resident in England and Wales were performed after 20 weeks in 1986 and not one in five, as stated in the report. The rate of complications was also grossly overstated; a major complication occurs after about 0.3% of abortions at eight weeks, but delaying the abortion until 10 weeks increases the complication rate by 60% and delaying it until 15 weeks by 300%.¹

Everyone wants to reduce the number of late abortions. The conference was called because of the considerable evidence that women often experience difficulty when trying to obtain help from the National Health Service with unwanted pregnancies. This delays abortions and increases the risks at all gestations. In 1981 delay in the National Health Service was the reason why 20% of women had their abortions after 20 weeks.²

The conference discussed means of avoiding delay by better access to pregnancy testing, and examples of efficient National Health Service provision of abortions were described. The proceedings of the conference are to be made available by the Birth Control Trust (price £5.50).

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Tonsillar enlargement and failure to thrive

SIR,—In their article on tonsillar hypertrophy and failure to thrive (29 August, p 541) Drs S Hodges and M P Wailoo mention some values for oxygen saturation in a child with upper airways obstruction but do not comment further on this aspect of assessment. We would like to illustrate the value of pulse oximetry in such circumstances by a case that we encountered recently.

Our patient, a girl aged 19 months who had been born at 26 weeks' gestation, was growing poorly and was admitted as a day case for investigation. After sedation for removal of a biopsy specimen of the small bowel she showed signs of upper airway obstruction, and examination showed large, although apparently healthy, tonsils. All signs of obstruction abated as the sedation wore off, but she was admitted overnight and monitored by pulse oximetry. Trace 1 shows the serious degree of hypoxia that occurred intermittently during sleep.

This evidence persuaded a previously reluctant ear, nose, and throat surgeon to remove the child's tonsils and adenoids, with the result that trace 2 was obtained 72 hours after operation. Her parents believe that her appetite and general wellbeing

Pulse oximetry traces in patient with upper airway obstruction before and after removal of tonsils and adenoids.

began to improve within days of the operation. It is too soon to tell whether she will grow any better.

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Regional neonatal intensive care: bias and benefit

SIR,—While I agree with Dr Teyrnon G Powell and Professor Peter O D Pharoah (19 September, p 690) that very low birthweight infants born at the regional intensive care unit probably stand a better chance of survival, care should be taken before these figures are acted on, especially when resources are limited. If regional units are developed at the expense of peripheral ones it is possible that the overall survival will fall.

In a review of all infants born at Leicester General Hospital in the years 1984, 1985, and 1986 (9747 deliveries in total) between 24 and 32 weeks and weighing less than 1500 g it was found that in 22 out of 60 (37%) cases it would have been impossible to transfer them in utero. Therefore if the special care baby unit were closed to provide funding and staff for the neonatal unit at the Leicester Royal Infirmary there would be at least eight cases each year in which the neonatal flying squad would have to be called. An extrauterine transfer of a sick neonate is often an unsatisfactory procedure with an appreciable morbidity.

Other factors that should be taken into account when recommending in utero transfer of small infants are the psychological effect on the mother of moving her from the local hospital and friends and the necessity for junior obstetric staff and midwives in the local hospital to obtain training in the management of premature delivery. Therefore, although in utero transfer sounds attractive, neonatal units should not be developed just so that district administrators may reduce their local hospital costs.

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Health promotion campaigns

SIR,—Dr Gellise Bagnall and colleagues (12 September, p 660) rightly emphasise the importance of evaluating health campaigns. This is true for campaigns related to the acquired immune deficiency syndrome as well as for all other prevention programmes.

Objective and competent evaluation of this kind of campaign is, however, extremely difficult. Changes in behavioural attitudes are so complex, especially with regard to sex, that a control group is mandatory for measuring the effect of the campaign. As such campaigns are directed at groups individual randomisation is impossible; only randomisation by group may be used. The difficulties of such designs have been pointed out,^{1,2} but this seems to be the only reasonable means of evaluation.

A controlled study of this kind has been undertaken in France to evaluate the effect of a campaign to prevent the spread of sexually transmitted diseases. Six French departments were randomised, in two groups, three of them to receive the prevention programme and three to act as controls. The incidence of sexually transmitted diseases and the relevant risk factors were measured just before

the programme and three months later, using a representative sample of general practitioners in each of the departments (261 general practitioners participated).

