ations that should feature in the reckoning of a profession that regards itself as having a scientific basis. Perhaps we should remember that always and never are words that we contemplate at our peril in medical debate, even if explanation eludes us.

Incidentally, with reference to Loudon's article, the only person who offered a guess as to how long I might have difficulties was a retired general practitioner with a lifetime of community experience behind him.

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1 Loudon M. Great expectations. *BMJ* 1994;**309**:676. (10 September.)

Controlled trials of dental amalgam are needed

EDITOR,—The response of almost every writer from the dental profession to the suggestion that dental amalgam is hazardous to health is that adopted by Ivar A Mjör: to sit back and challenge the opponents of amalgam to produce proof of harm.[1] Not only is this notoriously difficult to do, as in all cases of chronic low level toxicity, but it is fundamentally the wrong approach. The initial question is not a scientific one at all but a question of the burden of proof.

With any procedure that may be hazardous the onus of proof must shift. It is up to the advocates of that procedure to show its safety, not for its opponents to prove damage. The charge against the dental profession is that this has never satisfactorily been done. It is not enough to rely on comparisons with staff who handle mercury, but who absorb it in different ways from dental patients; on theoretical considerations of dose; or on a hundred or more years of use (what about smoking?). Contact hypersensitivity is not the issue here. Nothing less than long term population studies with proper controls, in the best traditions of rigorous research, will suffice in a case of such potential seriousness. These have not been done.

The dental profession should get its house in order with regard to research; above all, attention should be paid to the key question of the burden of proof in medical as well as environmental matters of this kind.

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1 Mjör IA. Side effects of dental materials. *BMJ* 1994;**309**:621-2. (10 September.)

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Use of complementary therapies

EDITOR,—Peter Fisher and Adam Ward report high use of complementary therapies throughout Europe.[1] The figures for the United Kingdom are based on surveys of public opinion carried out by organisations such as the Market and Opinion Research Institute and Gallup. As the authors admit, such data should be interpreted with caution. With a view to overcoming some of the shortfalls of these studies the Research Council for Complementary Medicine recently commissioned a methodological pilot study for a population based survey of the use of complementary medicine (unpublished report); this was conducted by Kate Thomas and colleagues at the University of Sheffield.

Postal questionnaires were sent to 921 adults sampled from electoral registers. Subjects were asked whether they had consulted a practitioner of six named therapies or any "other specialist in complementary medicine" in the past 12 months. The six named therapies were acupuncture, chiropractic, osteopathy, homoeopathy, herbal medicine, and hypnotherapy. A 78% response rate was obtained (718 subjects).

The crude estimate of use of the six named therapies in the previous 12 months was 8·5% (95% confidence interval 6·7% to 10·9%), with lifetime use estimated at 16·9% (14·3% to 19·9%). Use of other complementary therapies (for example, spiritual healing and aromatherapy) was estimated at 2% a year. A quarter of the sample had purchased over the counter homoeopathic or herbal remedies at least once. Roughly two thirds of these people had never visited a practitioner, giving an estimate for lifetime use of some form of complementary medicine of 33%. These preliminary data broadly support the figures given by Fisher and Ward. Use among certain groups of patients was higher. It has been reported that 46% of children with cancer,[2] 66% of patients with rheumatoid arthritis,[3] and 40% of patients with HIV infection and AIDS[4] have used complementary therapies.

Given this degree of use of complementary medicine and that such therapies may affect health status, doctors should routinely include questions about complementary therapies in history taking. There is strong evidence that patients do not readily volunteer this information, possibly for fear of admonishment.[2] In addition, use of complementary medicine may be a confounding factor in clinical trials, especially as many trials study the groups of patients most likely to use complementary medicine. Documentation of such use should therefore become a routine measure in assessments of outcome in clinical trials.

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Antibodies to phospholipid in alcoholic liver disease

EDITOR,—F Violi and colleagues report that a third of patients with cirrhosis of the liver had circulating antibodies to phospholipid (cardiolipin antibodies and lupus anticoagulant) and that the presence of antibodies to phospholipid is associated with an increased prevalence of splanchnic venous thrombosis.[1] Some of their patients had alcoholic cirrhosis, which is associated with a high frequency of non-organ specific autoantibodies.[2] The incidence of splanchnic venous thrombosis in chronic liver disease is less clear but is roughly 0·6-20%.[3,4] We have evaluated a series of patients with a range of alcoholic liver disease but without splanchnic venous thrombosis (as determined by Doppler ultrasound scanning) for the presence of antibodies to phospholipid.

