exposure to blood during invasive procedures; to evaluate interventions aimed at preventing blood contact; and to estimate the prevalence of HIV among health care workers who undertake invasive procedures.

The working group noted that "Few comprehensive surveys of patients surgically exposed to HIV-1 infected health care workers have been conducted." It documented the uptake of HIV testing by patients in such cases,[3 4] which was highest, at 79% (130 patients), among 163 patients of an HIV infected dental student in Georgia[5] but was only 22% (76 out of 339 patients) in the first episode in the United Kingdom.[6] A published account of the second surveillance in the United Kingdom, of over 1000 patients in April last year, is overdue.[4] We have argued that the success of any surveillance exercise should be judged by the level of voluntary HIV testing achieved in patients whose operation entailed a high risk of operator injury.[3]

We find it surprising that both Jeffries's editorial and a brief report in the *BMJ* by Fiona Godlee[7] state that there have been no reported cases worldwide of a surgeon infecting a hospital patient with HIV; neither piece mentions the dental surgeon in Florida who apparently transmitted HIV to five patients.[8] Though the mechanism of transmission is unclear in this case and may never be ascertained, the case should signal the need for further study rather than denial of its possible implications. Indeed, disparity between indirect estimates of the risk of transmission of hepatitis B virus from a surgeon positive for hepatitis B e antigen to a single patient during an invasive procedure and the observed transmission rates in outbreaks of hepatitis B virus associated with surgeons were described as thought provoking in the Royal College of Pathologists' report. Such discrepancies indicate that indirect estimates alone are an insufficient basis for reassuring patients about the risk of transmission of HIV. They must be supported by direct, rigorous surveillance data on tens of thousands of patients involved in such cases.

We commend the working group for the comprehensiveness and objectivity of its review and welcome its undertaking to update the report as appropriate.

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1 Jeffries DJ. Doctors, patients, and HIV. *BMJ* 1992;**304**:1258-9. (16 May.)
2 Royal College of Pathologists. *HIV infection: hazards of transmission to patients and health care workers during invasive procedures.* London: Royal College of Pathologists, 1992.
3 Bird AG, Gore SM, Leigh Brown AJ, Carter DJ. Escape from collective denial: HIV transmission during surgery. *BMJ* 1991;**303**:351-2.
4 Gore SM, Bird AG. HIV survey offers reassurance. *Independent* 1992 May 5:18.
5 Comer RW, Myers DR, Steadman CD, Carter MJ, Rissing JP, Tedesco FJ. Management considerations for an HIV positive dental student. *J Dent Educ* 1991;**55**:187-91.
6 Porter JD, Cruickshank JG, Gentle PH, Robinson RG, Gill ON. Management of patients treated by surgeon with HIV infection. *Lancet* 1990;**335**:113-4.
7 Godlee F. British surgeon infected with HIV. *BMJ* 1992;**304**:1204. (9 May.)
8 Centers for Disease Control. Update: transmission of HIV infection during an invasive dental procedure in Florida. *MMWR* 1991;**40**:21-7.

EDITOR, — D J Jeffries presents some of the figures in his editorial in such a way that they are misleading.[1] "If zidovudine prevented" 10% of nosocomial transmission "there would be no question about its use." This statement seems so obviously true that it will doubtless be taken at face value and will lead to demands that zidovudine should be given to those who incur needlestick injuries. The missing figures in this equation should also, however, be considered.

The quoted risk of seroconversion after inoculation injury is 1:275. It follows that if zidovudine prevented 10% of nosocomial transmissions 2750 courses would be needed for each success. Thus the risk-benefit ratio is 2750:1 rather than the 90%:10% implied. (In practice even more zidovudine would probably be given, as HIV negative donors might be regarded as high risk and "prophylaxis" taken anyway.)

I accept that to acquire HIV infection is a personal tragedy. But zidovudine is toxic; many patients have to stop taking it because of the consequent anaemia. Long term mutagenic or carcinogenic effects of zidovudine have not yet been excluded. To expose so many people to unknown risks when so few of them will benefit strays from the basic rule of medicine, which is "first, do no harm."

