CORRESPONDENCE

Appointing house surgeons R Hall, FRCS, and others..... 1507	Home monitoring of blood glucose using filter paper strips R B Paisey, MRCP, and others..... 1509	The care of children in hospital Pamela M Jefferies, SRN..... 1513
The case-control study and retrospective controls J I Mann, DM, and M P Vessey, FRCPED; R H Jones, MRCP; D W Young, MRCP.... 1507	"Wednesday's Child" P Goodchild..... 1511	A do-it-yourself medical centre M S T A Lawrence, MRCP..... 1513
Rehabilitation D H Boshingham, MRCP..... 1508	Placement of subnormal offenders D A Spencer, MRCPsych..... 1511	Medically qualified preclinical academics R R Sturrock, MB..... 1513
A national register for erythropoietic protoporphyria I A Magnus, FRCP, and others..... 1508	Muslims, Ramadan, and diabetes mellitus J C Davidson, FRCPED..... 1511	Revised consultant contract B D McKee, FRCP; T S Mann, FRCS..... 1513
Aggressive patients—what is the answer? A J M Bailey, MRCP..... 1509	Mycoplasma pneumoniae infection and neurological complications G E D Urquhart, MRCPATH; W J K Cumming, MRCP, and C E Skilbeck, ABPS 1512	The lesson of Charing Cross L J Temple, FRCS..... 1514
Multidisciplinary teams J P Wattis, MRCPsych; G F J Goddard, MRCS; H Gordon, MFCM; A Crowcroft, FRCPsych; A T Darby, RMN; J K W Morrice, FRCPsych..... 1509	Stress and premature labour R W Newton, MRCP..... 1512	Points Acetylcholine for supraventricular tachycardia (R J T Woodland); Wanted: a new wound dressing (G E Moore); Certificates for using radioactive medical products (A F Pentecost); Medical services for refugees (D Browne)..... 1514
	Medical reports not to the lawyers' liking A W Franklin, FRCP..... 1513	Correction: Antibiotic lavage for peritonitis STEWART..... 1514

We may return unduly long letters to the author for shortening so that we can offer readers as wide a selection as possible. We receive so many letters each week that we have to omit some of them. Letters must be signed personally by all their authors. We cannot acknowledge their receipt unless a stamped addressed envelope or an international reply coupon is enclosed.

Appointing house surgeons

SIR,—We would like to use the window of your pages to ventilate a problem which we feel must be widespread and about which many may well feel disquiet. How soon before starting the job should the appointment of a preregistration house surgeon be made?

As is the usual annual practice, we were recently invited by our local medical school to consider the arrangements for appointing house surgeons commencing duties on 1 August 1980 and 1 February 1981. Yet this was the summer of 1979. It seems that the practice of appointing junior students to their first and second house officer post is becoming widespread. Some medical schools appear to be fostering appointments at an even earlier stage than ours. Will it soon be that students of anatomy, physiology, and pharmacology will be expecting to have house officer commitments before the second MB has been attempted or may we expect GCE A level candidates as applicants? Inquiries made of undergraduate students, of prospective house

surgeons, and of house surgeons in posts all tend to indicate that a "lead" time of some four to five months between the date of interview and the date of starting posts is adequate and preferable. We have already declined to co-operate in the current "advance buying" of medical students to commit us with house surgeons for nearly two years.

We have recently interviewed excellent candidates to start as soon as 1 February 1980. We do not find that making the selection with this sort of interval reduces the quality of our house surgeons—perhaps the reverse—but it certainly does reduce the problems of drawing out a short list.

Are we wrong, are we misinformed, or what should we be doing?

ROBERT HALL
EDGAR PRICE
R A BREMNER

York District Hospital,
York YO3 7HE

The case-control study and retrospective controls

SIR,—We read with interest your leading article on case-control studies (13 October, p 884) and would be grateful for the opportunity to comment on a number of the points raised.

Case-control studies are described as "one of the methods of generating hypotheses and perhaps of testing them." Some groups have indeed used the case-control approach successfully for the generation of hypotheses; but clearly in these circumstances chance associations are likely to appear from time to time, which may lead to a great deal of subsequent confusion. In our opinion case-control studies are of particular value for testing hypotheses

generated by clinical impression or other means.

