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.

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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 the ward pharmacist thinks that I am a good doctor because I know my hospital's laxative policy by heart.

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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.

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1 Pagliuca A, Pawson R, Mufti JG. HTLV-1 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 primagravidae. *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.

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1 Pagliuca A, Pawson R, Mufti GJ. HTLV-I screening in Britain. *BMJ* 1995;311:1313-4. (18 November.)
2 Tosswill 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

donations. Twenty eight patients had received transfusions of either red cells or platelet concentrate, 18 of whom had since died. Two recipients could not be traced. The remaining eight patients were contacted and offered testing for HTLV-I antibody after counselling. Two patients declined to be tested. Of the six patients who were tested, five yielded negative results. The only recipient who was positive for HTLV-I antibody was a child who had received a transfusion of platelet concentrate during major cardiac surgery at the age of 9 days in 1985. The child was well.

This case clearly illustrates two important points that Pagliuca and colleagues made: that ethnic origin and other risk factors are not good predictors of HTLV-I infection in donors (and therefore that selective screening of donors is not effective) and that failure to screen for HTLV-I antibody on grounds of cost may be a false economy if expensive look back programmes have to be undertaken. We also believe that a strategy of screening the existing donor population once and thereafter screening only new donors is worth serious consideration.

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1 Pagliuca A, Pawson R, Mufti GJ. HTLV-I screening in Britain. *BMJ* 1995;311:1313-4. (18 November.)

Donors and recipients of organ transplants should also be screened

EDITOR,—In their editorial A Pagliuca and colleagues argue the case for screening blood donors in Britain for human T cell leukaemia/lymphoma virus type I (HTLV-I).[1] We believe that potential donors and recipients of organ transplants are another group who should be screened for carriage of the virus. Transmission of HTLV-I by blood transfusion around the time of transplantation is well recognised and has been associated with the rapid development of diseases related to the virus.[2] Other authors have pointed out that donor organs themselves are a potential source of the virus.[3] In addition, we recently described the development of adult T cell leukaemia/lymphoma in a West Indian carrier of HTLV-I nine months after he received a renal transplant; the disease was rapidly fatal.[4] Other, similar cases have also been reported.[5]

Such cases suggest that carriers of HTLV-I who receive transplants and immunosuppressive treatment may be at increased risk of developing adult T cell leukaemia/lymphoma. About 1500 renal transplant operations are performed annually in Britain, and if the prevalence of carriage of HTLV-I is as high as 1 in 500[1] we estimate that two or three high risk patients undergo transplantation each year. Although the exact prevalence of carriage of the virus among the transplant population is not known, transplant recipients who have survived long term and are carriers of HTLV-I are few because of the low rates of transplantation in Japan and the Caribbean. In view of the poor prognosis associated with adult T cell leukaemia/lymphoma it seems prudent to screen patients before operation, particularly those in high risk groups.

Screening would allow the prevalence of carriage of HTLV-I among potential recipients to be assessed and would determine the true association between such carriage and the development of adult T cell leukaemia/lymphoma after transplantation. If an association was substantiated, perhaps those patients most at risk should be excluded from transplantation except in exceptional circumstances.

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1 Pagliuca A, Pawson R, Mufti GJ. HTLV-I screening in Britain. *BMJ* 1995;311:1313-4. (18 November.)
2 Gout O, Baulac M, Gessain A, Semat F, Saal F, Peries F, *et al.* Rapid development of myelopathy after HTLV-I infection acquired by transfusion during cardiac transplantation. *N Engl J Med* 1990;322:383-8.
3 Perez G, Ortiz-Interian C, Bourgoignie J, Lee H, de Medina M, Allain J, *et al.* HIV-I and HTLV-I infection in renal transplant patients. *J AIDS* 1990;3:35-40.
4 Jenks PJ, Barrett WY, Raftery MJ, Kelsey SM, van der Valt JD, Kon SP, *et al.* Development of human T-cell lymphotropic virus type I-associated adult T-cell leukemia/lymphoma during immunosuppressive treatment following renal transplantation. *Clin Infect Dis* 1995;21:992-3.
5 Zanke BW, Rush DN, Jeffery JR, Israel LG. HTLV-I T-cell lymphoma in cyclosporine-treated renal transplant patients. *Transplantation* 1989;48:695-7.