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Life insurance and HIV tests

EDITOR, — At the end of last year a debate occurred in the *BMJ*'s letters column on whether people who have had a negative HIV test result are penalised when applying for life insurance.[1 2] We recently met a representative of the Association of British Insurers and discussed this issue. We understand that questions on HIV testing on insurance application forms are often used as trigger questions. An affirmative answer to the question "Have you ever had an HIV/AIDS test?" is likely to lead to the insurers requesting further information, including information on the applicant's sexual orientation. Being identified as a gay man in this way is likely to lead to the insurance cover offered being more expensive and, rarely, to insurance cover being refused.

Recently Hulme *et al* reported that a leaflet clarifying the position of the Association of British Insurers was being used in a genitourinary clinic.[3] The leaflet was quoted as stating that "People should be reassured that if they have an HIV antibody test and the result is negative they will face no difficulty in obtaining future life insurance because of having the test." Although strictly factually correct, this statement is misleading unless further qualified. Having an HIV test can be prejudicial to people applying for life insurance because it may lead to further questions that would not otherwise have been asked.

The statement of practice we were given by the representative of the Association of British Insurers says: "Having had a negative HIV test will not, of itself, prevent someone from obtaining life insurance or affect the cost, providing there are no adverse risk factors present. Consequently having a test for routine purposes such as giving blood, prenatal screening or employment creates no problem regarding life insurance."[4] We believe that this statement with an explanation that further questions may be asked to identify adverse risk factors accurately describes the true situation to people considering whether to have an HIV test.

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1 Correspondence. Counselling patients before an HIV test. *BMJ* 1991;**303**:1133-4.
2 Bor R, Miller R, Johnson M. Counselling patients before an HIV test. *BMJ* 1991;**303**:1478.
3 Hulme N, Smith S, Barton S. Insurance and HIV antibody testing. *Lancet* 1992;**339**:682-3.
4 Association of British Insurers. *Underwriting life insurance for AIDS and HIV.* London: ABI, 1991.

Sex biased language

EDITOR, — Mary Verdult argues forcefully against attempts to reduce sex biased use of the English language and concludes, "The notion that tinkering with the language is going to change people's attitudes is fallacious."[1] This assertion is not supported by the evidence. Studies that have used various methods have shown consistently that when terms such as "he," "his," and "man" are used in what is intended as a gender neutral sense, people more commonly think of male referents than they do when explicitly neutral alternatives such as "they" or "him or her" are used.[2-6] Not only is this a potential source of confusion[2] but the use of androcentric language in written information may modify the reader's subsequent behaviour in the light of that information.[7]

I have two daughters. Already one of them is limited in her choice of games at school by the irrelevance of her biological sex. Unfortunately, both children are likely to encounter further examples of sexist discrimination in many aspects of their lives. Although sex biased language may never be a proximate cause of discriminatory behaviour, the evidence suggests that androcentric language is a factor in maintaining sexist attitudes and that use of explicitly gender neutral language can reduce discrimination on the grounds of sex.

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1 Verdult M. Sex bias in the *BMJ*. *BMJ* 1992;**304**:1250. (9 May.)
2 Moulton J, Robinson GM, Elias C. Sex bias in language use. "Neutral" pronouns that aren't. *Am Psychol* 1978;**33**:1032-7.
3 Schau CG, Scott KP. Impact of gender characteristics of instructional materials: an integration of the research literature. *Journal of Educational Psychology* 1984;**76**:183-93.
4 Wilson E, Ng SH. Sex bias in visual images evoked by generics: a New Zealand study. *Sex Roles* 1988;**18**:159-68.
5 Khosroshahi F. Penguins don't care, but women do: a social identity analysis of a Whorfian problem. *Language and Society* 1989;**18**:505-25.
6 Gastil J. Generic pronouns and sexist language: the oxymoronic character of masculine generics. *Sex Roles* 1990;**23**:629-43.
7 Briere J, Lanktree C. Sex-role related effects of sex bias in language. *Sex Roles* 1983;**9**:625-32.

Minimising psychosocial disabilities of multiple sclerosis

EDITOR, — H E Webb is, regrettably, correct when he outlines the lack of efficacy of the recognised medical treatments for multiple sclerosis.[1] He also outlines methods of managing symptoms and remedial treatments to maximise independence. In this otherwise comprehensive review, however, no mention is made of the need for psychological and social support.

