Letters

Website: **bmj.com**
Email: **letters@bmj.com**

Few university students from overseas have been vaccinated against meningococcal infection

EDITOR—It is now a year since the new conjugated meningococcal group C vaccine was introduced to the United Kingdom.[1] Students in higher education are at a higher risk of meningococcal disease than other students and were targeted in the government vaccination campaign. Because of the limited supply and late licensing of the new vaccine the pre-existing polysaccharide vaccine was used.

To determine the effect of the policy we performed a cross sectional study of 3028 first year undergraduate and overseas postgraduate students at the University of Birmingham in autumn 1999. Only 1070 (51%) of the 2110 students from the United Kingdom had been vaccinated before arriving at the university. The main reason for this low uptake was a shortfall in supply of the vaccine to general practitioners. Uptake of the vaccine was not uniform: significantly more students reading health related subjects than those reading arts, social science, or science were vaccinated (227/383 (59%) *v* 843/1727 (49%); $P < 0.001$).

Fortunately, this academic year (2000-1) most first year undergraduate students from the United Kingdom will have been vaccinated as part of the school programme. An alarming finding from our study, however, was that only 31 (4%) of the 826 overseas students had been vaccinated before arrival. This left both the students and those with whom they came into contact at higher risk of meningococcal infection.

Overseas students will continue not to be vaccinated against meningococcal infection in future years while the countries of origin do not have a school vaccination programme similar to that in the United Kingdom. At present there seems to be no policy for vaccinating this group in the future. Recent reports of an increase in W135 serotype meningococcal disease with the Hajj pilgrimage[2] and high levels of carriage in the Gambia[3] highlight the potential for importing the meningococcus from outside the United Kingdom.

Our study also found that international students did not receive adequate health promotion information before arriving in the United Kingdom. Their first contact with university health services might be at the point of registration, and there may be only a small window of opportunity to target these students during their first weeks in the United Kingdom. If further vaccination programmes are to be effective—for example, if a group B vaccine becomes available—lessons must be learnt from the failings of the group C programme. Careful consideration of the needs of university medical practices is required, as sometimes they do not have enough staff or vaccine supplies to meet demand.

Matthew R Edmunds *4th year medical student*
James E Davison *4th year medical student*
University of Birmingham, Birmingham B15 2TT

Annette L Wood *consultant in communicable disease control*
annette.wood@hq.birminghamha.wmids.nhs.uk
Birmingham Health Authority, Birmingham B16 9RG

Vijay Raichura *medical officer*
University of Birmingham, Health Centre, Birmingham B15 2SE

1 Wise J. UK introduces new meningitis C vaccine. *BMJ* 1999;319:278.
2 Communicable Disease Surveillance Centre. Meningococcal infection in pilgrims returning from the Haj. *Commun Dis Rep CDR Wkly* 2000;10:129.
3 MacLennan JM, Urwin R, Obaro S, Griffiths D, Greenwood B, Maiden MCJ. Carriage of serogroup W-135, ET-37 meningococci in the Gambia: implications for immunisation policy. *Lancet* 2000;356:1078.

Do not resuscitate decisions

Rigid discussion process before making these decisions may cause distress

EDITOR—Ebrahim writes about do not resuscitate decisions.[1] Elderly patients and their relatives overestimate the success of cardiopulmonary resuscitation,[2] as do doctors and nurses.[3] Healthcare professionals need to be realistic about the poor success rate. Only 10-20% of all those in whom cardiopulmonary resuscitation is attempted in acute general hospitals will live to be discharged.[4] Selected elderly patients can do as well as younger patients, and old age should not be used as a basis for a do not resuscitate order, but elderly patients with chronic illness probably have less than 5% survival to discharge.[5]

Resuscitation is a medical treatment, and as with other treatments there are times when it will be futile and therefore inappropriate. We should discuss resuscitation when do not resuscitate orders are made on the basis of quality of life or the patient wants to discuss it. When resuscitation is thought to be medically futile, however, is it right to discuss this treatment; might it be distressing to the patient?

