a score of 7 or more, the homes were providing care for practically the same number of heavily dependent old people as were found in the geriatric wards. It therefore seemed safe to assume that the 25% who scored 5 or more were in need of nursing care, and this was reinforced by the statement that a quarter were incontinent during the previous week. The use of staff assessments as an indicator of need masks the severity of the problem, for an untrained staff may accept responsibility while not recognising mismanagement. For example, the nursing and medical problems are greatest with those who are immobile but they are not seen to be a problem, while wandering patients often are.^{1,2} The trend in Leicestershire to appoint trained nursing staff is welcome, but Andrews³ drew attention to the fact that it is the apparent intention of the DHSS to reduce the amount of nursing in the homes.—ED, BMJ.

¹ Millard PH, Bailey R. *Br Med J* 1981;282:1237-8.

² Snyder LH, Rupprecht P, Pyrek J, Brekhus S, Moss T. *Gerontologist* 1978;18:272-80.

³ Andrews J. *Br Med J* 1980;280:792.

Prescribing for the elderly

SIR,—Since appropriate use of carefully chosen drug combinations improves compliance,¹ the need for simplified regimens for essential drugs as urged by Dr M R Bliss in his article "Prescribing for the elderly" (18 July, p 203) would be certainly agreed by all physicians working with the elderly. But many would strongly disagree with sweeping statements he makes—for example, diazepam should not be prescribed for the elderly at all and antihypertensive drugs are scarcely ever necessary, if at all, for the elderly. I can easily recall cases where diazepam has been safe and immensely helpful, irrespective of its long half life, in calming anxious and difficult elderly patients for their successful rehabilitation. Similarly, patients suffering symptoms from grossly elevated blood pressure do require definite antihypertensive therapy, and I do not know of any geriatrician who could pledge himself to dismiss the use of antihypertensive drugs simply because the patient was elderly (over 65 years).

There is no convincing evidence that elderly people with good brain function are less likely than younger people to comply with a given regimen.² Despite the best packaging, labelling, and instructions by doctors for those elderly people who have failing eyesight or memory, the only sure answer remains the supervision of their drug intake by a relative, neighbour, district nurse, or the matron in the old peoples' home.

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¹ Anonymous. *Drug Ther Bull* 1980;18:37.

² O'Hanrahan M, O'Malley K. *Br Med J* 1981;283:299.

SIR,—I found Dr M R Bliss's article (18 July, p 203) both interesting and helpful and would like through your columns to thank him for it. I should also like to sympathise with him in his experience of general practice and to inform him that there are other ways of conducting general practice, although this may not be immediately apparent from his collection of statistics from various sources.

The method that I use is not particularly original but may serve to remind him of a

different type of general practice. Very simply, the basis is that prescribing is the result of consultation, which is best carried out by meeting the patient and not by telephone or by letter. Once this basis is established many of Dr Bliss's criticisms are quite inapplicable and the receptionists are not encumbered with the difficulty of writing prescriptions between making appointments and the hundred and one other jobs they undertake. Nor does the doctor sign sheafs of prescriptions without having checked them, which Dr Bliss seems to think is quite usual in Kent. Another benefit is that it is most unlikely that the doctor will be writing prescriptions for unnecessary vitamins and sleeping pills, as apparently happens in hospital. Of course, patients who are unable to visit the surgery have to be visited at home; but this need not be an ordeal for either the patient or the doctor.

Dr Bliss, I think, not only has been unfortunate in the practices with which he is acquainted but is even more unfortunate in the practitioners whom he has met. On the one hand, my patients do not order drugs any more than consultants direct me to prescribe drugs. I am always most appreciative of consultant opinion and very rarely disagree, but I do consider that it is the general practitioner's responsibility to be the final arbiter in the treatment of his patients when they are at home. It may be that general practitioners who are brusque with their patients and who find their task of prescribing unpleasant in actual fact do accept orders from their patients and directives from consultants.

