implicated in transmission.² Both blood and saliva would be likely agents of transmission in schools where skinned knees, hands, etc, sucked pencils and pens, and shared sweets are normal occurrences. That we find no evidence of any infection among 224 Scottish children in two schools with at least nine known carriers is encouraging (not all were tested in this voluntary study). We cannot conclude that hepatitis B is not transmitted in a school environment, as we have no measure of the true infectivity of the carriers (four had anti-HBe, five neither HBe nor anti-HBe). But we can conclude that the presence of a much larger number of carriers than would be present in a school composed entirely of native Scottish children has produced no evidence of any transmission of infection to the Scottish children. This is reassuring.

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¹ Goel, K M, *et al*, *British Medical Journal*, 1977, **1**, 676.

² Bancroft, W H, *et al*, *Journal of Infectious Diseases*, 1977, **135**, 79.

"Fighting Spirit"

SIR,—I was flattered that Minerva (8 April, p 929) should have noticed my book *Fighting Spirit* (not, by the way "The" *Fighting Spirit*) but feel I must answer her question: "Why . . . does he omit any mention of women?" I wrote: "We must not forget the growing number of women in the Services"; and named, as my supreme example of good modern leadership, Her Majesty the Queen Mother, giving good reasons for this choice. When I went so far as to caution that we cannot nowadays assume that God is a man, I was thinking of the ardent feminist who counselled a troubled friend: "Pray to God, my dear, and She will help you."

Soldiering may be a little outside Minerva's proper sphere, but many readers of the *BMJ* know a great deal about it, so I must point out that I claim no personal credit for the "theory that good morale and esprit de corps . . . are the most important attributes of a soldier." Napoleon, Montgomery, and Slim are among those who said this long before I did.

FRANK RICHARDSON

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Nutrition education

SIR,—We agree with Professor A S Truswell (25 March, p 782) that nutrition education for the whole public is difficult. The advice about food in the current phase of the "Look After Yourself" campaign is not intended to be comprehensive. In this opening phase of a long campaign we hoped to put across the ideas that what people eat has some bearing on their health; that everyday fitness could be improved or maintained by choosing some foods which could be regarded as healthier than others; and that people who think about what they eat are not food faddists or cranks, but simply being sensible about looking after themselves. We have not created the nutritional

principles; most of these—for example, reduction of obesity and reduction in the proportion of energy derived from fats and sugar—have come from the report of the Committee on Medical Aspects of Food Policy.¹ We have tried to translate these into mass media messages for the public.

Later in the campaign we intend to give more specific advice and will, of course, be consulting nutritionists on these messages. We are in process of joining with the British Nutrition Foundation in a nutrition education committee. In addition, we are pleased to hear from anybody with constructive advice or ideas.

As regards evaluation, all aspects of the campaign are being evaluated by means of a market survey of a national sample, and an academic study of a population in the Midlands.

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GEORGE CUST
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¹ Committee on Medical Aspects of Food Policy (Nutrition). *Diet and Coronary Heart Disease* (report of Advisory Panel on Diet in Relation to Cardiovascular and Cerebrovascular Disease). London, HMSO, 1974.

Fall in admission rate of old people to psychiatric units

SIR,—Following our paper (21 January, p 156) on possible interpretations of recent changes in admission rates of old people to psychiatric units, we have read with interest the letters in which colleagues have suggested points from their own experience which bear on these changes.

Dr Judith Jenkins (11 March, p 648) took us to task on a variety of counts, and in particular we seemed to her to be drawing conclusions from differences across a time of change in definitions. But if she looks carefully she will see that all our percentage falls in first admissions are calculated not across the fall of 1969-70 (when there was a change in definition) but for the continuing downward trend from 1970 onwards. Moreover, our paper was concerned also with the total admission rate, and the actual numbers of old people admitted with the diagnosis of dementia, rather than merely with the first admission rate. Total admission rates began to drop in 1970 and dementia admissions had their most dramatic drop in that year (our table II), and this makes us feel that in all probability a real change occurred at that time. Dr Jenkins suggests that a possible explanation for the maintenance of total admission rates before 1970 may have been due to "a policy of planning regular readmissions for short periods of time." Even if this were true she would have to explain why this policy should suddenly change in 1970 and continue to do so for the next four years.

Dr Jenkins then goes on to describe a surprising manipulation. She takes two figures, one greater than the other, adds to the lesser the difference between the two, and then finds they come to "largely" the same level; but even so she would still be left with a steady downward trend in first admission rates for both the relevant age groups from 1970 onwards, by contrast with the erratic but generally upward trend of previous years. And she would still have to explain the even more telling fall in "all admission" rates.