The skill of the doctor is in providing, and telling the patient about, treatments that are most appropriate, using all the available information, including the views of the patient. As with other treatments, the degree to which the patient wishes to become involved in this process varies considerably. One study of elderly patients receiving acute medical care and rehabilitation showed that only 57% actually wanted some involvement in making the decision on cardiopulmonary resuscitation.[2]

The requirement for a rigid discussion process before a do not resuscitate order is made would cause needless distress to some people nearing the natural end of their life due to inexorable and irreversible processes of disease. We should do everything we can to preserve a humane approach to dealing with patients and carers at this time of ultimate emotional vulnerability.

Tom Downes *specialist registrar in geriatric medicine*
Jane Liddle *consultant geriatrician*
b.j.liddle@sheffield.ac.uk
Northern General Hospital, Sheffield S5 7AU

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Liddle J, Gilleard C, Neil A. The views of elderly patients and their relatives on cardiopulmonary resuscitation. *J R Coll Phys Lond* 1994;28:228-9.
3 Adrian W, Kinirons M, Stewart K. Cardiopulmonary resuscitation: doctors and nurses expect too much. *J R Coll Phys Lond* 1995;29:20-4.
4 Bowker L, Stewart K. Predicting unsuccessful cardiopulmonary resuscitation (CPR): a comparison of three morbidity scores. *Resuscitation* 1999;40:89-95.
5 Murphy DJ, Burrows D, Santilli S, Kemp AW, Tenner S, Kreling B, et al. The influence of the probability of survival on patients' preferences regarding cardiopulmonary resuscitation. *N Engl J Med* 1994;330:545-9.

Resuscitation should not be part of every death

EDITOR—Pioneers of cardiopulmonary resuscitation in the 1960s were medical heroes. They would be surprised to find their treatment for hearts that were too young to die becoming an obligatory death rite for all, and themselves anathematised for mentioning the new taboo of age.[1]

Feedback that I, as chairman of Tayside cardiopulmonary resuscitation committee, receive from junior hospital staff is that inappropriately initiated cardiopulmonary resuscitation is common, emotionally fraught, and demotivating; inappropriate failure to initiate cardiopulmonary resuscitation is virtually unknown. Seemingly false positive results therefore heavily outnumber false negative results, but parallel audits of deaths and cardiopulmonary resuscitation are now being conducted to relate the two.

Ebrahim wishes to increase cardiopulmonary resuscitation in elderly patients, recommending legislation and quoting American attitudes and evidence in support.[1] Attitudes and practices cannot be imported uncritically from the United States, a lawyer-ridden society. If they were, ward rounds would end up being led by civil rights lawyers, medical ethicists, and their interpreters. Doctors would then be informed what equity and empowerment obliged them to do, rather than use their clinical judgment, which balances potential benefit against potential harm.

Cardiopulmonary resuscitation appears miraculous; hence the view that there should be miracles for all on the NHS and that cardiopulmonary resuscitation is somehow different from other treatments in not being a matter for medical discretion. Behind this expectation are two sources of confusion.

According to the *Oxford English Dictionary*, resuscitation means restoring life from apparent death, with overtones of the resurrection of Christ.[2] Medical practice has introduced semantic confusion by corrupting the term to mean the often vain attempt to restore life. The second source of confusion is that cardiopulmonary resuscitation was developed to treat the effects of reversible precipitants of sudden death. Even in chronic progressive disease the transition to death is momentary and therefore sudden. This makes the distinction between sudden and non-sudden death arbitrary and difficult to define medically, or for would-be legislators. The potential for pressure groups to make a point by publishing details of unfortunate cases and selected case series to the detriment of public confidence is virtually unlimited.

Tayside resuscitation policy is to avoid the phrase "not for resuscitation" because of the semantic confusion and to write in the notes "cardiopulmonary resuscitation currently inappropriate: decided by [name], discussed with [names]. To be reviewed by [identify who] in/on [time interval or date]." The policy states that written instructions are not always possible and that judgment on treatment is the ultimate prerogative of the medical team, taking account of all the circumstances, which often change.