Lastly, I would plead with Dr Bliss not to introduce yet another sheaf of paper for the poor patients to carry about from hospital to doctor and doctor to hospital. I am sure that if any general practitioner wishes to inform a consultant of an alteration in the patient's therapeutic regimen he would do so with a courteous letter rather than by giving the patient a prescription booklet. Similarly, I am sure that if the consultant was going to recommend some other treatment for the patient he would rather do so through a letter containing an explanation than through the patient with his booklet duly completed.

I think that one of the benefits of prescribing as a result of consultation is that the patient gains the impression that drugs are prescribed after due thought and careful consideration and are not to be treated lightly. As well as developing respect for the drugs the patient also develops a respect for a doctor who has the courtesy at least to see him before prescribing.

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SIR,—I really must protest at the way Dr M R Bliss accuses all doctors of lack of care in prescribing for the elderly (18 July, p 203).

In our practice of 12 doctors we have three who are clinical assistants in geriatrics and we have a specific prescriptions department. This department is open from 8.30 am to 6 pm, Monday to Friday. We employ women who fill the equivalent of three full-time posts and one half-time, one of the women being a qualified dispenser and another partly trained. They deal with approximately 300 prescriptions a day. Each patient who has repeat prescriptions has a repeat card which is authorised by the doctors, and is checked at regular intervals. Patients are given one month's supply of tablets at a time, and the date of the last supply is always checked by a query to the doctor if it is too soon.

No repeat requests are taken by telephone except personally by the doctor. Cards may be delivered to the prescription department or sent by post, and no repeat is issued by the prescription writers without a card. Patients are asked to allow 48 hours for a repeat to be completed. Each patient's repeat items are entered on index cards kept in the prescription department and the appropriate one is got out each time the patient requests a scrip. If a patient does not have a card it is probably because he or she has just started to have a repeat; and then the FPC5 or FPC6 is got out. Every repeat is entered either on notes or on the index card, and prescriptions are written in full with all instructions and quantities written clearly. They are then distributed to the doctors and are signed individually by the doctors at the end of morning or evening surgeries.

We find that patients do not often go to the hospital pharmacy but bring their scrips straight to us, and we then give them one month's supply if that is appropriate. We give only those hospital prescriptions which we consider necessary and certainly leave off things like vitamins and sleeping tablets.

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New evidence linking salt and hypertension

SIR,—Your recent leading article (20 June, p 1193) and subsequent correspondence (4 July, p 57) underlines the fact that there is probably now enough evidence to advise as a health measure a reduction of salt in the British diet. The DHSS booklet in the "Prevention and Health" series entitled *Eating for Health* stated in 1978, "... there is some confirmation from human studies that to eat little salt may be beneficial in preventing an increase in blood pressure." The trouble is that it is impossible to know what one's salt intake is unless one eats wholly natural, unprocessed food; and not everyone can do this.

A study of the food labels of prepared foods on supermarket shelves reveals that practically every prepared food contains added salt, from canned vegetables, packet soups and sandwich spreads right down to cake mix, margarine, breakfast cereals, peanut butter, etc, etc. Other foods contain the sodium ion in other forms, such as sodium glutamate, sodium citrate, and saccharine sodium. The labels, however, do not state, nor are they required by law to state, the amounts of the various ingredients. Obviously some of these ingredients are more important to know about than others; but information on calories, salt, and saturated fat would certainly be helpful.

Until such times as food labelling in this country is required to be quantitatively specific, it will be impossible for anyone to know their level of salt intake. It is not enough to advise one's patient to cut down or cut out "added" salt as much of his salt is added for him willy nilly.