In addition to this rather fundamental issue there are a number of points with which we would not entirely agree. We would not, for example, accept that "any retrospective study is less likely to obtain the randomness and independent selection of each individual that are found in the best prospective experimental or cohort follow-up studies." Some case-control studies have included all cases of the disease under study in a defined geographical area,¹ thus obviating this implied criticism as well as ensuring that the cases under study are "truly representative of all cases." Further-

more, it has been shown that it is often more appropriate when studying hospital cases to include as controls subjects who have also been hospitalised than those who have not been admitted to hospital.² We would accept that it may sometimes be useful to include a second group of "community" controls (even though this is likely to increase substantially the cost and amount of effort involved), but are unaware of any examples where the study of "at least three independent control groups" has proved helpful.

Case-control studies which have been carefully planned to eliminate as many as possible of the potential biases have not only demonstrated the association between the pill and its thromboembolic complications but number among their many other successes the first demonstration of the link between smoking and lung cancer. The problems which have been created (such as the example given concerning the unresolved debate about the possible link between reserpine and breast cancer) have usually occurred when case-control studies have been used for hypothesis generating. We do agree about the care needed in appropriate design but feel that perhaps your attitude towards this very useful epidemiological method has been rather unfairly lukewarm.

J I MANN

Department of Social and
Community Medicine,

M P VESSEY

University Department of Social
and Community Medicine,
Oxford OX1 3QN

¹ Mann, J I, Inman, W H W, and Thorogood, M, *British Medical Journal*, 1976, 2, 445.

² Jick, H, and Vessey, M P, *American Journal of Epidemiology*, 1978, 1, 107.

SIR,—After reading Dr Lawrence Cranberg's article on the use of retrospective controls (17 November, p 1265) I felt a short-lived sense of

vindication. Our study of the use of cimetidine after renal transplantation¹ had been criticised because of the use of retrospective controls² (although I am sure that our findings are valid).

At a second reading, however, Dr Cranberg's message seemed altogether unsatisfactory. Indeed, he has fallen foul of his own argument: he dismisses criticism of the polyarteritis study because it results from a particular clinical trial, yet it is only by special pleading on the basis of this and the fast-neutron trial that he is able to arrive at his conclusion. These are two very special situations, in which it is clearly difficult to gather adequate numbers for comparison; but there are a host of clinical therapeutic situations in which control and treated groups may readily be obtained. To give uncritical academic respectability to the use of retrospective controls is to weaken the incentive to achieve such accurate comparisons.

I would further suggest that to deem the use of retrospective controls "essential" is "a violation of a well-established scientific principle"—namely, that of maintaining objectivity and impartiality in the performance of an experiment. In medicine, as in quantum mechanics, observation changes the nature of the phenomenon observed and it is scarcely necessary to point out the influence of observer and of placebo, which only cancel out when groups are studied by the same workers over the same time period. And how many of us would place such faith as Dr Cranberg in the accuracy of data culled from old records or in our own abilities to select impartially from them? While conceding that, under rare circumstances, retrospective controls need to be used, I shall continue to regard with suspicion the majority of information which depends on them.

ROGER JONES

Andover, Hants

¹ Jones, R H, et al, *British Medical Journal*, 1978, 1, 398.
² *Lancet*, 1979, 1, 366.

SIR,—Dr Lawrence Cranberg (17 November, p 1265) is quite correct to argue that the indictment of retrospective controls as inherently fallacious is incorrect. As he states, this could be the case only if the method involved a logical contradiction. There is no logical reason why the controls in a case-control study have to be collected and assessed at the same time as the experimental group. The controls could be gleaned from retrospective studies or even a separate control study could be mounted. However, there are grave practical difficulties against these courses of action and it is much better in practice to have a concurrent control group.

Horwitz and Feinstein¹ reviewed 17 medical topics about which conflicting views had appeared in the literature. They looked at 85 retrospective case-control investigations. Their evaluation of these studies showed that most of them violated commonly acceptable standards of scientific investigation. The major argument against using retrospective controls is that they will not have been assessed in the same way as the experimental group. Case controls must be reviewed and assessed by the same methods and criteria for patient selection and response as the experimental group.

It is pertinent to state the reasons why trials using controls have been advocated. There are three reasons. The first is the multiphasic

nature of diseases. The pure scientist can usually isolate the effect he wishes to observe; this is not possible for the medical experimenter. Randomised controlled trials are an attempt to cancel out all variations except the one of interest. There is also an inherent variability in many diseases which are subject to experimental treatments. Again, randomised controlled trials are an attempt to ensure that any changes in the experiment are due to change induced by the experimenter and not to the inherent variability of the condition. Finally, the assessment of the effectiveness of drug treatment: it is usually the case that a marginal increase in efficacy is looked for—that is, a patient response rate of 70%, as against 50%. Again, randomised controlled trials are an attempt to cancel out the inherent variation in the patients and to allow a strict comparison of the effectiveness of two agents.

