the second offer of the combined vaccine. In Sweden there are very few true vaccination refusers.

(2) As concerns the seroconversion rate after a second vaccination Dr Thornton's "guesstimate" of 50% is probably taken from American investigations of revaccination against measles in a small number of children vaccinated for the first time before the age of 10 months.[2] In Albania, however, a whole age group—born in 1970 and vaccinated at the age of 4-12 months during the first measles vaccination campaign in that country—were revaccinated at the age of 7 years, when it was found that about one third of them lacked detectable antibodies.[3] After the revaccination serological immunity was found in 97% of the age group.

The simultaneous start of mass vaccination against measles, mumps, and rubella at two ages—one during early childhood and the other during early adolescence—will prevent the development of an epidemiological situation like that in the United States, with an increasing number of measles outbreaks among adolescents and young adults.[4] We believe that such outbreaks can be prevented only by a two dose vaccination programme. Since such outbreaks are costly to control, the Scandinavian model will be cost effective in the long run.

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Design and interpretation of clinical trials

SIR,—Dr Stuart J Pocock (5 January, p 39) has rendered a service to clinical research by pointing out problems of randomisation, overemphasis on significance testing (with particular reference to statistical analyses and "data dredging"), and the inadequate size of many trials. He suggested but did not state explicitly a rule which we have found useful in assessing the credibility of a significance level of $<0{\cdot}05$. This is that if moving one event from arm A to arm B (or moving one event in either arm to a no-event, or vice versa) reduces the χ^2 level below 3·84 then it is wise to accept the rejection of the null hypothesis with reserve.

We have been guilty of reporting such a trial.[1] In that paper there were 18 events (8·9%) and 184 no-events in the cephaloridine group, and 32 events (15·4%) and 176 no-events in the ampicillin group, $\chi^2=4{\cdot}01$, $p<0{\cdot}05$. If one event in the ampicillin group were moved to a no-event or one no-event in the cephaloridine group were moved to an event, χ^2 would become 3·50 or 3·36, $p>0{\cdot}05$. Clearly the publication of 95% confidence limits of the difference in proportions would have helped to emphasise the invalidity of conclusions based on too great a reliance on significance testing. In this example the difference in favour of cephaloridine was 6·5%, but the 95% confidence limits were +0·2% to +12·8%, which puts the significance of the difference into perspective.

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Nodular malignant melanoma in a patient treated by photochemotherapy

SIR,—We read with great interest the report by Dr Daniel Kennett and colleagues (1 December, p 1498) concerning malignant melanoma and squamous cell carcinomas in a patient receiving PUVA therapy. They finish with a call for multicentre cooperation to determine the incidence of melanoma in patients with psoriasis treated in this way. We wholeheartedly agree with this view.

We think that a central registry should be established at a dermatology unit in the United Kingdom, to which all cases of cancer in PUVA treated patients should be reported. This could collate the incidence of such problems from the United Kingdom national pool and assess the extent of the problem properly.

We would be interested to know the views of our colleagues.

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Hypoglycaemia during illness in children with congenital adrenal hyperplasia

SIR,—Drs F R J Hinde and D I Johnston (8 December, p 1603) describe four children with congenital adrenal hyperplasia who suffered profound hypoglycaemia (in three cases causing neurological damage) during intercurrent illness despite doubling of the maintenance steroid dose. In Bristol our management of febrile or vomiting illness in such patients differs in two important ways from that advised by the authors.

We advise parents to double the morning dose of hydrocortisone and to give it three times during the day, in effect trebling or quadrupling the normal daily dose. We also give each family hydrocortisone phosphate ampoules and teach them how to give a 100 mg dose by intramuscular injection. They are told to use it without hesitation during illness if the child becomes abnormally pale, quiet, or ill, before even contacting the GP or paediatrician and certainly before bringing the child to hospital. We emphasise that swift deterioration can occur during illness, particularly if it is associated with diarrhoea and vomiting, and that under such circumstances intramuscular hydrocortisone can be lifesaving. Understandably, parents are anxious about giving injections to their own children and so the advice must be emphasised repeatedly at outpatient visits. We have found that parents are prepared to follow these instructions and we have not seen profound hypoglycaemia nor has any child suffered neurological damage in the 10 years in which this regimen has been used.