Thirty patients admitted for investigation of liver disease during 1991-2 were tested for IgG and IgM antibodies to phospholipid with a commercial enzyme linked immunosorbent assay (ELISA; Cambridge Life Sciences, Cambridge, United Kingdom). All the patients had a history of alcohol misuse. Serological testing for hepatitis viruses yielded negative results, and liver biopsy specimens were characteristic of those seen in alcoholic liver disease. The table shows our findings. We conclude that antibodies to phospholipid are common in alcoholic liver disease and are not restricted to patients with cirrhosis; they also arise in patients with alcoholic hepatitis without an underlying cirrhosis.

Presence of antibodies to phospholipid, categorised by immunoglobulin type, in patients with alcoholic liver disease. Figures are numbers (percentages)

	IgG	IgM	All antibodies
Alcoholic hepatitis (n=14)	3	3	3 (21)
Alcoholic hepatitis with cirrhosis (n=10)	5	5	6 (60)
Inactive cirrhosis (n=6)	0	0	0

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1 Violi F, Ferro D, Basili S, D'Angelo A, Mazzola G, Quintarelli C, *et al.* Relation between lupus anticoagulant and splanchnic venous thrombosis in cirrhosis of the liver. *BMJ* 1994;**309**: 239-40. (23 July.)
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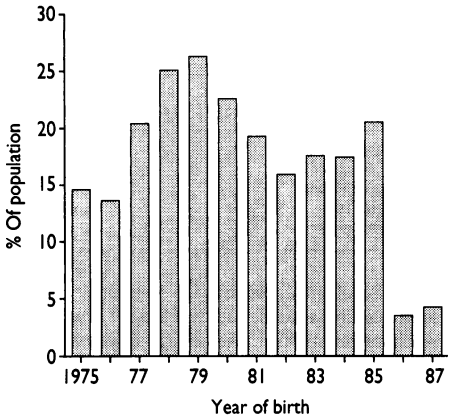
Measles and rubella immunisation campaign

Older children should be included

EDITOR,—Do others share my reservations about the national measles and rubella immunisation campaign?[1] It is based on a model dear to the hearts of some people who have influence in and around the Joint Committee on Vaccination and Immunisation and draws on campaigns for one off "catch ups" in the Caribbean and in Latin America,[2] Such campaigns are not necessarily transferable to Britain.

Previously the Joint Committee on Vaccination and Immunisation stated that there were cohorts of increasing age still susceptible to measles and recommended that they should be offered measles, mumps, and rubella vaccine if they had not had it before.[3] It is with these cohorts that the real problem for future years lies (figure). Measles is more severe in older teenagers and young adults, and the American experience of outbreaks in colleges and universities would inevitably be repeated in Britain.[4] Health authorities, such as Argyll and Clyde Health Board, that followed those recommendations, however, got no financial help and are now likely to be penalised through having to deal with parents' and health professionals' confusion and frustration over the recommendation that children should be immunised with the measles and rubella vaccine even if they have previously been immunised with measles, mumps, and rubella vaccine.



Percentage of population of Argyll and Clyde Health Board who are vulnerable to measles by birth cohort, 1975-87 (assuming that one case in four is notified)

As the group at risk are principally older pupils, many of whom have not been immunised or had natural measles, it seems perverse to restrict the campaign to those aged 5-10 and not to immunise sixth form students. In Scotland a decision has been taken to include all secondary schoolchildren in the campaign.[1] And what about university and college students, perhaps those most at risk? It seems excessive to direct the campaign at all primary schoolchildren, most of whom will have been immunised with measles or measles, mumps, and rubella vaccines previously.

Though I personally favour a two stage programme of immunisation against measles, mumps, and rubella,[5] a more graduated approach in younger children—that is, offering measles, mumps, and rubella vaccine to both sexes in place of the schoolgirl rubella programme—seems preferable to this campaign.

Why has the proposal apparently lain on the minister's desk for a good year, and why has it only now become clear that a supposed epidemic is imminent, necessitating rushed implementation of a most ambitious project in such a "top down" manner, to be completed in such an arbitrary and probably unrealistically tight timeframe?

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1 Kendell RE, Jarvie A. *National measles and rubella immunisation campaign.* Edinburgh: Scottish Office Home and Health Department, 1994. (SOHHD CMO(94)6.)
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Is a booster necessary?

