global society we have the resources we need to succeed. The commitments made—or skirted—in Johannesburg will show if we have the will.

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Making blood safer

Stricter vigilance and fewer transfusions are the way forward

Until recently it seemed that the United Kingdom's blood services could maintain continuous improvement in blood safety by the progressive introduction of extra screening tests and new procedures. These would, it was hoped, minimise the risk of bloodborne infection without the ongoing supply of volunteer donors' blood being compromised. Today that hope seems vain unless some decisive actions are taken. Not only does allogeneic blood continue to carry general microbial and immunological risks that can never be entirely eliminated, but also there is no way at present to deal with the possibility that a proportion of blood donors in the United Kingdom may turn out to transmit variant Creutzfeldt-Jakob disease. No current test can identify that risk. Even if such a test were to be devised, the time needed to evaluate its specificity, sensitivity, and acceptability would mean that many months, possibly several years, would separate its discovery from its routine application; and once applied it might put great strains on blood procurement in United Kingdom.

The risk of Creutzfeldt-Jakob disease, discussed widely in medical journals and in the lay press,[1] remains notional, and so far no evidence exists that either the classical or the variant form of the disease can be transmitted by transfusion. Nevertheless, experiments with the bovine spongiform encephalopathy agent in sheep and mice show that in variant Creutzfeldt-Jakob disease, at least, involvement of the lymphoreticular system might occur relatively early.[2] The potential risk from allogeneic transfusion is therefore undeniable. This creates a dilemma for our blood services, heightened by the recent judgment by Mr Justice Burton that defined blood as a "product" under the Consumer Protection Act 1988. He found that, avoidable or not, "if the existence of the defect (in that particular case infection with non A non B hepatitis viruses) was known or should have been known in the light of accessible information, then the producer (the National Blood Service] continued to produce at his own risk."[3] Allogeneic blood transfusion is an everyday lifesaving procedure for which there is mostly no alternative. Thus the only possible response to that judgment must be that the necessity for each transfusion is now carefully weighed up beforehand by senior clinical staff and the search for alternatives to allogeneic transfusion intensified.

When transfusion is resorted to, what steps can be taken to limit the risk? Blood from the United Kingdom is already leucodepleted, largely removing the lymphocytes that are one possible source of infectivity for variant Creutzfeldt-Jakob disease, and plasma for fractionation is sourced from the United States (which is free of bovine spongiform encephalopathy). Further expedients are, however, available that would limit exposure to allogeneic blood. Half of all red cell concentrates are used in support of planned surgery, and this reliance could be reduced by correction of preoperative anaemia, autologous transfusion (particularly through cell salvage at operation), use of pharmacological agents to reduce bleeding, anaesthetic techniques to minimise blood loss, and acceptance of a lower postoperative haemoglobin where appropriate.[4 5]

Other ploys could be considered. The number of donors to whom a recipient is exposed might be reduced in various ways—fewer units given, individual donors assigned to recipients, and larger volumes collected from some donors. The incorporation of very many units into a transfusion—whether, for example, as platelet concentrates or fresh frozen plasma—should, as far as is feasible, be avoided. For infants and pregnant women especially, consideration could be given to sourcing blood components from outside the United Kingdom. In fact, last week the Department of Health decided to treat babies and young children with imported blood only. As a further precaution, should previously transfused people not be allowed to donate blood? This would greatly reduce supply at a time when donor recruitment and retention are becoming more difficult. A better first step would be to contain risk and conserve supplies by observing the general rule that the aim of allogeneic transfusion is to save life and prevent deterioration, not simply to hasten recovery.

To put these changes into effect in the United Kingdom will require a cultural shift among clinicians, managers, and policy makers. No longer should clinicians prefer the convenience and immediate benefits of allogeneic transfusion over more troublesome but safer alternatives. Managers and policy makers, too, should be forced to take account of the costs of possible long term harm and delayed liability and not be deterred from investing in alternative procedures to allogeneic transfusion. It also needs to be decided who will take responsibility for driving the changes that are necessary to minimise exposure to allogeneic blood. Clinical end users, although they are becoming more aware of the risk, mostly do not regard safety of blood as their responsibility. The recipients themselves are not empowered to demand change (although they should be informed of the risks as well as the benefits of transfusion and ought to have a louder voice than they do). The blood services, though they are anxious to address the problem, would be put in an invidious position if expected not only to be cost efficient providers but also to ration the supply and police the use of blood.