There is no mystery about first admission

rates for dementia in the years previous to 1970; Dr Jenkins can, of course, get a fair approximation from our table II, but the exact figures for the two age groups in our figure 2 are not, the DHSS tells us, available before 1970. Since during the time in question numbers of old people were increasing fast, Dr Jenkins conceded that what we suggest "may well be true," but at the same time dismisses our attempt to make sense of what she calls the "inevitably crude national statistics." National statistics may be crude, but they are not to be dismissed. If they had shown a steady upward trend, then Dr Jenkins, or any of us, would not have been surprised. When they show a downward trend we have to take notice and try to think what it can mean, which is what our paper was about. In order to unravel these matters properly, we concluded that "operational studies of referrals and clinical studies of the patients referred" are now needed. It is not entirely clear whether Dr Jenkins is doing more than reaching the same conclusion when she enjoins us, but perhaps a little tentatively, to find out "what is happening to elderly people categorised as demented and their families" by looking at them "in real life." It is precisely because of what we find as working clinicians in "real life" that we warn against the possible conclusion that need for psychiatric beds for the elderly is diminishing and urge more detailed and intensive studies that take into account local needs and facilities.

The figures for 1975 have now been published¹ and they show a sharp upward surge in both all and first admissions, including admissions for dementia in old people. It may well be that we have seen a trough in admissions deriving its origins from the phenomena which we suggested in our paper but now being obliterated by the rapid continuing increase in the very elderly.

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¹ Department of Health and Social Security, *In-Patient Statistics from the Mental Health Enquiry for England 1975*. London, HMSO, 1978.

The abuse of slides

SIR,—Dr F W A Turnbull (29 April, p 1147) hasn't got it right either. Nelson's famous signal can be seen at the Nelson Museum at Lloyds and reads: "England expects that every man this day will do his duty."

JILL WILKINSON

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Duodenal ulcer in Johannesburg

SIR,—The careful analysis by Dr Isidor Segal and his colleagues (25 February, p 469) of patients presenting with duodenal ulcer in Johannesburg provides further evidence linking the development of this disease with urbanisation of the African population. With regard to the apparent increase in incidence, statistics are notoriously unreliable, since many patients with uncomplicated duodenal ulcer may remain undiagnosed in such a population. This is less likely to be the case when perforation occurs. An analysis of perforated duodenal

ulcer has shown that admission for perforation in the years 1973-6 was as common among black as among white patients at the Johannesburg General Hospital.¹ The type of complication occurring was also similar in the two population groups, perforation and haemorrhage being common, in contrast to the greater frequency of stenosis reported in many studies from rural areas in Africa.²

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¹ Cooke, S A R, *British Journal of Surgery*, 1977, **64**, 791.
² Tovey, F I, and Tunstall, M, *Gut*, 1975, **16**, 564.

Choosing an antidepressant

SIR,—The letter from Mr G W Lewis (25 February, p 510) implies that 98% of a dose of viloxazine is eliminated unchanged in urine. This is incorrect. Viloxazine is very well absorbed following oral administration and 98% of the dose is excreted via the kidneys. However, it is extensively metabolised and only about 12% of the eliminated material is unchanged drug.¹ As viloxazine is metabolised to inactive metabolites it does, of course, fulfil the first criterion for the selection of an antidepressant proposed in the letter cited.

D E CASE

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ICI Pharmaceuticals Division,
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¹ Case, D E, and Reeves, P R, *Xenobiotica*, 1975, **5**, 113.

Schumann's hand injury

SIR,—May I add two small postscripts to the fascinating paper on Schumann's hand injury by Drs R A Henson and H Urich (8 April, p 900)? Firstly, their paper has practical importance to pianists in finally dispelling the myth that gruelling finger-stretching exercises, such as those by Joseffy and Dohnanyi, are intrinsically dangerous and may cause permanent injury. Secondly, I wonder whether Schumann's composition technique may have been specifically adapted to minimise the effect of his own physical disability. In many of his technically difficult passages he appears to avoid undue use of his affected right middle finger; most of his Op 7 toccata, for example, can be played without this finger, although it is a formidable exercise for the other three digits and thumb. Is this a manifestation of his posterior interosseous palsy?

HUGH MATHER

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GP obstetrics

SIR,—It was kind of Mrs Jean Fedrick and Professor N R Butler (25 March, p 763) to comment so favourably, albeit paradoxically, on the obstetric results emanating from our general practice (15 October 1977, p 1004) in the midst of an article aiming to substantiate from somewhat dated statistics that care in consultant obstetric units carries less risk of death to the fetus. It is this paradox which points the way to further obstetric improvement. Overall figures such as theirs contain good and bad results from consultant units as

well as general practices. The challenge for the future is for those units and practices producing mediocre figures either to improve or to phase out of the obstetric scene.

