high; the standard mortality ratio was 1.42, which is much lower than that in recently published community based studies (one British,² one American³) and similar to that in hospital based series after six years' treatment with levodopa.⁴ Olanow and colleagues also state that the dose of levodopa was fixed in arm 2 and not adjusted to clinical need; if they read our paper's patients and methods section they will see that the dose in both arms of the trial was regulated to obtain optimum improvement.

Mark T Silva and colleagues comment on the causes of death listed in table 3. Inaccuracy of death certificates is well recognised and presents particular problems in elderly people. All entries on the death certificates were coded from the *International Classification of Diseases* (ninth revision), and causes of death were coded according to the World Health Organisation's rule 3 for determining cause of death. For example, if bronchopneumonia was the sole entry in part I of the certificate and Parkinson's disease was mentioned in part II, Parkinson's disease was coded as the cause of death.

As M Gerlach and colleagues indicate, the "on treatment" hazard ratio (1.44) was not significant, but the magnitude of difference was similar to that obtained with the intention to treat analysis. Altogether 60% of the deaths occurred while patients were still in the treatment group to which they had initially been randomised. The interim analyses were carried out annually; a nominal level of significance ($P < 0.005$) was used, which maintained the overall level of significance ($P < 0.05$), assuming a maximum of 10 interim analyses. Between April 1995, when investigators were notified of the findings, and submission of the paper for publication we received additional information on patients, and reanalysis (with these new data included) altered the P value. We would emphasise that all patients' records were flagged at the NHS Central Register. In addition, most of the survivors were seen in 1994, and those lost to follow up were relatively few and equal in the two arms.

As in any other trial, an imbalance between treatment groups in an unrecorded characteristic at baseline may have occurred. The fundamental strength of randomised trials is that both known and unknown confounders are balanced across interventions. Olanow and colleagues and K A Jellinger raise the issue of misdiagnosis. The diagnosis was revised in only 6% of cases in arms 1 and 2, and on the basis of clinicopathological studies probably as many as a fifth of the patients who died would have failed to fulfil confirmatory pathological criteria for Parkinson's disease.⁵ This difficulty, however, reflects the reality of clinical practice. For misdiagnoses to explain our findings the imbalance between the two arms would have to be great. We have calculated that to replicate the number of deaths in arm 2 it would be necessary for 60-89% of patients to have been misdiagnosed, assuming a twofold to threefold relative mortality for these patients compared with those with Parkinson's disease.

A J LEES
Honorary secretary

Parkinson's Disease Research Group of the
United Kingdom,
National Hospital for Neurology and Neurosurgery,
London WC1N 3BG

J HEAD
Medical statistician
Y BEN-SHLOMO
Epidemiologist

Department of Epidemiology and Public Health,
University College London,
London WC1E 6BT

1 Parkinson Study Group. I. Impact of Deprenyl and tocopherol treatment on Parkinson's Disease in DATATOP subjects not requiring levodopa. II. Impact of Deprenyl and tocopherol treatment in Parkinson's disease in DATATOP subjects requiring levodopa. *Ann Neurol* 1996;39:29-36, 37-45.

2 Ben Shlomo Y, Marmot MC. Survival and case of death in a cohort of patients with parkinsonism: possible clues to aetiology? *J Neurol Neurosurg Psychiatry* 1995;58:293-9.

3 Bennett DA, Beckett LA, Murray AM, Shannon KM, Goetz CG, Pilgrim DM, et al. Prevalence of parkinsonian signs and associated mortality in a community population of older people. *N Engl J Med* 1996;334:71-5.

4 Clarke CE. Does levodopa therapy delay death in Parkinson's disease? A review of the evidence. *Mov Disord* 1995;10:250-6.

5 Hughes AJ, Daniel SE, Kilford L, Lees AJ. Accuracy of clinical diagnosis of idiopathic Parkinson's disease: a clinicopathological study of 100 cases. *J Neurol Neurosurg Psychiatry* 1992;55:181-4.

Compliance with infection control procedures in dentistry

EDITOR,—Infection control should be adequately taught and carefully monitored in dental and medical schools.¹ Little objective evidence exists on how compliant dental staff are in undertaking infection control measures. We previously reported that the compliance of British hospital dental staff and students was inadequate: protective gloves were often neither changed nor washed between patients.^{2,3} Only half of staff and students wore protective eyewear, and only about a third wore a face mask. As a result of those observations, infection control procedures were re-emphasised.

