possibility of separating aid from politics is remote. On this score, for example, would the United States be content to build 30 health centres in relatively inaccessible rural areas while a large USSR-built hospital stood supreme in the capital? Publicity thus tends to carry more weight than utility, and size is made a virtue. And it must be admitted in fairness that indigenous authorities have often been swayed by the favourable domestic publicity that "vast structures" can bring. Nevertheless, the indigenous adviser has so far played a limited part in deciding to build them.

One possible solution would be for donors to channel most of their aid through international organisations such as UNDP, UNICEF, WHO, and the Commonwealth Fund for Technical Co-operation. Aid would then lose much of its national identity and comparisons would be limited to the amounts contributed rather than to the grandeur of structures built, and Third World planning could then be geared more closely to need.

Perhaps developing countries should stick firmly to their own plans and priorities and seek external aid on a "take it or leave it" basis. There are few countries which can afford to do this, however, and when cases arise in which "vast structures" are the result it is a mistake automatically to place the blame for them on indigenous advisers.

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A place to be born

SIR,—We have read with concern your leading article of 10 January (p 55) because it suggests that 100% hospital confinement is a desirable objective—thereby removing from women the possibility of choice—although the evidence for this is far from conclusive.

You imply that the reduction in neonatal mortality has occurred as a direct result of increasing hospital confinement. This is an over-simplification, for other factors such as higher standards of living, improved general health, size of families, and lowering of child-bearing age have contributed to this reduction quite apart from the higher standards of maternity care, whether carried out in hospital or at home. Sweden, with 100% hospital deliveries, has the lowest perinatal mortality rate, closely followed by Holland, with a more than 50% domiciliary rate, suggesting that it is not the place of confinement but rather the quality of life and care that is the critical point at issue.

The study by Dr C A Cox and others (10 January, p 84) gives an account of poor prenatal selection and some instances of questionable medical practice, but this is not in itself an argument against domiciliary confinement any more than examples of poor hospital care argue against hospital delivery.

At present there is an approximately 90% hospital confinement rate in England and Wales, but independent studies have shown that 80% of women who have experienced childbirth in both hospital and home preferred birth to take place in the family setting. As soon as one accepts that human and emotional factors are important elements in childbirth the problem arises as to how the balance between the different considerations for care can be achieved. We fully share the concern of all for the safety of mother and baby; however, if physical safety measured in terms of

mortality and morbidity becomes the overriding preoccupation there is a real danger that other important factors will be disregarded.

The critical question we would like to pose is, How are the decisions concerning the management of childbirth to be made? As a group looking at this question we have become aware that it is one in which various disciplines, together with the personal views of the mothers themselves, have an important contribution to make.

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SIR,—I was relieved to read your leading article on this subject (10 January, p 55). I consider its timing particularly appropriate as there seems to be a growing wave of nostalgia for a return to the "good old days" of home delivery, a trend which many paediatricians and obstetricians view with great anxiety. In my view a recent series of articles in the *Sunday Times* and a current series on BBC "Nationwide" have painted an altogether too rosy picture of the joys of having a baby in an atmosphere of friendly domesticity and informality as compared with the noisy, lonely, and impersonal surroundings of a large maternity hospital. Too often the feelings and wishes of the mother and her attendants, although important, are given precedence over concern about the safety of the baby. We even read statements written by individuals whose qualifications indicate that they should know better suggesting that forceps and breech deliveries can be carried out relatively easily in the home. Many of us who work in large maternity hospitals are uncomfortably aware of their deficiencies, but we must get our priorities right.

We all know that a number of very serious complications can occur during labour, even when the pregnancy has been entirely uneventful and a normal birth is expected. These may require the attention of staff and use of facilities that are available only in a properly equipped hospital. A potentially normal infant who dies or is crippled because of delay in getting such help represents a tragedy that can and should be prevented. The past few decades have seen major improvements in perinatal care based on increased understanding of the "what, why, and when?" of obstetric and neonatal complications. Unfortunately, too little of this knowledge is currently being applied throughout the country, and recent financial and staffing trends in the NHS make me very pessimistic that it ever will be. The trend in perinatal mortality has been most encouraging, but we still have a long way to go. I am afraid that over the next few years we may see that trend reversed. Failure to provide high-quality centralised maternity facilities and encouragement of home confinements are two ways of increasing perinatal mortality and morbidity. Our efforts must be directed towards improving maternity hospitals (including the attitudes of the staff) so that labour and delivery can not only be safe for the baby but a satisfying emotional experience for the

parents as well. Better facilities will help, but we can make a simple beginning by insisting on "family-centred maternity care" in which fathers are not treated as outsiders or visitors but are welcomed as part of the family unit.