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Preventing food poisoning by bacterial toxins

SIR,—We wish to comment on the answer of your expert to the question about the heat-stability of bacterial toxins and whether it is

always safe to eat food that has been recently well cooked, whatever its previous history (27 June, p 2111). *Bacillus cereus* is commonly found in many foods and its emetic toxin, which is produced during growth of the organism in food, is stable at 126°C for at least 90 minutes.¹ *B. cereus* food poisoning is not uncommon in England and Wales and the usual vehicle, fried rice from Chinese restaurants and "take-aways," could be described as "recently well cooked," although its "previous history" would indicate that it had been stored for some considerable time at ambient temperatures after boiling. There is ample evidence^{2,3} too that staphylococcal enterotoxins are very heat resistant, and 30-40 minutes at 121°C may be required for their inactivation. The last sentence of the answer, which states that "for practical purposes food recently well cooked may be eaten with assurance of safety," is particularly misleading; and we take issue with it because the emphasis on complacency could be dangerous, especially with caterers. It implies that thorough cooking will destroy all toxins in food, whereas we know that scrobrotin,⁴ which is produced by the action of bacteria on certain fish, and chemical contaminants are toxins about which the conscientious cook can do nothing.

Caterers and cooks should not be tempted to rely on reheating poorly stored food to prevent food poisoning—it is always bad hygiene to store moist foods at temperatures other than below 4°C or above 65°C.

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¹ Melling J, Capel BJ. *FEMS Microbiology Letters* 1978;4:133-5.

² Bergdoll MS. In: Riemann H, Bryan FL, eds. *Foodborne infections and intoxications*. 2nd ed. London: Academic Press, 1979:433-94.

³ Genigeorgis C, Riemann H. In: Riemann H, Bryan FL, eds. *Foodborne infections and intoxications*. 2nd ed. London: Academic Press, 1979:613-714.

⁴ Gilbert RJ, Hobbs G, Murray CK, Cruickshank JG, Young SEJ. *Br Med J* 1980;280:71-72.

Occupational health should not accept tobacco industry sponsorship

SIR,—In Dr J L C Dall's view (25 July, p 308) ill health is likely to arise from the "abuse" of the products of the tobacco industry, for which he works. Perhaps he would be good enough to let us know the proper use of the much-maligned weed as marketed and advertised.

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SIR,—Dr John L C Dall (25 July, p 308) has surely missed the point when he says that if a branch of the Health Service is to refuse sponsorship from tobacco firms it should act likewise regarding sponsorship from the motor, confectionery, and beer industries. He made his claim on the grounds that *abuse* of their products may equally result in disease and death.

However, in the case of cigarettes it is their *use* which carries such penalties. It is quite possible to drink and to eat sweets in moderation, and to drive a vehicle carefully (not all at the same time) without endangering health

or life. The same claim cannot be made of tobacco. As a general principle we in the medical profession should oppose activities which necessarily carry a risk of disease, but not those which do so only when carried out without due precaution or to excess.

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Puff volume increases when low-nicotine cigarettes are smoked

SIR,—The paper by Dr Ronald I Herning and others (18 July, p 187) addresses several different, although related, questions. Does the pattern of smoking vary between cigarettes of differing design and smoke yield and, if so, what are the important factors which the smoker is able to modify and what is the underlying determinant of the change in smoking behaviour?

On the basis of results from a large number of short-term cigarette-switching studies and more recently from two large-scale studies of habitual smokers of cigarettes within differing tar categories,^{1,2} it is now widely accepted that individuals smoking "low-tar" cigarettes smoke these products more intensively than do "middle-tar" smokers smoking middle-tar products. Relatively few studies have investigated this phenomenon but those which have³ draw attention to the possible importance of puff volume. We have recently examined this question in 50 middle-tar and 50 low-tar smokers and found no significant differences in any measured puffing parameters. Each subject was studied on two occasions and the mean (SD) puff volume (excluding the lighting puff) was for middle-tar smokers 37.6 ml (8.2) and for low-tar smokers 39.6 ml (8.0). We have further examined the changes in puff volume from first to last puff; and, although there is a trend towards decreasing puff volume down the cigarette, this is only on average 10 ml and there are no significant differences between the middle-tar and low-tar groups. Despite these findings measurement of nicotine and carbon monoxide indicated that the low-tar products were smoked more intensively. In our view the mechanism for this is still unresolved.