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Weight gain after cholecystectomy

SIR,—Mr P W J Houghton and colleagues reported weight gain in patients after elective cholecystectomy (17 November, p 1350). Unfortunately no comparison was made with the patients' weight at referral. A significant number of patients with benign biliary disease are overweight—31% just before operation in the series of Mr Houghton and colleagues. Our experience in running an obesity clinic shows that all overweight patients are advised by the referring doctor or the surgical team to lose weight during the usually long period between referral and elective operation. In some cases the surgeon will not contemplate surgery until a satisfactory weight reduction has been achieved. These patients are highly motivated to lose weight, and they often succeed. Thus a large number may have lost weight satisfactorily for the elective operation, and their weight gain after the operation reflects the common observation that overweight patients fail to maintain weight loss after their objective for losing weight has been achieved. We are not told what measures were taken by Mr Houghton and others to persuade their obese patients to maintain a low energy intake after the operation and what, if any, were their reasons for failure. The lesson of this study should be as cogent to doctors as it is to patients—namely, that the operation relieves but one complication of the disease, which requires long term management.

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Voice changes after thyroidectomy: role of the external laryngeal nerve

SIR,—The excellent paper by Mr A E Kark and his colleagues (24 November, p 1412) draws attention to the importance of avoiding damage to the external laryngeal nerve during the course of thyroidectomy. Strangely, the importance of this nerve has to date been largely ignored in British published reports. Fifteen years ago, when at the Charing Cross Hospital, Mr Peter Greening insisted that this nerve could be protected by an initial careful dissection of the superior pole of the thyroid gland and attempted visualisation of the nerve followed by ligation and division of the anterior branches of the superior thyroid vessels on the gland itself. The whole of the superior pole of the thyroid could then be freed and drawn forward. The posterior branches of these vessels are then exposed and can again be ligated and divided on the gland. This avoids the crude mass ligation of the superior thyroid vessels, which, as shown, may injure this important nerve. It also avoids leaving a remnant of thyroid tissue attached to these vessels that may subsequently hypertrophy and produce an un-

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sightly nodule in the side of the neck alongside the superior border of the thyroid cartilage.

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Blood lead concentration and blood pressure

SIR,—We read with great interest the paper by Dr S J Pocock and others (6 October, p 872), dealing with the relation between blood lead concentration and blood pressure, a controversial subject.[1 2] A relation was not found by Dr Pocock and others. However, data displayed in their fig 1, showing the variations of systolic blood pressure in relation to blood lead concentrations, seem to indicate that an increase in the blood lead value might result in an increase in systolic blood pressure up to a limiting value, while higher lead concentrations do not relate to blood pressure. Results from one of our recent studies support this hypothesis.

Our population study consisted of 431 men attached to a section of the Paris civil service, aged 24-55 years (mean 41·4 years), living in the same urban area, and not occupationally exposed to lead. We measured blood lead values by flameless atomic absorption spectrometry (graphite furnace atomiser), blood pressure after resting (with a mercury apparatus), weight, and height. Daily alcohol and tobacco consumption was assessed by questionnaires. The logarithms of blood lead values were used in calculating the correlation coefficients. As in the work of Dr Pocock and others, the systolic blood pressures were adjusted for body mass index, age, and alcohol consumption using analysis of covariance. The results are summarised in the table, where blood lead was

Systolic blood pressure means in relation to blood lead concentrations

Blood lead (μmol/l)	Systolic blood pressure: Mean (and 2 SE) (mm Hg)	Systolic blood pressure: Adjusted mean	No of subjects
<0·60	127 (3·6)	129	46
0·61-0·89	130 (1·8)	130	212
0·90-1·19	133 (2·4)	132	126
1·20-1·49	139 (4·8)	138	34
1·50-1·79	143 (13·6)	142	7
⩾1·80	130 (5·4)	129	6

grouped into the same classes as those used by Dr Pocock and others. The blood pressure means, not adjusted and adjusted, are shown by blood lead group: overall they differ significantly ($p < 0·001$). They increase from the first blood lead class (<0·60 μmol/l) to the fourth (1·20-1·49 μmol/l); the last two means, corresponding to 1·50 μmol/l and over, do not yield much information because of the small numbers of subjects. The overall correlation coefficient between systolic blood pressure and blood lead concentration is 0·23 ($p < 0·001$). Its values in the age classes 24-34 years (145 subjects), 35-44 years (143 subjects), and 45-55 years (142 subjects) are 0·29 ($p < 0·001$), 0·20 ($p < 0·05$), and 0·14 (not significant), respectively. Adjusting for alcohol consumption and body mass index does not modify these results.