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Carrier solutions for low-level intravenous insulin infusion

SIR,—Dr P H Sönksen (17 January, p 151) criticises the recommendation in our book¹ that albumin does not need to be added to the insulin infusion in the treatment of diabetic coma. He concludes from experimental work on the absorption of insulin in high dilutions to glass and plastic that human albumin should always be added to the insulin infusion.

The new treatment of diabetic ketoacidosis with low-dose insulin infusion owes much to the work of Dr Sönksen, who, with his colleagues,² showed that very low doses of insulin were metabolically active. In one of the original reports of the results of this treatment, of which Dr Sönksen himself was a joint author,³ it was stated that the rate of fall of blood glucose was the same in cases treated with and without the addition of human albumin (see figure).

It was for that reason, and because of our experience of the technique with about 100 cases since then, that we said in our book, and still think, that the addition of human albumin is not necessary. Perhaps instead of baldly saying that insulin in the concentration we use (about 1 U/ml) "does not adhere" to plastic we should have added the words "to a significant extent." At higher dilutions (as when insulin is added directly to the infusion solution, which gives a concentration about one-hundred times less than we use) adsorption may be important. That would be an extra reason, in our opinion, for preferring the infusion pump technique.

Diabetic ketoacidosis is a serious condition and its treatment always demands careful monitoring. With the continuous low-dose infusion technique a change in dose can be made (simply by altering the infusion rate) according to the patient's response, but in practice it is rarely necessary to do so. The

great advantage of this technique is its simplicity; we would be sorry to see the technique made more elaborate unless in practice that was found to be necessary.

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¹ Oakley, W G, Pyke, D A, and Taylor, K W, *Diabetes and its Management*, 2nd edn, p 112. Oxford, Blackwell Scientific, 1975.

² Sonksen, P H, et al, *Lancet*, 1972, 2, 155.

³ Page, M McB, et al, *British Medical Journal*, 1974, 2, 687.

Antipsychiatrists and ECT

SIR,—Your leading article (4 October, p 1) seeks to look dispassionately at an emotion-charged problem in medical practice but, in doing so, repeats errors which it hopes to rectify: "The very words shock and convulsion are frightening, but no euphemism (electroplexy, for example) has ever caught on, and perhaps rightly, because shock and convulsion, even if the latter is modified almost to the point of invisibility, are of the essence. Another set of objectives stems from our ignorance of how ECT works." If we are ignorant of how ECT works, how can we assert that shock and convulsion are of the essence?

Shock bears no part in the process. Neither electrical shock, nor traumatic shock, nor psychological shock is essential to the treatment response. The name "shock" was apparently introduced by two misconceptions: that the treatment was similar to the 18th century use of electric charges to "shock" patients to health; and that the electrically induced seizures produced their clinical results as did the spontaneous seizures complicating insulin coma therapy. In part, the error in the name of this therapy comes from the translation of the German *Insulinschocktherapie*, which became known as "insulin shock treatment" in its anglicization. In present practice ECT is given with subjects asleep and relaxed so that neither electrical, psychological, nor traumatic shock occurs. The persistent use of the phrase "shock therapy" does patients and their families a disservice, as you rightly assert. Another usage asserts that the term "electric shock" refers not to any shock that the patient may experience, but merely reflects the English meaning that an electric current was the basis for the treatment. Such usage is insensitive of the multiple meanings of "shock" and, further, denies the experience that treatment is as effective using fluoroethyl, a non-electrical method of induction, as with the use of electric currents.¹

Further, the convulsion is not of the essence. Electroplexy modified by muscle paralytic agents such as suxamethonium produces the same clinical results as unmodified treatment. The clinical efficacy is seen to reside in the cerebral seizure, no matter how produced, and not in the external motor events, the convulsion.¹ The duration of the seizure, not the convulsion, is better correlated with clinical results.² In comparisons of treatments which produce seizures and those that do not, the seizure-treated patients have better clinical outcomes than those treated with subseizure currents.^{3 4}

The ECT process has received considerable study on this side of the Atlantic and a cautious optimist may find the data consistent in providing hypotheses as to the biochemical, psychological, and electrophysiological aspects of the process.¹ Indeed, present studies of peptide fragments⁵ hold some promise that the memory defects accompanying seizures may yet be relieved, reducing this most persistent problem of the treatment. The state of our knowledge is not as mysterious nor as forbidding as to require the repetition of the myths of shock and convulsion as the essence of electroplexy.

The catalogue of misuses to which ECT is allegedly put is indeed depressing. But your observations should be a basis for criticism of the abusers, not the instrument. Unfortunately, legal and political forces seem to confuse this distinction. Laws are proposed and written which hamper the proper use of this occasionally useful treatment rather than allowing the restraint of abuse to depend on the traditional restraints for any medical treatment—professional education, peer review, malpractice litigation, and the right of patients to select the therapist.