Four years later, over a period of five weeks, we observed the compliance of dentists and dental students working in the same primary dental care clinic of the dental hospital. We used a video camera mounted on the ceiling. The camera had been installed two weeks previously, and the staff and students were unaware of its purpose or precisely when it was operating. Procedures were recorded on videotape and later assessed by two clinicians. A total of 215 contacts between patients and the dentists and students were scrutinised, consisting of 114 examinations (79 undertaken by dentists and 35 by dental students) and 101 treatment procedures (71 by dentists and 30 by dental students). The treatments were all surgical or restorative dentistry likely to produce aerosols or splatter. Compliance with hand washing before and after contact with the patient and the use of gloves, face masks, and eye protection were recorded. Other infection control procedures, such as sterilisation of instruments, were not assessed.

We found that the health care workers washed their hands before donning gloves in only 23% of contacts, did not wear gloves in 13%, and changed gloves between patients in only 56% (table 1). They wore face masks during only 82 contacts and protective eyewear in only 62. These observations were similar to those in our previous studies, except that more staff and students were now changing gloves or washing hands between patients.

Thus, even when provided with training and all suitable protective wear, neither hospital dentists nor dental students comply completely with infection control procedures. Indeed, compliance has not greatly improved over the past four years despite additional education of dental staff and students³ and the increasing prevalence of HIV infection and hepatitis C in the general population. The attitudes of dental staff and students to infection control procedures clearly require improvement, but whether additional or modified education measures alone will suffice is unclear. Perhaps legal methods may be the only means

of ensuring adequate compliance with infection control.⁴

STEPHEN R PORTER

Senior lecturer

CRISPIAN SCULLY

Dean

MOHAMMED EL-MAAHYTAH

PhD student

Eastman Dental Institute for Oral Healthcare Sciences,
London WC1X 0LD

- 1 Scully C, Mortimer P. Gnashings of HIV. *Lancet* 1994;344:904.
- 2 Scully C, Porter SR, Epstein JB. Compliance with infection control procedures in a dental hospital clinic. *Br Dent J* 1992;173:20-3.
- 3 Scully C, Haj M, Porter SR. Infection control in dentistry. *BMJ* 1993;306:1754.
- 4 Ragg M. Patient-to-patient HIV transmission trial. *Lancet* 1994;344:1695.

Tobacco advertising

Cigarette advertisements are still allowed on television in Japan

EDITOR,—Bruce Guthrie says that if the British government is serious about reducing smoking it should ban tobacco advertising.¹ I am embarrassed to say that cigarette advertising has not yet been banned from television in Japan. Young people, especially teenage girls, tend to think that smoking is glamorous and fashionable. The increase in the number of young women who smoke is one of Japan's most important problems.² According to the Japan Tobacco Corporation, the prevalence of smoking among women aged 20-29 was 16.6% in 1985 and had risen to 19.5% in 1990.³

According to a survey conducted in 1995, the prevalence of smoking among women in their 20s was 23.3%. The survey also showed that the prevalence of smoking was 58.8% among men and 15.2% among women—in other words, about 27.3 million men and 7.5 million women smoke in Japan. The number of female smokers was the highest since the Japan Tobacco Corporation began its surveys in 1965. Although a total ban on all tobacco advertising may be difficult, the Japanese government should prohibit cigarette advertising on television by law to indicate that it is taking the people's health and future seriously.

HIROSHI KAWANE
Associate professor

Department of Medicine,
Kawasaki Medical School,
Kurashiki City,
Okayama 701-01,
Japan

- 1 Guthrie B. Tobacco companies violated advertising restriction. *BMJ* 1995;311:1501. (2 December.)
- 2 Kawane H. The influence of the US tobacco industry in foreign markets. *N Engl J Med* 1991;325:815.
- 3 Kawane H. Smoking among women in Japan. *Lancet* 1991;337:857.

Committee exists to monitor agreements on tobacco advertising

EDITOR,—I read with concern the letter from Bruce Guthrie reporting his survey of poster advertisements for tobacco near schools.¹ Guthrie does not make any mention of the Committee for Monitoring Agreements on Tobacco Advertising

Table 1—Hand washing and use of gloves by dentists and dental students during contact with patients. Figures are numbers (percentages) of contacts

	Examinations		Treatments	
	Dentists (n=79)	Dental students (n=35)	Dentists (n=71)	Dental students (n=30)
Hands washed before gloves put on	11 (14)	9 (26)	9 (13)	21 (70)
Gloves worn	64 (81)	29 (83)	64 (90)	30 (100)
Gloves changed between patients	50 (63)	7 (20)	45 (63)	18 (60)
Gloves neither changed nor washed between patients	5 (5)	0	8 (11)	1 (3)

and Sponsorship, of which I am chairman. The committee's role is to examine precisely the sort of issue that Guthrie raises. The committee treats all complaints that it receives about tobacco advertising seriously and investigates them fully. We are keen to look into the concerns raised by Guthrie and have written to him requesting the details of his research. I understand that Guthrie conducted a similar survey in 1994, the results of which we also sought, in April 1994, but have not yet received.