They are right to highlight the importance of enthusiasm for obstetrics as being a *sine qua non* for the achievement of good results from general practice. This practice, however, is not alone in having enthusiasm, and we are well aware of many other practices with similar attitudes. Dr M J V Bull in Oxford (25 March, p 788) has reported provisionally on most excellent general practice care from that city. Furthermore, as a teaching practice we are passing on our enthusiasm year in, year out to our trainee general practitioners. Nevertheless, the sad chronicle of Mr B V Lewis and others (25 February, p 484) of the declining general practitioner obstetrics in Watford, apparently culminating now in over 50% of women choosing epidural anaesthesia in a specialist unit as their delivery method of choice, is becoming unfortunately prevalent in Great Britain. I still maintain that the ideal situation and the best results will emerge from areas where enthusiastic general practitioners are encouraged to "normalise" the majority of obstetric care and delivery by enthusiastic and open-minded specialists, who can then concentrate their expertise on a small number of high-risk and problematic patients who truly require it.

It must be borne in mind that the more recent statistics emerging from specialist units indicate that the price many mothers are paying for the tiny improvement in the overall perinatal mortality rate is a labour directed by virtually unknown doctors, in a highly abnormal and artificial setting, with increasing mechanisation, increasing use of drugs and drips (for example, see Dr R J Rowlett's plea (15 April, p 985) for less diazepam for the neonate), considerable interference in the natural father-mother-child bonding (probably of great importance in preventing future family morbidity), and far, far too little orientation towards the behavioural aspects of the intranatal period. A good general practitioner unit "specialising" in normal labour with personal care under the same roof but not necessarily under the same ceiling as a quality, not overworked, specialist unit appears to offer the best of both worlds. Results from this practice substantiate that claim.

G N MARSH

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Diseases of the respiratory system

SIR,—In her article in the Today's Treatment series Dr Margaret E Hodson (15 April, p 971) says: "The most important aspect of medical treatment [of bronchiectasis] is regular postural drainage of the affected segments or lobes. . . . The patient should maintain the appropriate posture for 10-15 minutes night and morning. . . . If possible, a relative or friend should be shown how to percuss the chest to aid expectoration. . . . If a pathogenic bacterium is found then appropriate antibiotics should be given. . . . Patients with large volumes of purulent sputum in whom simpler measures have failed should be admitted to hospital for intensive treatment. They should have intensive (four to six times daily) physiotherapy and [an antibiotic]. . . . Sepsis in the paranasal sinuses and teeth should be eliminated."

As bronchiectasis is a chronic malady the main object of treatment is to give long-term benefit. No doubt there are grounds for believing that regular postural drainage lessens the volume of sputum, but otherwise is there any evidence that any of these measures achieve this goal? In particular, is there evidence that percussing the chest aids expectoration or that intensive physiotherapy four to six times daily is beneficial? Moreover, what is "intensive physiotherapy"?

Throughout my medical career I have read an endless series of articles in which authorities have made ex-cathedra statements about treatment, all unsupported by evidence. Rest was repeatedly said to be of "fundamental importance" for all manner of maladies, diets were laid down in the fussiest detail, and numerous activities were "forbidden." In recent years we have become more critical and it has been accepted that, when dealing with variable and recurrent conditions, controlled trials are needed to evaluate drug and operative treatment (except when these are overwhelmingly and consistently successful, as for tuberculosis). But, as Dr Hodson's article illustrates, we still tend to be uncritical of such general measures as rest and physiotherapy.

May I finally suggest that you, Sir, are more critical of your contributors' articles? They should always be asked to provide evidence to support their recommendations about treatment, and in particular should distinguish between treatment based on evidence and treatment based on theory.

JOHN W TODD

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Lithium toxicity

SIR,—Some time ago Professor S R Hirsch discussed with me the paper he wrote with Dr Jean Speirs on lithium toxicity (1 April, p 815). However, I should be glad if I could add some further comments in the light of new data.

It is difficult to explain the increased requirement for lithium in this case. It may be mundane, but the most likely causes for this are poor compliance or inadvertent intake of lithium on the morning of the test. It is desirable to know how an individual patient is going to handle lithium before starting treatment in order to predict the most appropriate dosage. This can be done either by performing a renal lithium clearance test¹ or by taking a 24-hour blood sample after a lithium loading dose.² In the case described we would then have known whether or not the lithium clearance had changed during the treatment.

The cause of the patient's becoming comatose is difficult to determine. The surprising thing is that he developed coma one week after lithium was stopped. The lithium level at that time was not indicated, but it would be extremely surprising if it was anywhere near the toxic range, as the mean biological half life of this drug is 13 hours.³ It does, however, seem likely that the patient had had lithium levels well above the toxic range for seven months before admission. He was then receiving lithium carbonate in the form of Priadel at a dosage of 2000 or 2400 mg per day. Analysis of bioavailability data by a curve-peeling technique⁴ in volunteers receiving Priadel, with a mean age one year less than the patient described, shows that the mean serum lithium level would rise to a peak of