Dr Lutton's concluding advice to me about my medical care would have been impertinent if it had not been completely irrelevant. The general views expressed in his letter would perhaps have carried more weight if he had not chosen to invent a rift between myself and my doctor in his anxiety to emphasise the gulf he believes to exist between general practitioners and hospital consultants.

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How to use an overhead projector

SIR,—In his letter (9 June, p 165) on my article on the use of the overhead projector (3 March, p 602), Dr J Robbins commented on the use of a Xerox machine or a similar copier to produce projectable transparencies from books, drawings, tables, or electrocardiograms in a matter of seconds. There is one great drawback in carrying out this procedure and this is that the amount of material which goes on to the transparencies is too great and when projected almost impossible for an audience to read.

The point I made in the original article about the number of lines on a transparency and the number of words in a line cannot be emphasised enough: nothing is more irritating to an audience than being unable to read the message on the visual aid.

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Extradural haematoma: effect of delayed treatment

SIR,—Mr G M Teasdale and Mr S Galbraith (30 June, p 1593) have commented on our paper regarding the management of extradural haematoma (12 May, p 1240), where we emphasised that delay in evacuating an extradural haematoma in a patient who is deteriorating is dangerous.

The dangers of delay in this situation must be considered separately from the politics of deciding on which admission policy should be applied to neurosurgical units. All neurosurgeons must agree that an extradural haematoma should be evacuated as rapidly as possible in patients who deteriorate. We would like to stress the importance of avoiding any factors which might increase these delay times. In most hospitals to which such patients are primarily admitted immediate access to computerised axial tomography (CAT) is impossible. Over-zealous attempts to transfer deteriorating patients for this or any other investigation will increase the mortality and, more important, the morbidity of survivors with this condition. Even the delay of half an hour in a case of straightforward extradural haematoma in order to obtain a CAT scan when it is available is unpardonable. We made this quite clear in our paper.

We agree that pure extradural haematomas represent a small minority of head injuries, but it is a group that should do well unless there is associated brain damage of severity. In 1977 in seven patients our mortality was zero. It is precisely because of its rarity that the extradural haematoma is often overlooked.

We therefore make no apology for stressing the need for immediate surgical exploration and evacuation of clot in this small group of head injuries.

The problem of admitting only those patients to neurosurgical units who are referred is that the vital decision of *when to refer* usually has to be taken by those who are relatively unfamiliar with the complex problems of the complications of head injuries—that is, the district hospital surgeon and his junior staff. Neurosurgeons cannot handle all head injuries but they can provide a centre of excellence for head and spinal injuries with undergraduate teaching and postgraduate training of general and accident and emergency surgeons. They can also provide a round-the-clock telephone consultation service followed up by flying squad assistance when there is the slightest doubt in the mind of the referring surgeon if the patient cannot be transferred, and he has begun operative evacuation of clot in the outside hospital. This has been the policy for hospitals outwith Edinburgh since 1952, and will continue to constitute the 50% not handled in the department of surgical neurology. Most of those with head injuries occurring in the city are admitted direct to the neurosurgeons.

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Tap water instead of electrode jelly for electrocardiographic recording

SIR,—We have read with interest the article by Dr Ann Martin and others (17 February, p 454). In this study ECG recordings using tap water were as good as those using electrode jelly.

At the Vasa Hospital, a geriatric, long-term care hospital, we have carried out a similar study. On 30 consecutive inpatients where ECG recording was indicated, recordings were taken using first tap water and then electrode jelly. The recordings were made on the wards, with the patients in their beds, using Elema-Schönder 34 equipment with repeated-use metal electrodes. The ECG recordings were analysed by one of us (OD), who did not know which type of technique had been used, and the recordings were classified into the following categories: good or satisfactory, slight interference, heavy interference. An evaluation was also made to see if the recording with jelly was better than the one with tap water or vice versa, or if they were equivalent.

The only interferences that were observed were alternating current interference. The table shows the resulting quality of the ECGs.

Comparison of tap water and electrode jelly used for electrocardiographic (ECG) recording

Quality of ECG	Jelly	Tap water
Good or satisfactory	9	5
Slight interference	18	15
Heavy interference	3	10

χ^2 -test: $0.10 > 2p > 0.05$

The quality was the same with jelly as with water in 15 cases, but the jelly was better in 14 cases, whereas the tap water was better in only one case.

Thus in our study electrode jelly was much

superior to tap water for ECG recording. Possible explanations for the difference are different surroundings during the ECG recordings (in our study all ECGs were taken on the wards), differences in the recording equipment as well as differences in the types of electrodes used.

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Fifty years of penicillin

SIR,—After reading the leading article "Fifty years of penicillin" (28 April, p 1101) I feel that being one of the first patients to receive penicillin in large quantities (several million units) I have much reason to thank Professors Flemming and Florey for their wonderful discovery, work, and persistence against almost impossible odds.

During the period I spent in the RAF hospital at Whitchurch, Shropshire, and St Hughes at Oxford 1943-4 being treated for osteomyelitis of the skull, the first penicillin treatment I received was penicillin in a sulphide base, dusted on to gauze and packed into the wound. On my transfer to St Hughes, while undergoing a number of operations to remove the affected bone penicillin was given intravenously and intramuscularly. At first it was only possible to dissolve 1000 units in one pint of saline; after a few months, and when the American penicillin became available, it was possible to dissolve 10 000 units in one pint, and later 100 000 units.

At the start of the second front, when penicillin was still in short supply, and I was under observation and requiring regular dressings, I assisted in reclaiming penicillin from the urine of patients receiving heavy doses and had the exceptional privilege, for a few months, of working under Professors Flemming and Florey.

In conclusion, I would like to say that although the surgical skill and treatment I received was the highest one could ask, I am convinced that penicillin was a very large factor in my being able to record the above today.

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Care of low-birth-weight babies

SIR,—Your leading article "The therapeutic pendulum and the special care baby unit" (3 March, p 575) considered the thorny question of how extensively the facilities of special care baby units should be used.

In the rural ex-mission hospitals of Transkei such units do not exist, yet two years' experience in different hospitals here has left me with the strong impression, shared by my colleagues, that low-birth-weight babies do very well despite the absence of elaborate facilities. To test this belief, I studied the records of this hospital's maternity department for 1978. During the year 113 live-born infants weighing 2500 g or less were born, and there were five deaths (44.3 per 1000 live births). Of 36 live-born infants weighing