The committee is concerned to ensure compliance with the voluntary agreements, and we have already commissioned an independent national audit of poster sites near schools. The results of this exercise will be included in our ninth report, to be published this year.

CLIVE WHITMORE
Chairman

Committee for Monitoring Agreements on
Tobacco Advertising and Sponsorship,
PO Box 3982,
London SK1 8YJ

1 Guthrie B. Tobacco companies violated advertising restriction. *BMJ* 1995;311:1501. (2 December.)

Clinical guidelines may obviate need for thought

EDITOR,—Having read Brian Hurwitz's editorial considering the fate of doctors who deviate from clinical guidelines and how they might fare in court,¹ I thought that the everyday reality of clinical guidelines as seen from the perspective of a senior house officer might be of interest. Clinical guidelines are usually issued by specialist departments as an aid to staff. The number of guidelines gradually proliferates: most hospitals will have protocols for situations varying from the management of neutropenia induced by chemotherapy to the indications for which a full blood count may be requested by the casualty senior house officer. In almost all cases doctors have the greatest input into the formulation of these guidelines. So what is there to fear?

Unfortunately, in everyday practice it is not doctors but junior radiographers, biochemists who are medical laboratory scientific officers, or pharmacists who use the guidelines, absolutely confident in their knowledge of their department's policy and unhesitating in their refusal of deviant requests. If a request does not comply with the guideline, explanation rarely makes any difference and inevitably results in lengthy and exasperating discussions with their seniors. The black and white simplicity of, for example, an x ray department's policy on requests for ultrasonography may run the risk of obviating the need for thought and the consideration of factors not included in hospital protocols. Even a consultant's decision that deviates from department policy will often be regarded not as evidence of clinical acumen but as proof that even senior doctors are unable to understand the guideline.

The senior doctor may have the last word now, but for how long can the medical profession survive the undermining criticism that clinical guidelines so often serve to legitimise? Doctors must be cautious when being party to the development of hospital protocols. Though I am glad that I have memorised the European and UK Resuscitation Councils' guidelines, I hate the fact that the ward pharmacist thinks that I am a good doctor because I know my hospital's laxative policy by heart.

DOMINIC HEANEY
General medical senior house officer 1

Western Infirmary,
Glasgow G11 6NT

1 Hurwitz B. Clinical guidelines and the law. *BMJ* 1995;311:1517-8. (9 December.)

HTLV-I screening in Britain

Blood supply in Britain should be made safer

EDITOR,—A Pagliuca and colleagues' editorial on the developments needed to improve Britain's blood transfusion service after the recent reforms is welcome.¹ The blood supply in Britain is manifestly not as safe as it can reasonably be made. We do not screen blood for human T cell leukaemia/lymphoma virus type I (HTLV-I) despite the seroprevalence of the virus being 1 in 20 000. This results in an estimated 200 recipients being infected annually. France, Sweden, and the Netherlands, which have similar prevalences of HTLV-I, do screen for it.¹ We do not screen blood for hepatitis B core antibody, allowing an estimated maximum of 50 cases of transmission a year (R Tedder, personal communication). France and Germany and many other countries do screen for this antibody. We do not "quarantine" pooled fresh frozen plasma or cryoprecipitate and retest donors at three months before its release, as is done in the Netherlands.

Even within Britain standards differ among regions, making uniform access to the best care impossible. Some regions advocate prophylactic antenatal anti-D for first pregnancies in rhesus negative women while others do not despite ample evidence of its efficacy in reducing haemolytic disease of the newborn.^{2,3} Some regions state the full rhesus and Kell antigen types in addition to ABO and RhD types for all red cells. This encourages, for example, the selection of blood that is negative for Kell antigen for all female subjects before the menopause, enabling the prevention of the rare but severe anaemia related to Kell antigens in newborn infants.⁴

It is ironic that in Britain, where blood supplies are arguably among the less stringently tested in Europe,¹ autologous blood transfusion is rarely provided. Needless to say, our European neighbours have readily accessible, well publicised, and well used autologous services.⁵

I hope that the £10m saved by the National Blood Authority is deployed to help correct these deficiencies.

LA KAY
Consultant haematologist

46 Clarence Terrace,
London NW1 4RD

- 1 Pagliuca A, Pawson R, Mufti JG. HTLV-I screening in Britain. *BMJ* 1995;311:1313-4. (18 November.)
- 2 Tovey LAD, Townley A, Stevenson BJ. The Yorkshire antenatal anti-D immunoglobulin trial in primigravidae. *Lancet* 1983;ii:244-6.
- 3 Letsky EA, Da Silva M. Preventing Rh immunisation: much scope for improvement. *BMJ* 1994;309:213-4.
- 4 Warwick R. Erythropoietin suppression in fetal anemia. *Am J Obstet* 1994;171:247-52.
- 5 International Society of Blood Transfusion. *Practical methods to avoid blood transfusion. Proceedings of a satellite symposium of the ISBT, Lugano, May 1989.* Manchester: ADIS Press International, 1989.

