in the Netherlands, issues about 8000 wheelchairs of all types annually, as part of the provisions within the handicap insurance bill. Poor comfort can be drawn from the fact that despite all efforts similar delays, of up to six months, occurred in Holland. In some cases delays were due to the too complicated administrative procedures, a source of much frustration. These are now brought down to a bare minimum, as fraud rarely occurs in these requests.

On the other hand expectations are too high and not realistic. Most people believe that issuing a wheelchair is "just an over-the-counter business." In fact, the adequate fitting of a wheelchair is a laborious and time-consuming occupation. This point is poorly understood and rarely stressed. Outcries are therefore not always justified. Only strenuous efforts and large funds may shorten delivery times.

J W KOTEN

Research Office,
Gemeenschappelijke Medische Dienst,
Amsterdam, The Netherlands

Hospital equipment "Which?"

SIR,—It would be churlish not to acknowledge the generous, if opaque, replies from the Department of Health to my letter (26 August, p 632). I feel bound to remark, however, that neither Dr W Wintersgill (16 September, p 828) nor Mr P M Harms (23 September, p 892) seems to have taken us very far.

Mr Harms, if he will forgive my saying so, makes rather heavy weather of what appears to me at least a fairly simple problem. The Department of Health insists (rightly) on safety tests for new electrical equipment before it is used on behalf of a patient. Good. The hospital's electrician insists on a circuit diagram so that he will not damage the equipment. Even better. Answer: an instruction to that effect from the Department of Health and Social Security to all manufacturers and distributors who supply electrical instruments to the National Health Service. What could be simpler? Or have I missed the point?

As to *Hospital Equipment Information*, Dr Margaret L Heath (14 October, p 1084) has said what needs to be said. I repeat: the hospital doctor needs comparative consumer reports, with some acknowledgment that scientific instruments are expensive to buy (capital) and even more expensive to run (revenue). In other words, he needs a hospital equipment *Which?* I think it a pity that no one from the Department is prepared to comment on the suggestion that consultants be given direct responsibility for their clinical budgets.

Some of your readers, Sir, may wonder why I bother to raise these questions. I raise them because I really need to know the answers. I am the hospital consultant member—the only one—on my regional health authority's core project team for the new Bromsgrove and Redditch District General Hospital. I thus represent the eventual users (patients and staff). Phase I will cost about £12m. If the Department expects value for money, as I am sure that it does, then I need information. That information must lie readily to hand; it must be comprehensible; it must be comprehensive; and it must be comparative.

It is hard enough to have to cope, at project team meetings, with architects' argot and managers' and planners' jargon ("We are constrained by resources availability"). Like my

consultant colleagues up and down the country, I have had no training in management or in planning. Nor have I the skill to translate other than medical jargon. I have had to learn a new language, and I am still learning. At the same time, it seems that I may be prevented, by lack of tabulated and expertly appraised information, from making a proper contribution to the successful spending of £12m of taxpayers' money—your money and mine. Without that vital information, how am I to advise my hard-working and conscientious colleagues on the project team about, let us say, equipping an intensive therapy unit or an operating theatre?

I hope very much that this correspondence may eventually bring order from disorder in a highly technical field, where the doctor is, as Dr Heath has said, the veriest amateur. The amateur needs all the help that he can get if he is to make sensible and thrifty decisions about complex modern medical technology. A hospital equipment *Which?*, in my opinion, would go part of the way towards meeting a real need.