EDITOR,—In 1992 the Department of Health issued advice from the Joint Committee on Vaccination and Immunisation, which stated unequivocally that reimmunisation against measles "is only necessary when vaccine has been given before 12 months of age."[1] In the current campaign the department is instructing health professionals to include previously immunised children to boost their immunity. After this campaign young children will again be offered the national programme of a single immunisation against measles, mumps, and rubella without a follow up booster. Is a booster necessary for individual protection or not? If it is not then the current campaign, coupled with alarmist national advertisements, is transgressing fundamental principles of informed consent. If it is then the national programme should be altered.

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1 Department of Health. *Immunisation against infectious disese 1992.* London: HMSO, 1992.

Safety untested

EDITOR,—I have received a number of telephone calls from parents asking whether their children should have a third measles and second rubella immunisation. These children have all had measles immunisation alone followed by measles, mumps, and rubella immunisation when this became available.

After an extensive literature review, and after contacting my local microbiology laboratory in Exeter, I am unable to find any reports of research testing the safety of three measles immunisations. Equally, there is nothing to suggest that those who have not seroconverted after two immunisations will do so after a third. Furthermore, I found evidence from Sweden[1] and Russia[2] that herd immunity after two doses is nearly complete. My practice, therefore, is seriously considering advising these parents not to subject their children to a third dose of vaccine.

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1 Bottiger M. Boosting effect of a second dose of measles vaccine given to 12-year-old children. *Scand J Infect Dis* 1993;**25**: 239-43.
2 Bolotovskii VM, Mikheeva IV, Gelikman BG, Auzinia AV, Glinskaia EV. The duration and intensity of measles immunity after a repeat inoculation against this infection. *Zh Mikrobiol Epidemiol Immunobiol* 1990;4:45-9.

May have medicolegal consequences

EDITOR,—Am I the only doctor concerned about the catch up programme of immunisation against measles and rubella? The Department of Health is so keen to raise herd immunity against measles that the balance between the interests of the individual and the community may have been badly struck. It seems that, on occasions, a child's consent to be immunised may be accepted if the parent's consent is not forthcoming. This will lead to cases in which children with contraindications such as allergy, coincidental illness, or pregnancy are immunised. This could be a disaster for the victims and a godsend for their lawyers.

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Department of Health's response

EDITOR,—D S G Sloan does not seem to appreciate that the principle behind the British campaign is now the World Health Organisation's recommended strategy for controlling and eliminating measles.[1] Mass immunisation of the whole population among whom measles is occurring is not just a "catch up" exercise aimed at immunising those who have previously been missed but is intended to interrupt transmission by breaking the chain of infection from child to child. Such a strategy takes account of the fact that vaccine failures as well as unvaccinated children contribute to maintaining transmission of measles, a point overlooked in Sloan's analysis of vulnerable children. Earlier this year, as soon as it was clear that notifications of measles in England and Wales were rising and that some parts of Scotland were already experiencing a measles epidemic, plans were made to implement a measles campaign as soon as supplies of vaccine could be assured. A graduated approach to the introduction of a two dose regimen would not prevent the epidemic of measles forecast for next year. The large number of cases of measles now being notified reinforces the need for immediate action. The pattern of notifications this year is exactly the same as that seen in 1987 in the lead up to the epidemic in England and Wales in 1988.

Adrian Bull questions the need for a second dose of measles vaccine for the cohort of children presently under 5 and not included in this campaign. Although coverage against measles has been higher in this group than in older children, the problem of vaccine failure remains. In advice sent to all health professionals in late September we recognised this need.[2] Elizabeth Miller's editorial offers two possible alternatives for our future strategies: a routine two dose schedule with the second dose given before school entry or repeated campaigns targeted at primary schoolchildren.[3] The Joint Committee on Vaccination and Immunisation will carefully review the outcome of this campaign and advise on future strategy for eliminating measles and rubella, including the future arrangements for the present under 5s.

Roger Stephenson, concerned that some children may receive three doses of measles vaccine, overlooks the benefit that will be gained because those children will be getting a second dose of rubella vaccine, which should result in seroconversion in those in whom the first dose failed and boost immunity in the others. Parental histories of immunisation are frequently unreliable, and in a nationwide mass campaign there is no opportunity to establish accurate histories in all children. Re-exposure of an immune person to measles or rubella vaccine viruses does not lead to the establishment of infection—this is the purpose of immunisation—and is unlikely to carry any risks different from those of re-exposure of an immune person to the natural infection.

Immunisation Against Infectious Diseases states that a child under 16 may give consent or refuse immunisation provided that he or she fully understands the benefits and risks entailed.[4] The child should be encouraged to involve a parent or guardian in the decision. The recommendations for this campaign are the same, recognising the rights of young people.

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Advice to authors

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