If in a condition for which there is no treatment a treatment is introduced which has any effect at all, then case controls are not needed. For example, case controls were not needed to show the effectiveness of anti-tuberculous therapy in tuberculous meningitis. Without treatment the mortality was virtually 100%, whereas with treatment there were many survivors.

It is perhaps understandable for experimenters to rail at the extra work involved in having controls, but it is incumbent on the experimenter to justify his methods and to show that his results are the effect of the changes he has introduced and not those inherent in the disease he is considering. If he is able to do this without controls, then well and good. However, because of the difficulties in this field the randomised controlled trial has been devised as the most satisfactory way of overcoming the problems involved.

To point out, as your leading article (p 1244) does, that by judicial selection of papers conflicting results can be shown in the comparison of the efficacy of drugs in rheumatoid arthritis simply means that none of the drugs are superior. It is not an argument against the methodology which gave rise to those results.

DAVID YOUNG

St Chad's Hospital,
Birmingham B16 9RQ

¹ Horowitz, R I, and Feinstein, A R, *American Journal of Medicine*, 1979, 66, 556.

Rehabilitation

SIR,—It was reassuring to find rehabilitation discussed in your series on accident and emergency services (17 November, p 1268), but closer inspection revealed the old platitudes simply being re-aired. We know that return to work depends on many factors other than the physical,¹ not the least being the improvements in social security benefits.²

Why are patients attending for physiotherapy on their way to work? If they can work why do they need physiotherapy if "return to normal work is the best form of rehabilitation"?³ How big is the workshop where there are "special machines, adapted to provide all the movements needed for rehabilitation in the many different types of disability"? Such statements suggest a failure to grasp the most basic concepts of disability and rehabilitation.

The trend towards a team approach is recognised especially in paediatric and community-based units and competition for posts

in such units is high. Generally, however, physiotherapy departments are said to be understaffed by 20% and the reasons are not purely financial. Some hospital departments are understaffed possibly because therapists are unable to work with medical colleagues who do not recognise their ability and training, while the importance of understanding what a physiotherapist or occupational therapist can achieve for a given patient is sometimes overlooked. We are still training surgeons in orthopaedics and traumatology who cannot, or do not, utilise the employment rehabilitation services for their patients. This is as true now as it was eight years ago when Brewerton and Daniel³ published the results of their study on brachial plexus injuries.

Although accidents may account for a large number of patients requiring rehabilitation, by far the greatest load comes from patients with rheumatic diseases, and the working time lost because of these dwarfs time lost from accidents. "Consider the impact on the national economy of regular return to work of skilled workers with minor back strains."¹

We continue to equip rehabilitation departments with expensive trained staff and elaborate equipment. Rehabilitation will continue to be an expensive placebo, devoid of scientific basis, if more thought is not put into its future and an opportunity given to examine carefully its therapeutic effect. "It is a serious error to think that rehabilitation is a separate process divorced from other medical care"³—but it is.

DAVID BOSSINGHAM

Nuffield Orthopaedic Centre,
Oxford OX3 7LD

¹ Brewerton, D A, and Nichols, P J R, *British Medical Journal*, 1977, 2, 1006.
² Sommerville, J, *Proceedings of the Royal Society of Medicine*, 1970, 63, 1147.
³ Brewerton, D A, and Daniel, J W, *British Medical Journal*, 1971, 4, 277.

A national register for erythropoietic protoporphyria

SIR,—Erythropoietic protoporphyria is an uncommon genetic disease in which attacks of acute, often burning, photosensitivity occur soon after exposure to sunlight. The exposed skin is thickened and may bear superficial scars. Excess protoporphyrin is found in the red cells. A spectrum of liver disorders ranging from the trivial to the lethal may be seen in these patients, and perhaps also in some of their relatives; but little is known about the prognosis and treatment.

We are therefore, with the support of the Medical Research Council, setting up a national register. The register will (a) help to clarify the natural history of the disease; (b) provide an estimate of its prevalence and that of its complications; and (c) enable treatment to be evaluated. The UK is uniquely favourable for such a register because of the existence of both the NHS records and the Registrar General's system for tagging death-certificates, which will allow us to follow up the patients on the Register for the rest of their lives.

We would, however, also welcome details of patients in the other European countries, since greater numbers will increase the value of the register. We have written to all consultant dermatologists in the UK, since they are most likely to see patients with erythropoietic protoporphyria; but we would be very