Antenatal screening is important

EDITOR,—In their editorial A Pagliuca and colleagues revive the debate on whether British blood donors should be screened for human T cell leukaemia/lymphoma virus type I (HTLV-I).¹ Five European Union countries with rates of HTLV infection among blood donors similar to that in Britain now screen blood donors routinely, and Portugal will start to do so this year, so we agree that Britain will need to follow suit.

Antenatal screening may, however, be an even more urgent issue than screening of blood donations. In the four studies to date the seroprevalence of antibodies to HTLV-I and HTLV-II in pregnant women in Britain has been between 10 and 50 times higher than that in blood donors.^{2,3} Most cases of adult T cell leukaemia/lymphoma occur after

infection in childhood,⁴ which may be due to blood transfusion in some cases. More important is vertical transmission: 25% of babies born to infected mothers become infected if they are breast fed, but this figure is reduced to 5% by bottle feeding.⁵ Although HTLV-I antibodies can be detected from dried blood spots obtained by heel prick, we recommend antenatal diagnosis, which allows time for counselling and for the mother to make an informed decision about breast feeding.

The HTLV European Research Network addressed the problems of cost and diagnosis at a workshop of virologists, epidemiologists, and representatives of the blood transfusion services in 1994. We recommend screening first with an inexpensive, sensitive assay (such as a particle agglutination assay) followed by a more specific enzyme linked immunosorbent assay (ELISA), which reduces the number of expensive confirmation assays required. If a western blot that includes recombinant envelope peptides is used the following interpretations are recommended: HTLV-I/II negative if no bands are detected; HTLV-I positive if antibodies to p19, p24, rgp21, and rgp46-I are present; and HTLV-II positive if antibodies to p24, rgp21, and rgp46-II are present. Band patterns that do not fulfil these criteria should be described as indeterminate; these are rarely positive for HTLV-I/II proviral DNA by the polymerase chain reaction.

We agree that blood infected with HTLV-I or HTLV-II should not be transfused, especially to those most at risk of developing disease (children) or transmitting the infection (expectant mothers and sexually active people). Additionally, we believe that mothers should be given the opportunity not to transmit their infection to their children.

JN WEBER
Professor of communicable diseases

G P TAYLOR
Scientific secretary, HTLV European Research Network

St Mary's Hospital Medical School,
London W2 1NY

- 1 Pagliuca A, Pawson R, Mufti JG. HTLV-I screening in Britain. *BMJ* 1995;311:1313-4. (18 November.)
- 2 Tossell JHC, Ades AK, Peckham C, Mortimer P, Weber JN. Infection with human T-cell leukaemia/lymphoma virus type I in patients attending an antenatal clinic in London. *BMJ* 1990;301:95-6.
- 3 Parker SP, Taylor MB, Ades AE, Cubitt WD, Peckham C. Use of dried blood spots for the detection and confirmation of HTLV-I specific antibodies for epidemiological purposes. *J Clin Pathol* 1995;48:904-7.
- 4 Murphy EL, Hanchard B, Figueroa JP, Gibbs WN, Lofters WS, Campbell M, et al. Modelling the risk of adult T-cell leukaemia/lymphoma in persons infected with human T-lymphotropic virus type I. *Int J Cancer* 1989;43:250-3.
- 5 Oki T, Yoshinaga M, Otsuka H, Miyata K, Sonoda S, Nagata Y. A sero-epidemiological study on mother-to-child transmission of HTLV-I in southern Kyushu, Japan. *Asia Oceania J Obstet Gynaecol* 1992;18:371-7.

Failure to screen may be a false economy

EDITOR,—We have recently seen a case of acute adult T cell leukaemia/lymphoma that leads us to support A Pagliuca and colleagues' call for a reappraisal of screening of blood donors for human T cell leukaemia/lymphoma virus type I (HTLV-I).¹

A 47 year old white man presented with hypercalcaemia, a rash, dyspnoea, and lung infiltrates on chest radiography. Skin biopsy and serological testing confirmed the diagnosis of acute adult T cell leukaemia/lymphoma associated with HTLV-I, and, despite combination chemotherapy, his condition deteriorated rapidly and he died. He had no obvious risk factors for HTLV-I infection: no history of blood transfusion, injecting drug use, or travel to areas in which HTLV-I is endemic. The man had donated blood on 24 occasions from 1981 to 1990, and an extensive look back programme was started to trace all the recipients of cellular blood components derived from his