use to support their argument: "The acceleration of spontaneous labour with oxytocin was

found not to have any significant dose dependent relationship to neonatal hyperbilirubinaemia," and again, "The absence of any meaningful association between increasing doses of oxytocin and neonatal hyperbilirubinaemia in accelerated labours whilst such an association was demonstrable in induced labours suggests that the mode of onset of labour may also be of importance." In this hospital oxytocin is not given in doses which exceed 10 units.

I must again emphasise that my investigation specifically excluded induction of labour with oxytocin because of the lower mean gestational age which is an inevitable result.

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¹ Boylan, P, *British Medical Journal*, 1976, **2**, 564.

² Beazley, J M, and Alderman, B, *British Journal of Obstetrics and Gynaecology*, 1975, **82**, 265.

Computer interrogation of patients

SIR,—The doctor rarely has time to investigate all the areas of a patient's social and medical history that he needs to know about. I make this point because I think that Dr A L Jacobs (2 October, p 814) is premature in dismissing the expanding human science of man-computer interaction. To imply that the issue is either the computer or human contact is to reject a potentially valuable clinical tool.

The results we have obtained in a recent study of history-taking by computer show that suitably designed computer programmes can (1) have therapeutic effects, (2) increase the value of the subsequent doctor-patient interview, (3) give pointers to areas of concern, on which the doctor can then concentrate.

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Emergency medical care

SIR,—As one with experience as a consultant surgeon associated with a university medical centre, a casualty officer in the Royal Alexander Infirmary at Paisley, and more recently a general practitioner on the Isle of Mull, perhaps I may have some reason to be aware of one aspect of the problem of the quality of emergency care that has not been considered in Dr H Conway's article (28 August, p 511), nor by Drs P D'A Semple, J C Murdoch (25 September, p 752), and Dr R Erskine and others (2 October, p 813) in commenting on the article.

In 1966 Klugs, reviewing emergency room care in five United States hospitals, found that two-thirds of the patients did not need hospital centre medical care. They either did not have a family doctor or he was either not available or sought out. The problems of emergency care are not unique to the NHS.

It goes without saying that primary care requires a physician to be available 24 hours a day. The NHS pays general practitioners to practise in groups so that continuity of care will be available and profitable. But part of the satisfaction of general practice is derived also from managing (as far as possible) the patient's diagnosis and treatment. The practitioner who gives this up voluntarily is mistaken. Informed co-ordination of *all* aspects of patient care is really what general practice is all about.