Doctors are in a unique position to minimise the additional suffering that results from the psychosocial disabilities of multiple sclerosis. The initial distress and anger that follow the diagnosis may be minimised by good communication.[2 3] A sympathetic doctor who understands the illness can encourage patients to plan realistically for an uncertain future while giving hope and helping them to maintain a fighting spirit. Sympathetic counselling can help patients with deteriorating disease to cope with threats to their ability to continue to work, be a good parent,[4] remain personally independent, and preserve their dignity and self respect. Visits by both the patient and his

or her partner together may enable the doctor to ask about the influence of the disease on their partnership and thus allow them to discuss emotionally loaded topics together.

Local support groups can also be invaluable. Many patients and their partners find that the leaflets, meetings, and other facilities of the Multiple Sclerosis Society and Action for Research into Multiple Sclerosis provide support that neither health nor social service professionals can give.

Offering to help patients with multiple sclerosis and their families in these ways is a vital aspect of management and will remain so until traditional therapeutic endeavours become effective.

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1 Webb HE. Multiple sclerosis: therapeutic pessimism. *BMJ* 1992;**304**:1260-1. (16 May.)
2 Langton-Hewer R. Multiple sclerosis: management and rehabilitation. *International Rehabilitation Medicine* 1980;2: 116-25.
3 Burnfield AJ, Frank AO. Multiple sclerosis. In: Frank AO, Maguire GP, eds. *Disabling diseases: physical, environmental and psycho-social management.* Oxford: Heinemann Medical, 1989:168-90.
4 Coster GM, Sturge JC, Williams KA, Frank AO. Pilot investigation into the needs of children when one parent has multiple sclerosis [Abstract]. *Clinical Rehabilitation* 1989;3:80.

Study of factors in atherogenesis

EDITOR,—We are the authors of a paper, published last year, on the interactions of serum copper, selenium, and low density lipoprotein cholesterol concentrations in carotid atherogenesis.[1] In the methods section we gave details of the assessment of atherosclerosis and stated (fourth and fifth sentences of this subsection): "The intima media thickness was measured from video recordings of the entire scanning procedures by the scanning physician (RS). The reader was blinded with regard to the subjects' identify and whether she was reading a baseline or a two year follow up recording." This part of the description of the method was inaccurate.

Technically speaking, the entire scanning procedures were not video recorded: roughly half of the whole scanning time was recorded. The recordings included, however, the imaging of the entire length of the common carotid arteries. Secondly, when the intima media thickness was measured the identities of subjects were not literally hidden from the observer as this was not possible. The baseline and follow up videotapes were, however, read in a random order. The reader was blinded to all risk factor values and, when she was reading the follow up tapes, to the baseline measurements of intima media thickness. We used the term blinded as the observer made about 8400 measurements over 13 months and could not possibly have remembered the previous readings for any single person. Also, the computerised videotape reading equipment gave the distance reading only after both the lumen-intima interface and the media-adventitia interface had been defined by cursors driven by software. We do not believe that these minor inaccuracies in any way undermine the validity of either our findings or our conclusions.

To verify this, the same observer repeated the baseline and two year follow up measurements of intima media thickness from the original video recordings, which had been stored for three to five years, in a random order and blinded, as far as possible, with regard to the identities of the subjects. The mean of the absolute differences between the original and repeat measurements was 0·07 mm (0·08 mm for the increase in two years). The intraclass correlation coefficient for agreement between all original and all repeat measurements

Mean increase in maximal carotid intima media thickness after two years (mm) (adjusted for age and cigarette pack years) according to serum copper and low density lipoprotein cholesterol concentration, from original and repeat measurements

	Low LDLC (<4·0 mmol/l)		High LDLC (≥4·0 mmol/l)	
	Original	Repeat	Original	Repeat
Low copper (<17·6 μmol/l)	0·08	0·11	0·05	0·09
	(n=52)		(n=25)	
High copper (≥17·6 μmol/l)	0·06	0·06	0·25	0·29
	(n=22)		(n=27)	

LDLC=Low density lipoprotein cholesterol.

was 0·91 (0·69 for the two year increase). The measurement variability was independent of both serum copper and low density lipoprotein cholesterol concentrations. We also repeated the main analysis of our paper (table III in that paper), using the repeat measurements of intima media thickness (table). All of the crude means and adjusted means (adjustment for age and cigarette pack years) were identical to within 0·1 mm of the original means (greatest difference 0·04 mm). The interaction between serum copper and low density lipoprotein cholesterol concentrations was, if anything, stronger (net difference 0·25 mm instead of 0·22 mm) than with the original measurements.