The most fundamental question posed by Dr Herning and his colleagues, however, is "Do people smoke for nicotine?" While their study might appear to give weight to this hypothesis it is open to major criticism. We cannot believe that products over such a wide range of nicotine values (0.4-2.5 mg) were indistinguishable in taste characteristics. For this crucial statement to be made the results of a formal sensory evaluation should be presented.

The results would appear to be based on one measurement per subject per cigarette. Furthermore this was the first cigarette of the day, there was no apparent acclimatisation to the cigarette holder, and the cigarettes were found by subjects to be unacceptable; all of these would affect the pattern of smoking. The method used for measurement of puff volume is considered inaccurate. While we may accept that a fourth-power equation will permit conversion of pressure to flow, it does not seem rigorous enough to apply this equation on the basis of only five measurements; this is equivalent to defining a straight-line calibration on two measurement points.

It is misleading to quote puff volume accuracy by giving a standard error; we calculate the 5% probability level on a puff to be ± 11.6 ml ($2 \times \text{SD}$). It is incorrect then to state that "a decrease in cigarette length . . . did not significantly alter calculated puff volumes." We estimate that the difference in accuracy (SD) for the first puff (+1.7 (4.38)) and the last puff (-2.5 (5.48)) is significant at the 1% level ($t=3.3$). It is also surprising that the "residual" variance for puff volume, estimated from table II as 33.9, which will include

a variance for measurement error, can be almost identical to the measurement variance, estimated as 33.8. The conclusion is that intersubject variability is negligible, and this must be considered unlikely.

Finally, one might comment on the results themselves. A major determinant of nicotine presented to the smoker is the total puff volume and one can therefore calculate the nicotine intake of subjects, by simple ratio, knowing the total machine puff volume and nicotine yield. For the high-, middle-, and low-nicotine groups this would be 4.47, 1.99, and 0.9 mg respectively. Correcting for differences in nicotine yield under standard conditions then gives a comparative index of smoking intensity of 1.79, 1.66, and 2.25 for the three groups. This indicates that all products have been smoked more intensively than on machine smoking and that the low-nicotine product has been smoked more intensively than either of the other products by some 50%. More important is the observation that the intake of nicotine on the low-nicotine product is less than half of that on the middle-nicotine cigarette.

The authors' conclusion that "encouraging the smoking of low-nicotine cigarettes may increase exposure to combustion products and not appreciably decrease exposure to nicotine" is not only false but also misleading. The extrapolation to other combustion products from nicotine is also misleading, as discussed elsewhere.⁴ This paper does not, in our opinion, add any weight to the hypothesis that nicotine is the major determinant of smoking behaviour.

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¹ Russell MAH, Jarvis M, Iyer R, Feyerabend C. *Br Med J* 1980;280:972-8.

² Wald NJ, Idle M, Boreham J, Bailey A. *Thorax* 1980;35:925-8.

³ Rawbone RG, Murphy K, Tate ME, Kane SJ. In: Thornton RE, ed. *Smoking behaviour—physiological and psychological influences*. London: Churchill Livingstone, 1978:171-94.

⁴ Rawbone RG. *Br Med J* 1980;281:309.

Smoking in hospitals

SIR,—We have passed through the International Year of the Child and are in the International Year of the Disabled. I have a child who has for some time been slightly (though temporarily) disabled. She has been in hospital for two brief stays within the last few months, where she has had no choice but to inhale cigarette smoke. I write to support Mr Howard O Williams's suggestion that Circular HC(77)3 should be revised.

My 13-year-old daughter was in two different hospitals and in each the lounge area to which she was sent to eat and to sit when not in bed was the designated area in which smoking was allowed. In the second hospital she was in the ear, nose, and throat ward. Again the smoking area was the only place where she could watch television; no separate sitting-room facilities were available for non-smokers at either hospital and in one of them, although notices proclaimed that one was entering a no-smoking zone, the smoke emanating from the nurses' room pervaded that part of the ward nearest to it.

Yes, please amend the circular so that non-smokers may enjoy clean air in hospitals when they are not confined to bed; and if space makes this difficult, let the rights of the non-smokers prevail for common sense's sake.

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