Our results in fact agree with those of Dr Pocock and his colleagues provided the following observations are made. The mean systolic blood pressure in their study is much higher than in ours, which might at least partly be explained by the different age ranges in the two studies (40-59 years in theirs, 24-55 in ours). In their study no overall correlation was found between blood lead values and systolic blood pressure, although a slight increase is to be noted as blood lead varies from 0·6 μmol/l to 1·1 μmol/l. In our study blood lead values are significantly related to blood pressure; this correlation, highly significant in young subjects (24-34 years), decreases with age (not significant in 45-55 year olds). Thus, we may hypothesise that the increase in blood lead concentration parallels the increase in blood pressure until some limit value, so that such a trend is apparent only when other factors (such as age) do not competitively increase blood pressure by greater amounts. This would be apparent in our study but not in that of Dr Pocock and colleagues. Further studies would be needed to confirm or elucidate this point.

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On the state of the public ill health

SIR,—Professor John C Catford and Dr Sherm Ford (15 December, p 1668) draw attention to the need to look behind the comfortable statements of wellbeing in the people's health. Arguments about percentages of gross national product, the impact of demographic changes on required levels of expenditure, the need to seek value for money, the improved efficiencies of the service, and plans to spend more on patient care seem recently to have obscured the facts now presented in their article. "He is not better, he is much the same."

The authors rightly ask why the public and politicians have not raised their voices but suggest no answer. To some extent this may be because the facts are not widely known. Campaigns for improvement need facts even if underlying causes may be obscure. Professor Catford and Dr Ford belong to a specialty which has historically taken a leading role in bringing unpalatable facts of life and death to public notice, but recently it has used muted tones.

The editorial in the latest issue of the *Journal of Epidemiology and Community Health* has specifically drawn attention to the diminishing number of contributions in its pages from leaders of the specialty presenting a critical analysis of health and health services today.[1] It suggests that a reason for this may be a reluctance to cause embarrassment to political and administrative paymasters.

The present introduction of the general management function into the National Health Service seems likely to change the orientation of some community physicians, and the chairman of the Central Committee for Community Medicine and Community Health has suggested that this may result in their spending less time on management and more on the exercise of their other skills.[2] This would be a welcome change. Much of the influence of community physicians in the past has derived from their ability to bring to a local public the messages of health backed by their professional standing and uninfluenced by managerial responsibilities.

Community medicine is concerned with all matters which affect health, and its practitioners must be enabled to study these and present their findings to the public and profession alike. This is unlikely to occur when community physicians are enmeshed in chains of accountability leading to a general manager. An uncertain distinction between professional and managerial responsibilities may be insufficient protection for what might be critical views.

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Doctors, drugs, and the DHSS

SIR,—The government has indicated that the range of NHS prescribable drugs will be restricted. Among 100 consecutive adult patients admitted for elective procedures to Southampton Eye Hospital in 1983, 14 admitted regularly taking medicines bought in chemists. Their mean age was 71·9 years, and the commonest drugs were vitamins (9 patients), followed by analgesics (6), laxatives (2), and antacids (2). Some elderly patients eligible for exemption from prescription charges are already buying simple remedies despite similar products being available on prescription. Imminent political decisions require larger scale similar research to be undertaken urgently.

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SIR,—Sorbitol has been known to be an effective laxative agent for at least 40 years at daily doses of 30-50 g.[1] It is found naturally in fruits and other foodstuffs and is used in many "sugar free" sweets and chewing gum.[2] Its use as a food additive has been reviewed by the World Health Organisation and their estimated acceptable daily intake for man is "not limited."[3] It is thus remarkable that our own Committee on Safety of Medicines has not licensed sorbitol for use as a laxative. In comparison with other osmotic laxatives sorbitol is cheap (about a quarter of the cost of lactulose in the UK). Its use as a laxative could lead to impressive savings for the NHS. Although one is unable to buy sorbitol (for its laxative effect) from pharmacies, many sweets containing sorbitol are openly advertised for their laxative effect. Perhaps instead of banning NHS prescription of most existing licensed laxatives the DHSS should consider introducing cheaper and effective drugs such as sorbitol to replace similar but more expensive drugs.

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1 Ellis FW, Krantz JC. Sugar alcohols. XXII. Metabolism and toxicity studies with mannitol and sorbitol in man and animals. *J Biol Chem* 1941;**141**: 147-54.

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