Computerised prescribing of chemotherapy reduces errors

EDITOR,—S M Cotter advocates computerised prescribing as a useful addition to a clinical pharmacy service.[1] In 1993 we introduced a computerised prescribing system for cytotoxic chemotherapy in order to improve patients' care, rationalise prescribing, and increase the quality, clarity, and safety of prescriptions. Other advantages include improved compliance with protocols, ease of access to clinical data, a decrease in prescribing time, a reduction in errors of transcription, and help with audit.[2-4]

At any time up to 50 research and standard chemotherapy protocols are available in our unit. Chemotherapy regimens are often complex, yet compliance is essential for patients' safety and to maintain good clinical practice. Most prescribing for chemotherapy is done by senior house officers undertaking the medical oncology attachment on a general medicine rotation. They do not normally have previous experience in oncology and are not expected to know all the intricacies of chemotherapy regimens. Pressures to reduce junior doctors' hours have led our unit to adopt as many procedures as possible to rationalise working practice.

Our system was developed with Filemaker Pro software on the unit's computer network by a multidisciplinary team including the pharmacist, business manager, doctors, and nursing staff. Computerised prescribing of chemotherapy requires identification of the patient with his or her minimum dataset; selection of the regimen to be given, including the particular cycle within the treatment programme; the patient's height and weight; and the date that chemotherapy has to be given. The surface area as calculated from the formula of Du Bois and Du Bois is used to calculate the dose for most of the regimens,[5] and the dose can be reduced below 100% when this is clinically indicated. Notes are provided on the administration of the chemotherapy regimen, its emetogenicity, and the formula for calculating the dose if the surface area is not used. A prescription and pharmacy worksheet are printed and include details of the complete regimen. There is rigid control of access, an audit trail for logging in and off, security levels for overriding warnings, and password protection of prescribing.

We found that a pharmacist made 14 interventions during a 12 week period before computerisation and none during a 12 week period afterwards. In a random sample we found two errors in five handwritten charts and none in computerised charts. As the system promotes safe and effective prescribing, time is ultimately freed for other clinical work.

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1 Cotter SM. Avoiding drug errors. *BMJ* 1995;311:1367. (18 November.)
2 Schroeder CG, Pierpaoli PG. Direct order entry by physicians in a computerised hospital information system. *Am J Hosp Pharm* 1986;43:355-9.
3 Dillner L. Illegible writing kills patients. *BMJ* 1992;305:604.
4 Jenkins D, Cairns C, Barber N. The quality of written inpatient prescriptions. *International Journal of Pharmacy Practice* 1993;2:176-9.
5 Du Bois D, Du Bois EF. Clinical calorimetry 10th paper—a formula to estimate the approximate surface area if height and weight be known. *Arch Intern Med* 1916;17: 863-71.

Infertility may lead couples to adopt children

EDITOR,—As an involuntarily childless couple, we wish to respond to Jill Emery's personal view of infertility.[1] While we acknowledge the pain and disappointment of not being able to have a child of our own, our experience of infertility has had—perhaps surprisingly to some people—a very positive influence on our lives. It has certainly strengthened our marriage, made us appreciate our family and friends for their unstinting support, and reminded us that we have otherwise perfect health. Most important of all, through our childlessness we have come to consider adoption seriously; it is a chance for us to give a loving and secure home to a child who might otherwise never know such a thing.

The process of adoption is not easy and, rightly, entails rigorous assessment procedures. We are, however, driven by the knowledge that what we are trying to do is right—right for a child, for us, and for society.

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Patients who reattend after head injury

Criteria for performing skull radiography on first attendance need to be better defined

EDITOR,—We share the frustration that Gordon Murray expresses in his commentary on Miranda Voss and colleagues' study.[1] Their paper presents the clinical features of 606 patients who reattended for the consequences of head injury but fails to give a detailed account of the 30 important patients who underwent neurosurgery when they reattended. In the light of this, some of the authors' conclusions may be misleading.

Firstly, the authors state that patients who reattend are a high risk group in themselves. It could be argued that their level of risk depends on the diagnostic work up performed at their first attendance. The authors state that 16 of the 30 patients who had neurosurgery had a vault fracture on first *x* ray examination (in addition to loss of consciousness or amnesia). We do not know much