

insurance is relevant to other health care workers in this situation.<sup>1</sup> I was interested to read that a few companies would treat him as a special case if he subsequently acquired HIV infection in the course of his duties. The onus of proving causation would, however, be on him.

The NHS injury benefit scheme would also compensate infected workers for loss of earning ability.<sup>2</sup> Again, however, it is stated that "work related infection would have to be established." To do this "a record of a specific injury and evidence of seroconversion are not regarded as essential but would be helpful in proving causation."

Astbury and Baxter found that only 18% of such injuries were reported on an accident form and 5% were notified to the occupational health service.<sup>3</sup> Thus in most cases the health care worker is unlikely to have either an official record of the injury or evidence of seroconversion after exposure. Moreover, it has been pointed out that HIV infection acquired occupationally is not a pre-scribed disease, unlike hepatitis B,<sup>4</sup> which seems to be an anomalous state of affairs.

What advice, then, should we give injured health care workers? Certainly, they should report the injury on an accident form, and to the occupational health department. HIV antibody testing would be considered only after careful counselling. I have argued that testing in these circumstances should not affect the workers' ability to obtain life insurance cover at normal rates.<sup>5</sup> A record of the injury and documentation of subsequent seroconversion if it occurs would allow the workers to obtain injury benefits more easily and give them a better case should they wish to obtain compensation from their employer through a civil claim.

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- 1 Gibbons P. Life insurance and HIV antibody testing. *BMJ* 1992;305:1093. (31 October.)
- 2 Department of Health. *AIDS—HIV infected health care workers. Occupational guidance for health care workers, their physicians and employers. Recommendations of the expert advisory group on AIDS.* London: DoH, 1991.
- 3 Astbury C, Baxter P. Infection risks in hospital staff from blood: hazardous injury rates and acceptance of hepatitis B immunisation. *J Soc Occup Med* 1990;40:92-3.
- 4 Williams S, Cockcroft A. Policies for HIV and hepatitis B infected health care workers. *Occupational Health Review* 1992;36:12-4.
- 5 Tamin J. HIV testing and life insurance. *Occup Med* 1992;42:119.

EDITOR,—Simon Barton and Peter Roth's editorial on life insurance and HIV antibody testing<sup>1</sup> highlights a problem that has adversely affected the acceptance of screening for HIV infection. Yet should we be so surprised by the requirements of the insurers, who, like the reformed NHS, are running businesses not charitable societies?

Current practice is to screen patients only with their informed consent after pretest counselling. Part of this procedure is an attempt to quantify the patient's risk on the basis of reported behaviour. Few people attending a genitourinary medicine clinic are likely to be at no risk, but some might believe that their risk is too low to justify future problems with insurance or mortgage.

Perhaps we should try to understand the insurance companies' point of view. At present a positive test result signifies death within a decade for most patients, but a survey in Riverside Health Authority showed that more than a quarter of patients would not divulge their HIV status to an insurance company.<sup>2</sup> Testing by consent leads to the conclusion that acceptance implies a degree of increased risk. In these circumstances is a request for further information not to be expected?

From the public health point of view, the situation is even less satisfactory. What incentive is there for a person at high risk to be tested? For a person, ignorance of infection may be preferable to the modest extension of lifespan afforded by early

intervention; for the community, however, this view begs the question of transmission of HIV by those unaware of their status. All this serves to frustrate monitoring of prevalence and control of HIV infection.

Anonymised unlinked testing could solve this problem, but only if it was done routinely on all blood collected for other purposes and was not subject to the informed consent of each patient. I think it a pity that the Department of Health has not exercised greater authority in promoting this approach, which most responsible bodies consider to be justified and ethical. Without compromising the autonomy of the individual person, universal anonymised testing could enable actuaries to take into account the overall risks among different sections of the population and enable insurance companies to be less intrusive to those who take a responsible approach to their health in line with the objectives of *The Health of the Nation*.

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- 1 Barton S, Roth P. Life insurance and HIV antibody testing. *BMJ* 1992;305:902-3. (17 October.)
- 2 Hulme N, Smith S, Barton SE. Insurance and HIV antibody testing. *Lancet* 1992;339:682-3.

