an acute admitting hospital is seldom far away. But in the coming years of financial stringency the population must choose between this luxury of convenience and rather opt for a streamlined, rationalized, and efficient service. For example, for every 5 acute hospitals at present open 24 hours a day, in the future one hospital only in that district should be adequately staffed and equipped to deal with all emergencies. At present there is great variation in work load between hospitals of comparable staffing and beds. Such a scheme would give junior staff no less experience but a more concentrated training and indeed would assist in reducing the present very long periods of post-graduate medical training which have long distinguished Britain from comparable nations. If you are on duty in the hospital, at whatever grade, you might as well be busy!

I am not advocating wholesale reduction in the hours worked by junior hospital staff, though some cuts could be achieved, but rather suggesting that nothing but good would stem from bringing planning and order to what in some areas resembles nothing less than chaos. Within the next 5 years it is probable that less rather than more doctors will be available to staff our hospitals, with an increase in the proportion of women trained who then either take part-time appointments or leave medicine for a large part of their life and with the prospect of significant reductions in the numbers of foreign medical graduates entering the country. Consideration of these further reasons for likely diminishing skilled medical manpower adds substantial weight to a plea for enhanced efficiency.

Surely it should be possible for medical staff through their local medical executive committees and district management teams to put such proposals as outlined above to the relevant higher area and/or regional health authorities and refuse to take "no" for an answer. While I am not so naive as to ignore all the vested interests and petty little empires that over the years have grown up within the N.H.S., surely the time has come for those whose eyes are open to let a "wind of change" blast all the muddled and ineffective thinking from all those areas where they can influence affairs. After all, it only needs common sense and resolution—alas, rare qualities indeed, especially in combination, in 1975.—I am, etc.,

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Randomization

SIR,—In the controlled clinical trial reported by Mr. I. L. Rosenberg and others (22 March, p. 649) randomization to the three treatment groups was by month of birth, those born in the first four months of the year being allocated to one treatment, etc. The resulting group sizes were 73, 79, and 121 respectively, with 22 withdrawals. Prior to withdrawal the group sizes were 88, 85, and 122 respectively (Pollock A.V., personal communication) and this poor distribution of group sizes deviates significantly from expectation ($P=0.015$, χ^2 test).

Assuming that one aim of this method of randomization was the reasonable one of achieving roughly equal group sizes (though

this is not necessarily the statistical optimum) it has clearly not proved satisfactory in this respect. One is therefore also led to question whether this method can be trusted to ensure that on average the treatment groups are similar with respect to patient characteristics correlated with the trial end-points, a necessary condition for unbiased comparison. In view of the ready availability of eminently satisfactory randomizing techniques using random numbers,¹ which can be constrained to give equal group sizes if required, it is unnecessary to rely on other techniques of possible dubiety such as ones based on dates of birth.

The unbalanced distribution of group sizes is in itself interesting. After allowing for differing lengths of the months and seasonality of birth rate the significance of the observed deviations increases, so the explanation does not lie here. An explanation in terms of admission procedure or simple bad luck must initially be preferred to the possibility of a real correlation between morbidity and month of birth. I am currently collecting examples of such correlations and should be interested to hear from anyone with relevant data in narrowly defined disease areas rather than in a heterogeneous situation.—I am, etc.,

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¹ Armitage, P., *Statistical Methods in Medical Research*, Oxford, Blackwell, 1971.

Safer Cigarettes

SIR,—In their somewhat heavy condemnation of your leading article (17 May, p. 354), Professor C. M. Fletcher and Dr. K. P. Ball (14 June, p. 613) seem to reflect a sadly one-sided view. They "strongly deplore" the term "safer cigarettes" and favour referring to them as "less lethal cigarettes." Whether we call them less lethal, less harmful, less hazardous, or safer, the fact that such cigarettes already exist and are gradually being improved would seem to merit encouragement and welcome rather than scepticism and disparagement.

Our common aim surely is to reduce smoking-related disease. Traditional methods of health education, antismoking propaganda, and treatment at antismoking clinics have had a long run without conspicuous success. There have been cries for more money and more restrictions, but such intensification is unlikely to meet with much success so long as those involved remain fixated on the goal of abolishing all smoking. In my view far more could be achieved by focusing more of this effort on the more realistic goal of safer smoking.¹ The switch to filter-tipped cigarettes (a form of safer smoking) has done more to reduce smoking-related disease than have two decades of health education and antismoking propaganda.

The more recently developed ventilated filters enable tar, nicotine, and carbon monoxide (CO) yields to be reduced to very low levels. This makes it possible for cigarettes to become even less hazardous. But there is a rub. Most smokers smoke to obtain nicotine and modify their smoking pattern to regulate their nicotine intake. If the nicotine concentration of the mainstream smoke is

reduced the smoker compensates by taking more smoke into his lungs; and if the nicotine yield is lowered so much (<0.3 mg) that an adequate nicotine intake is impossible despite this compensatory increase in smoking the cigarette will simply lose acceptability.^{2,3} Such evidence suggests that the safer cigarette will be the one with a very low tar yield and a very low CO yield but a medium (about 1.0 mg) rather than very low nicotine yield. It is the ratio of the nicotine to tar and CO that matters.

I do not claim that such cigarettes would be completely safe, for nicotine is unlikely to prove completely safe. But they would substantially reduce the risk of lung cancer, which is caused by the tar, and if Professor Fletcher and Dr. Ball are correct about CO rather than nicotine being the cause of smoking-related cardiovascular disease such cigarettes would reduce the risk of this as well. If people cannot stop smoking and smoke mainly to obtain nicotine there is no reason why cigarettes should not be made which allow them to have their nicotine without having it contaminated by excessive amounts of tar and CO.

Finally, Professor Fletcher and Dr. Ball's letter contains an error. They claim that 160,000 people in Britain stopped smoking after two Thames Television programmes in April and that this represents 2% of the smoking population. This would mean that the smoking population was only 8m. But in the United Kingdom in 1973 there were 19.2m. cigarette smokers.⁴—I am, etc.,

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¹ Russell, M. A. H., *Lancet*, 1971, 1, 254.

² Russell, M. A. H., et al., *British Medical Journal*, 1973, 4, 512.

³ Russell, M. A. H., et al., *British Medical Journal*, 1975, 2, 414.

⁴ Tobacco Research Council. *Statistics of Smoking in the United Kingdom, 1973 Supplement*. London, T.R.C., 1974.

Diagnosis in the Elderly

SIR,—It is surprising that Dr. J. R. Hampton and his colleagues in their thought-provoking paper (31 May, p. 486) on the value of history, examination, and investigation in reaching a diagnosis made no statement on the ages of the patients seen.

It seems likely that old people did not form a large part of their sample. Nevertheless, old people will continue to be seen in general medical clinics elsewhere in large numbers. Clinical experience suggests that the observations made by Dr. Hampton and his colleagues are not applicable to old people. The frequency with which specific illnesses present in non-specific ways in old people is well recognized by those dealing with them. Concentration on the patient's own history without equal attention to the history from other sources, examination, and simple investigation may result in the failure to diagnose such conditions as pulmonary tuberculosis, thyroid disorders, and vitamin B₁₂ and iron deficiency anaemias, to mention just a few of the most easily treatable.

It is already known that the incidence of diseases, their presentations, and the appropriate forms of treatment in old people differ from these aspects in the under-65s. If it