August 2004 the UK government completed a consultation on "Proposals to exclude overseas visitors from eligibility to free NHS primary medical services,"⁷ aiming to align primary care with changes in April 2004 that required NHS trusts to charge overseas visitors for hospital treatment.⁸ After 16 months the government has not reached a decision, however, and responses to the consultation have not been published.

Currently general practices have the discretion to register overseas visitors for NHS primary medical services, although such registration does not provide entitlement to referral for hospital care. Under the new proposals practices would have no discretion to register overseas visitors, failed asylum seekers, people who overstay their visas, and those without official papers, although the provision for emergency and immediately necessary treatment would remain. The consequences to health of restricting access to secondary care have not been scrutinised by the government, but anecdotal cases have highlighted concerns particularly about maternity care and management of HIV for such visitors. And confusion among some NHS staff about charging arrangements deters many people from seeking care to which they are entitled.^{9, 10}

General practices do not have the resources or, in many cases, the desire to check patients' immigration status. The possible detriment to community relations might be considerable and the health consequences of denying primary care might be uneconomic, leading to emergency hospital admissions and pressure on accident and emergency departments. Most importantly, denying free basic health care to the most vulnerable groups in society, who are legally prevented from working and unable to pay charges, is ethically unsupportable and a breach of human rights.¹¹ Indeed, denying such access to care may mean that general practitioners would be in conflict with their professional duties as doctors registered with the UK General Medical Council.¹²

While access to free primary care remains an entitlement for refugees, asylum seekers, and all

migrant groups, these rights should be advertised and provision of care should be improved through advocacy and support to practices. If the government persists with its proposals, however, the provision of services by charities and non-governmental organisations will become a necessity. We can only hope that the Secretary of State reviews this policy and ensures that the NHS continues to provide a service to everyone living in the United Kingdom.

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Competing interests: Both SAH and KB are GMS (general medical services) general practitioners in Tower Hamlets.

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Cerebral palsy and perinatal exposure to neurotropic viruses

A new study raises further questions about the role of infection

Research p 76

Cerebral palsy, one of the most common causes of serious long term disability, is a term covering the conditions found to have "non-progressive but often changing motor impairments secondary to lesions or anomalies of the brain arising during early development."¹ The final irreversible neurological damage frequently results from a causal pathway created by the joint effects of several factors including genetic constitution, fetal infection, preterm birth, and problems during delivery. The role of postnatal infection, such as catastrophic meningitis or encephalitis in infancy or early childhood, is usually clear, but the part played by infection in congenital or neonatal cerebral palsy is more complex and needs

more investigation.² A case-control study in this issue (p 76), reporting the prevalence of neurotropic viral nucleic acids in blood spots from routine neonatal screening, if confirmed, may take us a little further.³

Several maternal viral infections, including cytomegalovirus, can be passed to the fetus at different stages in pregnancy.⁴ Estimates based on prospective studies of mothers who have had a primary cytomegalovirus infection in pregnancy suggest that 5-10% of cases of cerebral palsy, depending on the population prevalence, might be attributable to this virus.⁵ Also, evidence of the role of perinatal maternal infection in preterm pregnancy, itself a cause of cerebral palsy, is increasing. A large number of studies have found an

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excess of surrogate markers of perinatal infections in preterm and term babies who were later found to have cerebral palsy, although the extent to which these associations reflect direct causal effects is unclear.⁶

Gibson and colleagues report how they used the South Australia newborn screening register to retrieve the dried blood spots that had been taken from neonates who were subsequently notified to the local cerebral palsy register and from controls.³ In most developed countries these blood spots are samples taken from all babies after birth to screen for phenylketonuria. They are often retained on Guthrie cards. The South Australian study used such samples to measure the prevalence of the nucleic acids of enteroviruses; herpes simplex virus types 1 and 2; Epstein-Barr virus; cytomegalovirus; human herpesviruses 6, 7, and 8; and varicella zoster virus. The tests were not quantitative, and viral load—which may determine risk of fetal infection—was not measured.

The authors found viral nucleic acids in a high proportion of spots taken from controls: 40% tested positive for at least one. The controls had been matched to the cases by place of care, and the study included an unduly high proportion of babies born in metropolitan teaching hospitals and born preterm. Even so, the prevalence of viral nucleic acids was very much higher than expected from previous epidemiological work.

For instance, 26.7% of the control blood spots tested positive for cytomegalovirus. Studies in London teaching hospitals in the 1980s found positive cell cultures for cytomegalovirus in 3/1000 newborns, looking at samples derived from neonatal throat swabs in one study⁷ and searching for viruses in urine in another.⁸ However, as the Australian authors point out, the prevalence they report does not reflect active fetal infection; it may reflect perinatal exposure to viruses. Moreover, the results may vary with the age of the babies when tested and with methods of storage and retrieval of samples. And the high prevalence may reflect non-specific signals, given that the investigators were co-amplifying multiple viral nucleic acids in very small samples.

Despite these differences from expected absolute prevalence, the reported risks are consistent with those from previous work. The excess of positive tests for cyto-

megalovirus in preterm compared with term controls was significant (odds ratio 1.6). In the sample as a whole, and in babies with gestational age of 37 weeks or more, there was a significant association between a positive test for any viral exposure and cerebral palsy, but also some distinctive associations with different viruses. The authors postulate that, if the associations were causal, 4-5% of all cases of cerebral palsy in these babies might be attributable to perinatal exposure to a group of viruses including human herpesviruses 6 and 7 and varicella zoster virus.

The research group plan to follow this study with prospective and clinical investigations, looking also at interactions with other contributory factors. Overall this is an interesting and provocative contribution to the growing body of research into the role of maternal and fetal infections in cerebral palsy, even though it is based on methods that need further validation.

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Introducing new health interventions

There's still a long way to go to get health technology evidence into practice

Throughout the world, healthcare innovations have put pressure on limited resources while governments and patients have demanded top quality, yet cost effective, services. This makes it increasingly difficult for anyone who plans, provides, or receives health services to judge which intervention to use—what works, how well, at what cost, for whom, in what circumstances, and with what impact? Health technology assessment (HTA) is a multidisciplinary specialty whose purpose is to bring together the evidence to answer those questions.¹ It boasts a thriving international scientific society (Health Technology

Assessment International; www.htai.org) and a global network of more than 40 public sector agencies (International Network of Agencies for Health Technology Assessment; www.inahta.org). It evaluates the costs, effectiveness, and sometimes the wider impact of any intervention used in the care of patients, including medicines, devices, techniques, and skills. In the UK, for example, the HTA programme (www.ncchta.org) has produced more than 300 reports that have had an

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