Hugh Tunstall-Pedoe *professor of cardiovascular epidemiology*
University of Dundee at Ninewells Hospital, Dundee DD1 9SY
h.tunstallpedoe@dundee.ac.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 *Oxford English dictionary*. 2nd ed. Oxford: Oxford University Press, 1999.

Focus should be on offering treatments appropriate to diagnosis and regardless of age

Editor—I am surprised at Ebrahim's views on resuscitation decisions.[1] Perhaps it should be remembered that cardiopulmonary resuscitation is designed to help patients with sudden collapse, usually due to acute myocardial ischaemia. The implication of Ebrahim and Age Concern[2] is that patients with a do not resuscitate order are condemned to die, not that they are individuals for whom this form of treatment is simply not indicated. The other implication is that cardiopulmonary resuscitation is usually successful; in fact, the outcome is often less than desirable. The fact that doctors can identify patients who are "30 times more likely to die" is probably an indication of doctors' skill and little else. Perhaps the reason that guidelines are not being followed is because they are flawed.

If Ebrahim and Age Concern wish to tackle ageism the focus should be to ensure that patients of any age are offered treatments appropriate to their diagnosis. Far more benefit could be gained, for example, by campaigning for stroke units than by campaigning for resuscitation of individuals with terminal, untreatable illnesses, regardless of age.

Dennis Briley *consultant neurologist*
Stoke Mandeville Hospital, Aylesbury, Buckinghamshire HP21 8AL
dennis@dbriley.fsnet.co.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Cancer patient's fury at doctor who "wrote her off" on hospital's death ward. *Guardian* 2000 Apr 13.

Cardiopulmonary resuscitation seems to be exempt from scrutiny of evidence based medicine

Editor—I am surprised that Ebrahim should have used media comments about do not resuscitate instructions in patients' notes as the basis for a tirade against ageism in health care.[1] Whereas the risks and benefits of other medical interventions are subjected to the rigorous scrutiny of evidence based medicine, cardiopulmonary resuscitation seems to be exempt from this.

It is hardly surprising that the media should represent cardiopulmonary resuscitation as a good thing, which is being rationed according to the prejudices of the medical profession on the one hand and misguided attempts at cost containment on the other. Yet similar misconceptions seem to creep into more informed discussions.

If patients and families are to take an active part in difficult treatment decisions they need reliable information on the likely risks and benefits of each option. Unfortunately, the literature on cardiopulmonary resuscitation provides little firm evidence on which to base such decisions, particularly for elderly inpatients. Estimates of the success rate of cardiopulmonary resuscitation vary so widely, and definitions and selection criteria used in the studies are so diverse, that meta-analysis of absolute risks and benefits is meaningless.[2]

Although spontaneous recovery from apparent cardiac arrest is not uncommon, hardly any controlled studies have been carried out, and most of the observational studies have unquantifiable biases. Ebrahim implies that old age itself may not substantially affect the chances of successful resuscitation, but, because of the prejudice of which he complains, frailer elderly patients could have been excluded from the studies on which this conclusion is based.

Information about the risks of adverse effects of cardiopulmonary resuscitation—a more distressing death, or survival with severe brain damage—is hard to find, and these outcomes are hardly ever discussed with patients. The term "do not resuscitate" ignores these possibilities and implies that doctors can revive the patient if they so wish. It is hardly surprising that patients and families feel aggrieved if they are not consulted about do not resuscitate decisions. It is not known whether seriously ill patients would be keen to discuss the realistic question, "In the event of your sudden death occurring after a deterioration in your condition, should we make attempts at resuscitation, which would probably prove futile and cause distress to you and your family?"

Before we are compelled to spend scarce time raising complex and potentially frightening questions with patients before withholding a treatment that we think is inappropriate, more reliable evidence is needed about the risks and benefits of cardiopulmonary resuscitation.