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¹ Fink, M, et al, *Psychobiology of Convulsive Therapy*. Washington, DC, Winston, 1974.

² Ottoson, J O, *Acta Psychiatrica et Neurologica Scandinavica*, 1960, 35, suppl 1.

³ Ulett, G A, Smith, K, and Gleser, G C, *American Journal of Psychiatry*, 1956, 112, 795.

⁴ Fink, M, *Diseases of the Nervous System*, 1958, 19, 113.

⁵ Marx, J, *Science*, 1975, 190, 367.

SIR,—The resumption of Canadian postal services allows us to comment on your leading article (4 October, p 1).

Electric convulsion therapy (ECT) is one of the few "procedures" in psychiatry and has been available for 40 years. Nevertheless to the lay person it is surrounded with mystique, and the fear of the treatment is related to the early practice of giving it without an anaesthetic. It does not appear to be well known to the public that it is a simple and safe treatment akin to a very minor operation. Recently the treatment has been assailed by such groups as scientologists. It has been brought into the political arena and legislation has been passed in California and Alberta which is so rigid that it may eliminate the use of ECT.

Recent evaluation of ECT in Toronto, based on total number of treatments, courses of treatment, and specific rates, showed that the affective disorders constituted the largest treatment group.¹ This is in keeping with the standard textbooks,^{2 3} Ottoson's⁴ concept that electric seizures have a specific effect upon depression, and d'Elia's⁵ recommendation that ECT is the treatment of choice for endogenous depression.

The evaluation of medical care has been divided by Cochrane⁶ into "effectiveness" and "efficiency." Effectiveness is not synonymous with specificity, but clearly the more specific a treatment the more likely it is to be consistently effective. Since in this city ECT is being used with considerable specificity it would seem much more profitable to examine the efficiency of ECT in order to determine how and when it should be given. There is a

need for treatment protocols for those with mood disorders and a need to learn whether it is better for patients with recurrent depression to be treated with lithium or continuous antidepressants or to receive, for example, daily unilateral ECT for about a week at the time of each attack.

ECT is one of the most dramatic treatments in the whole of medicine when used appropriately. It seems a pity that it should fall into disrepute for lack of adequate research into its most efficient application.

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¹ Eastwood, M R, and Peacocke, J E, *Canadian Psychiatric Association Journal*. In press.

² Mayer-Gross, W, Slater, E, and Roth, M, *Clinical Psychiatry*, 3rd edn. London, Bailliere Tindall and Cassell, 1969.

³ Freedman, A M, and Kaplan, M I, eds, *Comprehensive Textbook of Psychiatry*. Baltimore, Williams and Wilkins, 1967.

⁴ Ottoson, J O, *International Journal of Psychiatry*, 1968, 5, 170.

⁵ d'Elia, G, and Raotma, M, *British Journal of Psychiatry*, 1975, 126, 83.

⁶ Cochrane, A L, *Effectiveness and Efficiency. Random Reflections on Health Services*. London, Nuffield Provincial Hospitals Trust, 1972.

Cancer statistics

SIR,—The contribution by Dr R F Mould on cancer statistics (10 January, p 86) is reminiscent of the curate's egg. A number of the points on delay, accuracy, classification, and retrieval have been discussed at some length.¹ He suggests a major extension of the basic items recorded in the system; this misjudges the arguments for a national scheme.² Such detail is difficult enough to collect as a routine for patients under the care of a few "enthusiastic" clinicians; it is inappropriate for a national scheme, which can make a number of important contributions to the study of malignant disease from the basic items suggested by the Advisory Committee on Cancer Registration.²

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¹ Alderson, M R, *Central Government Routine Health Statistics*, vol 2, Review of UK Statistical Sources, ed W F Maunders. London, Heinemann, 1974.

² Office of Population Censuses and Surveys. *Report of the Advisory Committee on Cancer Registration*, p 10. London, HMSO, 1970.

SIR,—Dr R F Mould (10 January, p 86) discusses cancer registration as if it were concerned only with the provision of recurrence and survival rates. We would like to draw attention to the importance of registry data in epidemiological studies. Alderson and Nayak,¹ for example, used material collected in the Manchester region to look for space-time clustering in Hodgkin's disease, while one of us is using the National Cancer Register to identify cases of malignant disease in a large follow-up study of women using oral contraceptives.² Registry data can also be used to initiate special studies by identifying patients with particular conditions. Thus registry material was used by Lee et al³ to identify men with scrotal cancer in a study of occupational causes of this disease and by Inman (cited by Doll⁴) to find young women with vaginal adenocarcinoma in a study of the trans-