PETER V SCOTT

Department of Anaesthetics,
Bromsgrove General Hospital,
Bromsgrove, Worcs

Chronic spinal arachnoiditis

SIR,—Your editorial on chronic spinal arachnoiditis (19 August, p 518) provides a good review of this distressing condition, one of the most frequent causes of which is myelography. Your statement that the myelographic medium metrizamide causes little or no arachnoiditis, and therefore seems to be the contrast medium of choice, will be supported by many radiologists who have used this product for the last two or three years. Your readers will therefore be interested to learn that up to September 1977 268 patients had a second water-soluble myelogram after a previous metrizamide myelogram. Only one demonstrated radiological evidence of adhesive arachnoiditis—and he had undergone lumbar disc surgery between the two myelograms.^{1 2} It must be remembered, however, that even metrizamide in higher concentrations can cause adhesive arachnoiditis, at least in the macaque monkey.³

An important and fundamental error has crept into your editorial which you will wish to correct. You state that metrizamide is sodium calcium medetate (sic). This is not so. Sodium calcium edetate (without the "m") is a chelate salt added in small quantities to many solutions for injection in order to act as an ionic buffer. It contains no iodine. Metrizamide is the first soluble iodinated contrast medium which is not a salt and does not dissociate in solution. Its solutions therefore have a remarkably low osmolality, which is a major factor in its low toxicity. Metrizamide is a substituted amide of metrizoic acid and contains three atoms of radio-opaque iodine per molecule.

RONALD G GRAINGER

X-Ray Department,
Royal Hospital,
Sheffield

¹ Nyegaard and Co, Oslo, personal communication, 1977.

² Grainger, R G, *Recent Advances in Radiology*—6, 1978, in press.

³ Haughton, V M, *et al*, *Radiology*, 1977, 123, 681.

*.*We regret the error; as Dr Grainger says, the small amount of sodium calcium edetate

in Amipaque, the proprietary solution of metrizamide, is there only as a buffer.—ED, *BMJ*.

Deficiencies in parenteral nutrition

SIR,—Your leading article (30 September, p 913) drew attention to the problem of acute folate deficiency in patients who are fed intravenously, but did not mention the pathogenesis of this condition. We have shown that oral methionine loading (8 g daily) is accompanied by a decrease in serum folate concentration and have suggested that this occurs because folate is required for utilisation of the one-carbon units provided by methionine.¹ We believe that folic acid should therefore be given to all who receive intravenous amino-acids, and it is advisable to begin with a loading dose because many such patients are already folate deficient before starting parenteral nutrition.² Until further evidence is available we suggest a loading dose of 10 mg followed by 0.5 mg of folic acid daily.

H CONNOR
D J NEWTON
F E PRESTON
H F WOODS

Departments of Therapeutics and
Haematology,
Hallamshire Hospital,
Sheffield

¹ Connor, H, *et al*, *Postgraduate Medical Journal*, 1978, 64, 318.

² Bradley, J A, *et al*, *British Journal of Surgery*, 1978, 65, 492.

SIR,—We fear that your leader of 30 September (p 913) has not adequately emphasised the hazards of the acute folate deficiency syndrome with thrombocytopenia and leucopenia associated with intravenous nutrition,¹ nor have you stressed the vital importance of giving folate supplements with parenteral nutrition regimens² whether or not they contain ethanol. Our work³ shows that acute folate deficiency is induced by at least the following solutions: Aminoplex 5 (even when specially prepared lacking ethanol), Aminoplex 14, and Vamin with glucose. Many solutions for intravenous nutrition thus cause folate deficiency and we would anticipate a serious risk of consequent thrombocytopenia and leucopenia *within a week or two* of starting intravenous nutrition, at least in many post-operative surgical patients.

This is the commonest form of iatrogenic haematological toxicity except for that due to cytotoxic drugs and deep x-ray therapy; but the haematological and clinical consequences of the syndrome may easily be overlooked and falsely ascribed to the basic diseases of patients in whom parenteral nutrition is indicated. We have been in touch with the Committee on the Review of the Safety of Medicines at intervals since our initial report¹ and we understand that consultation between this committee and the pharmaceutical industry is in progress. But to our knowledge no warnings have yet been issued by the committee or by manufacturers of solutions for intravenous nutrition about the risk of acute folate deficiency causing thrombocytopenia and leucopenia with potentially fatal consequences.

The situation has been highlighted by the transfer to our care this week of yet another patient suffering severe haematological depression unrecognised as having been