Initial results indicate that the change in the incidence of sexually transmitted diseases was very similar in all departments irrespective of group (there was a mean decrease from 6.1% to 4.4% in the controls and from 5.8% to 4.7% in the intervention group). More interestingly, a change was noted after the programme in the intervention group in the characteristics of women who consulted about sexually transmitted diseases; the proportion of patients who had had more than one sexual partner in the past three months changed significantly (36% before, 9% after), as did the proportion having sex with occasional partners (36% before, 5% after) and also the proportion who delayed longer than seven days before consulting (81% before, 57% after). There was no difference between the two groups before the programme. This may be related either to a decrease in exposure to risk factors or to an increased use of protective measures in the exposed subjects—for example, use of condoms. Finally, a survey has indicated that the best way to inform exposed people about sexually transmitted diseases is through comics, posters, and advertising cartoons.

This kind of evaluation is long, difficult, and expensive, but this seems to be the only way to evaluate health promotion campaigns objectively.

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Sexual dysfunction in women with Crohn's disease

SIR,—Dr Elspeth Guthrie and colleagues reported sexual dysfunction in 83% of women with the irritable bowel syndrome (5 September, p 577). Thirty per cent of women with inflammatory bowel disease also reported that their sexual activities were affected by their illness. We are currently studying menstrual and menopausal problems among women with Crohn's disease and have noted similar problems among 30% of our patients.

One hundred and forty five women with Crohn's disease from south Wales¹⁻³ and 50 nurses with Crohn's disease⁴ were interviewed about sexual activities, menstruation, and the menopause (table). One hundred and sixty four were sexually active at the time of the study, and 49 reported pain

Dyspareunia among women with Crohn's disease (n=195)

	Total	Sexually active	Those with dyspareunia
All women	195	164	49
Patients with Crohn's disease:			
Menstruating	83	78	25
Amenorrhoeic	62	42	10
Nurses with Crohn's disease:			
Menstruating	34	32	11
Amenorrhoeic	16	12	3

during intercourse. There were no significant differences between patients and nurses with Crohn's disease ($\chi^2=0.1$). Neither was there a difference between patients and nurses who were menstruating and those who had been amenorrhoeic for six or more months ($\chi^2=1.3$).

We believe that a substantial number of women with Crohn's disease have largely unrecognised sexual difficulties and that these may be partly responsible for the reduced fertility seen among women with Crohn's disease.⁵ Certainly such difficulties might account in part for the high level of interest in fertility and family planning among self help groups for patients with inflammatory bowel disease.⁶ Physicians, surgeons, gynaecologists, and family practitioners need to be sensitive to the needs of women with Crohn's disease.

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Children born in Seascale

SIR,—In the week of the 30th anniversary of the Windscale fire it is surely a remarkable coincidence that your pages should carry confirmation, (3 October, p 819, 822) of the findings of Sir Douglas Black¹ concerning the raised incidence of childhood leukaemia around the Windscale (now Sellafield) plant. The discovery that the excess is confined to children of mothers living in Seascale at the time of birth raises a number of questions in relation to the continuing controversy over the safety of nuclear installations in Britain.

Firstly, as the *Lancet* observed after the inquiry,² of the 14 young people with leukaemia born in Millom rural district, three were born in 1957—the year of the fire—and one in 1958. The findings of Professor M J Gardner and colleagues sharpen the doubts that this small temporal focus have raised.

Secondly, in offering his "qualified reassurance" to the people of west Cumbria Sir Douglas relied heavily on the calculations of the National Radiological Protection Board, which claimed to show that reported levels of radioactivity discharged from the plant were far too low to account for the observed incidence of leukaemia.³ Profound uncertainties underlie the models used in these calculations,^{4,5} but the uncertainties are at their most broad and uncharted over risks to the fetus.

The fetal model⁶ relies on a tiny handful of animal experiments and is preoccupied with changes in physiology during gestation rather than with metabolic behaviour. Thus the fractional distribution of plutonium in the organs of the fetus is taken to be the same as that in the mother. Transfer of actinides from mother to child is based entirely on experiments in animals; the authors of the model remark that extreme care is needed in extrapolating from animals to humans. They also question whether the conventional concept of dose has any meaning when applied to the fetus. It

seems unlikely that committed effective dose equivalent, which is the quantity recommended for adult members of the population, is an appropriate criterion for estimating risks to the fetus.⁶

The model also includes a factor to account for the reciprocal relation between tissue dose and the increasing body mass of the growing child. Thus the dose—and therefore the risk arising—from a long lived α emitter lodged in the skeleton is taken to decrease with the rapid growth in fetal body mass.⁶ Tissue mass is relatively unimportant, and at the cellular level α particle dose averaged throughout the tissue may be biologically almost meaningless.⁷

Thanks to the work of Professor Gardner and his colleagues, those seeking an explanation for the existing excess of leukaemia in Seascale now have a clearer idea of where their efforts might be directed.