David Barer *professor of stroke medicine and elderly care*
Queen Elizabeth Hospital, Gateshead NE9 6SX
d.h.barer@ncl.ac.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Smeeth L, Haines A, Ebrahim S. Numbers needed to treat derived from meta-analyses: sometimes informative, usually misleading. *BMJ* 1999;318:1548-51.

More consumer education and involvement are needed

Editor—In response to Age Concern's campaign on cardiopulmonary resuscitation[1] we designed and completed an audit of the views of patients in our hospital. We conducted our questionnaire survey, administered by medical students, between 25 April and 1 May 2000 at a hospital for older people (aged >65) and stroke rehabilitation. We interviewed only patients who were documented as being for resuscitation in the event of a cardiorespiratory arrest.

Twenty eight patients were interviewed in the time available. Nineteen thought that cardiopulmonary resuscitation had a 50% or greater success rate. Eight considered that a "not for cardiopulmonary resuscitation" order would detrimentally affect their general care (six thought it could improve their care). Few (three people) thought that age should influence cardiopulmonary resuscitation status. Most (24) correctly recognised that doctors currently make the decisions on cardiopulmonary resuscitation, but in their opinion they and their relatives should be equally involved in the decision.

Our sample of patients had an over-optimistic view of the potential success of cardiopulmonary resuscitation. We also found that they may worry about the implications of their cardiopulmonary resuscitation status, as some were concerned that

their further care might be adversely affected. The risks of discussing cardiopulmonary resuscitation status with patients need to be considered by all healthcare professionals. Overall, our survey supports the view that more consumer education and involvement are needed.[2]

Barbara Brett *medical student*
Elizabeth J Peak *medical student*
Arjun Nair *medical student*
Medical School, University of Edinburgh, Edinburgh EH8 9AG

Richard I Lindley *consultant geriatrician*
Royal Victoria Hospital, Edinburgh EH4 2DN
ril@skull.dcn.ed.ac.uk

1 Age Concern England. *Turning your back on us—older people and the NHS*. London: Age Concern, 2000.
2 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death. *BMJ* 2000;320:1155-6. (29 April.)

Sound clinical reasons for withholding cardiopulmonary resuscitation must not be confused with ageism

EDITOR—Contrary to Ebrahim's comments in his editorial,[1] the 1999 statement on cardiopulmonary resuscitation by the BMA, Resuscitation Council, and Royal College of Nursing does not demand discussion with the patient or close relatives before a do not resuscitate order can be considered.[2] Indeed, it seems totally inappropriate, illogical, unkind, and potentially unethical that healthcare professionals should be compelled to discuss any form of ineffective treatment with a patient. Furthermore, as healthcare professionals are not obliged to provide any treatment that cannot produce the desired benefit[3] it seems particularly cruel to offer cardiopulmonary resuscitation in circumstances where evidence indicates that it will be ineffective and then to refuse to administer it anyway.

Age Concern's finding that elderly patients are given do not resuscitate orders does not necessarily suggest ageism. There is much evidence that elderly patients do receive cardiopulmonary resuscitation. Altogether 55% of patients in the British hospital resuscitation (BRESUS) study were aged over 65, with a quarter being over 75.[4] I would suppose that when do not resuscitate policies were applied there were good clinical reasons for the intended withholding of cardiopulmonary resuscitation.

Gary B Smith *chairman of Portsmouth district resuscitation committee*
Portsmouth Hospitals NHS Trust, St Mary's Hospital, Portsmouth PO3 6AD
gary.smith@qmail01.porthosp.swest.nhs.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 British Medical Association, Resuscitation Council (UK), and Royal College of Nursing. *Decisions relating to cardiopulmonary resuscitation; a joint statement*. London: BMA, RC(UK), RCN, 1999.
3 British Medical Association. *Withholding and withdrawing life-prolonging medical treatment. Guidance for decision making*. London: BMA, 1999.
4 Tunstall-Pedoe H, Bailey L, Chamberlain DA, Marsden AK, Ward ME, Zideman DA. Survey of 3765 cardiopulmonary resuscitations in British hospitals (the BRESUS study): methods and overall results. *BMJ* 1992;304: 1437-51.

