becomes impossible when such incorrect information is being disseminated. Indeed, RAWP, despite the economic and social problems which are present and affect every branch of medicine, has not been kind to Merseyside.

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[1] Mersey Regional Health Authority. *Population and patient statistics*, 6th ed. Liverpool: Mersey RHA, 1979.

SIR,—The two approaches to planning neurosurgical inpatient provision described by Dr G P A Winyard and others (7 February, p 498) do, as they state, produce very different recommendations with very different resource implications.

The evidence the authors quote, however, in respect of Mersey Region at least, is not a true record. In 1978 Mersey RHA had 70 neurosurgical beds for adults and children for a catchment population of 3·1 million—that is, 22·6 beds per million, not 46 as stated. I can only assume that beds in the spinal injuries unit, which also serves part of the North-western Region, and preconvalescent beds in Macclesfield District for patients operated on in the North-western Region and outside the catchment area, were added to produce the figure quoted. Was the spinal injury provision at Stoke Mandeville included in the Oxford figures?

In 1978 there were 18·1 discharges and deaths per available bed, not 12·8, with an average length of stay of 15·2 days, not 23·1 as quoted; and this has since been reduced. If the figures for one region are so unreliable those quoted for others must be suspect. The admission rate to the Mersey RHA neurosurgical unit was 470 per million catchment population in 1978—a figure very similar to that quoted for the Oxford Region. However, unlike the latter, the Mersey regional unit's policy is to accept the direct admission of patients with head injuries.

On the basis of the London Health Planning Consortium method, Mersey Region would require 81-93 beds, but with Oxford's methods 54 beds. If, however, the unit in Mersey Region achieved the targets suggested of 12·7 days average length of stay and a turnover interval of two days, then it would be able to admit at a rate of 567 patients per million with its existing number of beds. This is nearer the national figure of 675 quoted and almost identical with the rate suggested for Oxford but with a more "normal" length of stay. If, on the other hand, the national admission rate is a true measure of need, then Mersey RHA, with the suggested length of stay, would require 83 beds to admit that number of patients, which might suggest that the region is underprovided, not overprovided.

It is suggested that because Oxford runs a more efficient service it is being penalised. The RAWP allocation distributes money according to population characteristics and standardised mortality ratios, not on the number of beds available. There is no evidence to prove that the Oxford unit, which discharges four days earlier than the average, thereby produces a more satisfactory service.

Whereas the report is valuable as an illustration of the widely different results that can be obtained by the use of different methods it does not produce any evidence on the real need for beds. It does underline the necessity for further investigation of this problem before plans for future developments are formulated.

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SIR,—There is a statistical error in the comment from Oxford Regional Health Authority on neurosurgical beds (7 February, p 498). The data have been taken from "SH3," where "spinal injury" units are included with "neurosurgery." In Mersey Region, the duration of stay in the neurosurgical unit was 15·2 days, whereas the duration in the spinal injury unit was 74·5 days. Unless data from "true" neurosurgical units are compared, no sensible conclusion can be reached.

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SIR,—Dr G P A Winyard and his colleagues (7 February, p 498) in reporting how two attempts "at rationally answering the same question—'How many neurosurgical beds are needed?'—came up with such different answers" have perhaps missed the point.

London started with the view that it had too many beds while Oxford wondered if it had too few; each centre had a different view of its relative need in this matter. The calculation of the possible savings, were the Oxford figure adopted, is correct but London (presumably) had already decided that the benefits of the extra neurosurgical beds exceeded the benefits of other beds or services. Oxford quite properly applied different values and priorities to that comparison. As a result, need in practice is a relative concept; the benefit of meeting one individual's need for a neurosurgical bed will vary from that of another's (as will the cost).

The authors suggest that, of the approaches on which they report, "neither .... is ideal." By way of explaining such shortcomings they suggest that "Both combine some rational quantitative elements with informed but nevertheless arbitrary value judgments." Certainly we would not want to defend arbitrary value judgments but there is no way health care planning can be conducted without recourse to *some* value judgments. What matters is making these rationally and explicitly, so that others can decide if they *are* informed judgments. Denying the necessity for their existence, as these authors would seem to imply, merely perpetuates the myth that "need" can be absolute.

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**We sent these letters to the authors, who reply below.—ED, *BMJ*.

SIR,—We are sorry that a misleading impression of the neurosurgical service in the Mersey Region was given in our recent paper (7 February, p 498). The reason why this occurred was because in 1978 the spinal injury beds in Mersey were classified at local level as neurosurgical beds in SH3 returns to the DHSS. This was not normal practice as Dr Jones's letter implies: indeed, Mersey was the only region to do this in that year.

Certainly it was not intended to criticise the department of neurosurgery in the Mersey Region, which has a national and international reputation. If any region was criticised it was our own, as we openly admitted that resources were inadequate in that the resultant patient throughout was too rapid.

The inter-regional comparisons were included only to make a general background point, and while we appreciate the irritation felt by the correspondents from Mersey it is clearly unjustifiable to suggest that our paper is invalidated by an isolated statistical error caused by incorrectly supplied data.

It must, however, be of interest that even with the corrected figures there is such a wide variation in the throughput of patients between various neurosurgical units. This was also seen in the London Health Planning Consortium study[1] and in surveys by the European Association of Neurological Surgeons. As we and some of your correspondents point out, a key determinant of such variation will be differences in case mix between units. This includes the issues of the care of head injury patients and the balance between the number of beds for neurosurgery and neurology and other specialties. We are considering the feasibility of a study of this and very much hope that other units might like to co-operate.

The practical reason for studying the work of neurosurgical units is, as most neurosurgeons agree, that the present system of funding regional specialties is unsatisfactory and a system of earmarked direct regional funding might prove more effective. It is necessary to define the scope of the service provided to justify a particular level of funding; and when this is done in terms of numbers and types of patients treated, instead of aggregate discharges and deaths, deficiencies in services become clearer and a more valid case for additional resources can be made.

Finally, we certainly did not mean to imply, as Drs Weir and Mooney suggest, that value judgments are not necessarily part of health care planning. What we did suggest is that because of the inadequacy of present planning methods "arbitrary value judgments" have to be used as a substitute for hard quantitative information. Thus clearly a value judgment will always be needed in determining the level of neurosurgical provision. At present, however, decisions are made on this without, for example, taking account of which types of case are excluded, and with what effects, when neurosurgical admissions are restricted. We too are arguing for more rationality and explicitness.

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[1] London Health Planning Consortium. *Report of the Study Group on Neurology and Neurosurgery*. London: London Health Planning Consortium, 1980.

A matter of life and death

SIR,—In the 100-minute programme on brain death (BBC2 19 February), by failing to agree on the present criteria for determining brain