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Keeping up with orthopaedic epidemics

SIR,—The suggestion by Mr Christopher Bulstrode that the rising incidence of fractured neck of femur is responsible for the present difficulties experienced in running orthopaedic trauma services (29 August, p 514) has been challenged by Dr Fear and colleagues (26 September, p 782). They produce data from Leeds to show that the incidence of fractured neck of femur and the actual number of cases in the over 65 age group have not changed noticeably in the past 12 years.

When figures for the Cardiff Royal Infirmary (table) are considered in two five year periods,

Numbers of operations for fractured neck of femur and trauma cases at the Cardiff Royal Infirmary between 1977 and 1986

Year	Total operated on for fractured neck of femur	Total operated trauma cases
1977	407	1493
1978	390	1566
1979	382	1603
1980	379	1654
1981	382	2218
1982	427	1854
1983	398	2092
1984	403	1938
1985	463	2211
1986	454	2228

1977-81 and 1982-6, operations for fractured neck of femur increased by 10.5% and all trauma operations by 21%. The incidence of fractured neck of femur is rising gradually as the population ages but is overshadowed by a more rapid rise in general trauma. The motorcycle has taken over from the car as a major cause of trauma since the

widespread use of seatbelts; and knee arthroscopy becomes daily more popular, as does the operative fixation of secondary bony deposits of malignant disease.

Many other factors heap pressure on limited resources. To date the "epidemic" has been contained as far as theatre time is concerned and with little expansion in resources by the introduction of better x ray imaging, orthopaedic fixation, and anaesthetic techniques.

Clearly, a time will be reached when the elective case will be squeezed out by the trauma load, especially if the beds happen to be under the same roof.

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Reference bias in reports of drug trials

SIR,—I would like to commend Dr Peter Göttsche for his study of "reference" bias in reports of drug trials (12 September, p 654). It is dismaying that unbiased information retrieval should be so difficult. The modern meta-analyst or other researcher is faced with the challenge of collecting an unbiased series of reports for a given subject using the combination of an electronic searching system that provides incomplete retrieval of reports and a hand search method that relies on a biased set of reports.

I would also like to commend Dr Robert Newcombe for presenting the concept of "registering" protocols for peer review at the planning stage (p 656). Readers may be interested to know that Jerold Lucey, editor of *Pediatrics*, has indicated his willingness to adopt a system similar to that proposed by Dr Newcombe.

Dr Newcombe's arguments for a registration system would have been a good deal stronger if he had supported his statements about publication bias with data. Though there are data to support its existence in psychology and education,^{1,2} publication bias is far from being a fact supported by data in medicine. As far as I know, a study by Simes provides the only published data documenting the problem, in this case for cancer.³ Findings from an additional study⁴ show that a publication bias related to study results does exist but there it is the authors who fail to write up null or negative results rather than the editors who fail to accept them for publication.

Dr Newcombe wrote that currently the only prospect of eliminating publication bias is to contact all investigators who may have done relevant work; he mentioned the worldwide survey designed to identify all unpublished trials in perinatal medicine, undertaken by Iain Chalmers and others in connection with the Oxford database of perinatal trials. The survey is now complete, and the results are being written up. Very few responses were received reporting unpublished results of perinatal trials, indicating that there are not many unpublished results of trials, that the survey did not reach investigators with unpublished results, or that investigators with unpublished results did not respond to the survey. In any case, we are forced to conclude that retrospective registration of trials is not worth while in view of the enormous effort and expense required. Instead, we must devise a system for prospective registration of initiated studies, as Dr Newcombe and others have suggested.

Though the proposal to register studies through journals is a possible solution, the additional burden might prove too great for the already overloaded volunteer peer review system. Perhaps a more practical approach, at least in the United States, would be to set up registration through the institutional review boards, a system already in