EDITOR,—We cannot allow Paul Gibbons's curious concept of life insurance to go unchallenged.<sup>1</sup> He alleges that a claim would not be paid if his death was related to AIDS. There would be little point in having a life insurance policy if certain modes of death were excluded, and it would be unusual for a bank or building society to accept such a policy to protect a loan. Provided the questions on the proposal form are answered honestly and the proposal for life insurance is accepted, the agreed benefit will be paid on death, whatever the cause.

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- 1 Gibbons P. Life insurance and HIV antibody testing. *BMJ* 1992;305:1093. (31 October.)

## Decreasing quality of semen

EDITOR,—Time and again supposed evidence for a decrease of semen quality is reported. Carlsen and colleagues presented results of a skilful review of publications on semen quality in men without a history of infertility.<sup>1</sup> On the basis of statistical analysis of data published in 61 studies from 1930 to 1990 they concluded that semen quality has declined during the recent 50 years. They took into consideration that environmental factors might be responsible for both the decrease of semen quality and the increase in occurrence of some genitourinary abnormalities.

We reanalysed data from 48 studies published since 1970 by using the SPSS statistical package and found quite different results. Regression analysis weighted by number of subjects in each study revealed a significant increase of sperm concentration over the past two decades ( $B=0.38 \times 10^6/\text{ml}$ ,  $SE=0.02$ ,  $p<0.0001$ ).  $R^2$  is an alternate estimate of how well the data fits the population. In the above regression model the proportion of the variation in sperm density explained by the model is rather small ( $R^2=0.01$ ), so that this relation, although significant, should not be overestimated.

We conclude from our calculation that the decrease of sperm concentration observed is not a continuous development, at least not for the past two decades. As only few data are available for the

period 1950-70 linear regression is not a useful model to describe the time related decrease of sperm concentration. There is no doubt that the historical values of mean sperm concentration between 1938 and 1969 are significantly higher than those found between 1970 and 1990, but from a statistical point of view there is little reason to claim a linear development and care should be taken when discussing a causal relation with environmental factors.

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- 1 Carlsen E, Giwercman A, Keiding N, Skakkebaek NE. Evidence for decreasing quality of semen during past 50 years. *BMJ* 1992;305:609-13. (12 September.)

## Managing transient ischaemic attack and ischaemic stroke

EDITOR,—Martin M Brown and Peter R D Humphrey's comment concerning the lack of suitable patients referred by general practitioners for further investigation of transient ischaemic attack is particularly important.<sup>1</sup> We recently carried out a postal survey of all 122 general practitioners in one district health authority about their attitudes to carotid endarterectomy; we received 102 replies (84%).

Although 61 of the general practitioners thought that carotid endarterectomy was of benefit in selected patients, the remainder either felt unable to give an opinion (36) or thought the procedure unacceptably hazardous (five). The results of the recent international trials had been noted by only 21 of the general practitioners.

The age of the patient was the commonest deterrent to referral (40 respondents) despite the authors' assertion that this should not be a definite barrier. In our sample the general practitioners referred for further investigation only a third of patients whose symptoms they attributed to carotid disease.

Our survey confirms the suspicion that many patients in the community will benefit from investigation and carotid endarterectomy only if efforts are made to increase awareness among general practitioners.

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- 1 Brown MM, Humphrey PRD. Carotid endarterectomy: recommendations for management of transient ischaemic attack and stroke. *BMJ* 1992;305:1071-4. (31 October.)

EDITOR,—After reading Martin M Brown and Peter R D Humphrey's recommendations for the management of transient ischaemic attack and ischaemic stroke<sup>1</sup> I calculated the implications for my district health authority of 140 000 patients and 70 full time general practitioners. About 250 patients have a stroke each year, of whom 100 die within one month, 90 remain disabled, and 60 make a good recovery. A further 60 patients suffer a transient ischaemic attack. Of the 120 patients who make a good recovery or have a transient ischaemic attack, 80 are younger than 75 and would require neurological referral for duplex scanning; this would show that 13 had a