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At two recent symposiums, the United Kingdom's chief medical officers have sought to educate senior health service managers and clinicians in better transfusion practice and the alternatives to allogeneic transfusion. Without reinforcement of their message, however, sustained change seems unlikely. By contrast, the French government has, since a highly politicised blood scandal in the mid-1980s, implemented a policy of national haemovigilance that has brought about a substantial reduction in the previously high rate of allogeneic blood use. A similar haemovigilance is in place in the Irish Republic after a costly failure to oversee national arrangements for the preparation and supply of anti-D immunoglobulin.

A haemovigilance programme is overdue in United Kingdom, with mandatory local participation, new funds to pay for training, innovation, and audit, removal of incentives to supply and use blood, and an independent body to administer the programme. Although it may turn out to be more expensive to use blood sparingly in the short run, lower consumption of allogeneic blood will both minimise the danger from variant Creutzfeldt-Jakob disease and alleviate the growing problem of recruiting loyal volunteer donors. If the threat of variant Creutzfeldt-Jakob disease transmitted by transfusion materialises it will be hard to defend the casual practices in the use of blood that linger from an era when it was believed that British blood was by definition safe. The remedy is not to wait for the unscheduled arrival of yet another screening test, but to bring allogeneic blood use under firm control now.

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Child labour

Vast problem whose effects on children's health remain largely unstudied

Child labour today represents the largest single cause of child abuse across the globe. Most of it takes place in economically less developed countries, and much is hidden. In a minority of instances the effects of child labour may be neutral or even positive, such as helping out in a family run shop during school holidays. In recent years therefore the emphasis has shifted from the abolition of all forms of child labour to the elimination of intolerable and hazardous child labour. The International Labour Organisation estimates that worldwide 110 million children aged 5-14 years are engaged in labour that can be described as hazardous or intolerable.[1] Most of this takes place in Asia and the Pacific, although the highest prevalence is in Africa, where children younger than 14 years make up a third of the total workforce.[1]

Slavery, bonded labour, prostitution, and the recruitment of child soldiers are all intolerable and illegal. Yet in central and west Africa alone an estimated 200 000 children are traded each year.[2] Landlords can bond a child worker for as little as US$1.50 (£0.95, €1.50), and family debts are manipulated so that there is no hope of repayment. The commercial sexual exploitation of children is increasing, and organised networks can be found in Latin America, Asia, Africa, and, most recently, eastern Europe. An estimated 1 million children in Asia alone are victims of the sex trade, much of it focused around sex tourism.[3] Paradoxically, as prostitutes the children often fall victim to the very legal system that should be protecting them. The recruitment of children as combatants is an increasing problem, and the factors responsible for this are becoming clearer.[4] More than 10 000 boys and girls were forcibly recruited in the conflict in Sierra Leone as soldiers, cooks, porters, and sexual partners for male combatants.[5]

The bulk of child labourers work in agriculture and industry, often in hazardous environments. In 1992 in Pakistan, over two thirds of the estimated 1.5 million people employed in the carpet industry were children.[6] Industrial and agricultural child labourers work long, monotonous hours, with few breaks. Their work is unremitting, their pay meagre. These children, especially those in export industries, represent the most familiar face of child labour to Western eyes. Less familiar are children in domestic service. In Indonesia alone there are an estimated 5 million child domestic workers, most of them female.[2] They are often handed over to employers, many of whom earn a relatively low income themselves, in the belief that they will be afforded a better life—a belief that is misplaced. Children in domestic service work long hours, isolated from friends and family. Educational opportunities are very rare, and if the children fall ill they must fend for themselves or are sent home. A culture of "social apartheid" often feeds this practice, and the belief that employers are somehow acting as benefactors has been described as unshakeable.[7]

Few reliable data exist on the health of working children. Most of the data that do exist comes from small scale studies of children involved in industry. The growth and development of children in industry and agriculture are severely compromised, and these children risk a wide range of diseases and injuries.[8] Numerous reports describe poisoning, serious skin and other infections, chronic lung disease, cancers, burns, amputations, skeletal deformities, and impairments to hearing, vision, and immune function.[8] Child prostitutes risk pregnancy and sexually transmitted diseases including HIV infection, and children in domestic service are often victims of physical, psychological, and sexual abuse. Children in combat

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