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1 Salonen JT, Salonen R, Seppanen K, Kantola M, Suntioinen S, Korpela H. Interactions of serum copper, selenium, and low density lipoprotein cholesterol in atherogenesis. *BMJ* 1991; 302:756-60.

Medical abortion

EDITOR,—In discussing the situation where a woman changes her mind after receiving mifepristone and as a result the fetus is born but with an abnormality, Michael Heard and John Guillebaud recommend that the "initial consent includes a woman's agreement that she must take full responsibility for any outcome."[1] The effect would be that the child would be deprived of any right of action in respect of any abnormality resulting either from use of the drug or from failure to continue using it.

Such a recommendation does not accord with the law. A "wrongful life" action by a malformed fetus claiming that it should have been aborted has yet to succeed in the British courts[2] but has been recognised in the United States as giving a right to damages for pain and suffering.[3] Nor is it clear that such a right of action is barred by the Congenital Disabilities (Civil Liability) Act 1976. If a child does have such a right then it cannot be excluded by the mother signing a consent form. Similarly, an action by a child against the manufacturers of a drug alleging that its use caused the child injury while in utero could be brought under this act and any consent form signed by the mother would be subject to the requirement of reasonableness in the Unfair Contract Terms Act. And what about an action by a child resulting from negligently performed in vitro fertilisation treatment? Why should a consent by the parents bar such an action? More debate is needed on this.

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1 Heard M, Guillebaud J. Medical abortion. *BMJ* 1992;**304**:914. (4 April.)
2 McKay *v* Essex Area Health Authority (1982) Q B 1166.
3 Curlender *v* Bio-Science Laboratories (1980) 165 Cal 477.

PPP and physiotherapy for senior citizens

EDITOR,—I recently received a letter from Private Patients Plan (PPP) announcing that those people who may receive tax relief on their premiums—that is, old age pensioners—may receive physiotherapy benefit only if the physiotherapy is ordered by a consultant and not if it is recommended by their general practitioner. My letter is not to debate the merits or otherwise of the announcement but to draw attention to the source from which it originated. I would expect such a decision to have been arrived at by the medical advisers to PPP. In fact, it has been imposed on PPP by the Inland Revenue, and, seemingly, PPP has accepted it without demur.

In its letter to me PPP says that until now it paid for physiotherapy provided it was satisfied that the physiotherapy had been ordered by a doctor. The letter then goes on to say, "The Inland Revenue have now advised us that they are not prepared to allow that situation [as outlined above] to continue in respect of subscribers claiming tax relief."

Subscribers claiming tax relief may be just the people who need this benefit most. I have written protesting strongly to PPP for having permitted the Inland Revenue to rule in what is surely a clinical matter. I hope that all medically qualified senior citizens will do the same, for I see no reason why our financial position should permit the Inland Revenue to control or dictate our clinical treatment. If this matter passes without protest who knows what the next infringement of clinical freedom may be?

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Patterns of hospital medical staffing

EDITOR,—*Achieving a Balance* aimed at providing trainees entering a chosen discipline with a reasonable chance of eventually becoming consultants, and regions have been wrestling with quotas for registrar and senior registrar posts set by the Joint Planning Advisory Committee to bring higher professional training into balance.[1] In the West Midlands region this has now largely been achieved, and most disciplines are on target to achieve their 1995 registrar quotas. The implementation of the heads of agreement on junior doctors' hours, however, has the potential to swamp the principles of *Achieving a Balance*.

The heads of agreement principles can be achieved in only two ways. One is to recruit junior staff, particularly at the senior house officer level, as necessary to provide for appropriate rotas or shifts across the board in all disciplines. The present number of such trainees is not sufficient for this to be possible except in large hospitals, and even then such legal rotas or shift systems will be achieved only by enforcing cross cover between related and sometimes barely related specialties. Given the current number of graduates in the United Kingdom, it would be possible to staff an increased number of senior house officer posts only by recruiting from overseas, and from the Euro-