Not discussing decisions is often because of practicalities, not ageism

EDITOR—We strongly support Ebrahim's attack on ageism in the health service but think that he was unwise to illustrate his point by referring to the use of do not resuscitate orders.[1] The situation is not nearly as clear cut as he would have readers believe.

We make resuscitation decisions regularly; we sometimes discuss these with relatives, less often with patients. The reasons for not discussing decisions have little to do with ageism and much to do with practicalities. Most survivors of resuscitation have their arrest on their first or second day in hospital, so decisions have to be made at a time when many elderly patients are legally incompetent to decide, either because of confusion or because of the severity of their illness. In a small British study most patients could not recall important details about resuscitation a week after the discussion.[2] We often try to contact relatives on these occasions, but this in itself causes problems. Under current law if patients are incompetent then responsibility for medical decisions passes to their doctors, not their family; many people are unaware of this.

What if decisions are made because resuscitation is so unlikely to succeed that it can be regarded as futile? Is there an obligation to tell patients or relatives about this (and other potentially lifesaving treatments that are to be withheld on this basis)? The most recent guidelines avoid giving a clear answer.[3]

Ebrahim states that most patients and relatives want to discuss death and do not resuscitate decisions, but this is not our experience and is not supported by the literature. We are regularly asked to avoid discussing diagnoses of cancer and other serious illness for fear of causing distress. British studies of patients' views about resuscitation are consistent with this; some patients want to be involved in decisions or have their relatives consulted and others do not, while some want doctors to decide.[4] Heller et al became the subject of press criticism for attempting to discuss resuscitation with all elderly patients and were accused of rationing care and advocating euthanasia.[5]

Doctors who face these problems in their work would appreciate an editorial telling them how its author manages to discuss all the do not resuscitate decisions that he or she has to make and how the practical difficulties that we have described can be overcome.

Kevin Stewart *consultant geriatrician*
Claire Spice *specialist registrar in general and geriatric medicine*
Royal Hampshire County Hospital, Winchester, Hampshire SO22 5DG
kevin.stewart@weht.swest.nhs.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Sayers GM, Schofield I, Aziz M. An analysis of CPR decision-making by elderly patients. *J Med Ethics* 1997;23:207-12.
3 British Medical Association, Resuscitation Council (UK), and Royal College of Nursing. *Decisions relating to cardiopulmonary resuscitation; a joint statement*. London: BMA, RC(UK), RCN, 1999.
4 Stewart K. Discussing cardiopulmonary resuscitation with patients and relatives In: Hind CR, ed. *Communication skills in medicine*. London: BMJ Publishing Group, 1997.
5 Heller A, Potter J, Sturgess I, McCormack P. Resuscitation and patients' views: Questioning may be misunderstood by some patients. *BMJ* 1994;309:408.

We need a consistent message

EDITOR—I have recently researched the issue of resuscitation orders and agree with Ebrahim's sentiments concerning ageism, but I was disappointed that his editorial did not address many of the concerns of the public highlighted by the British media.[1] He did, however, make the comment that the orders "have greater implications than merely not calling the resuscitation team." This relates to a misconception that needs to be quashed in the eyes of both the public and a small element of the medical profession.

"Not for resuscitation" should mean just that—not for cardiopulmonary resuscitation and not for advanced life support measures such as ventilation. It should not, however, cover other aspects of medical care unless they are specifically documented. Patients should still expect high levels of care, including antibiotics, fluids, and other drugs as well as palliation of symptoms. The literature suggests that this does indeed happen,[2] and patients need to be reassured accordingly.

Another important issue is that medical staff and the public should be informed about the procedure itself. Resuscitation is not often the quick and miraculous action seen in television programmes such as *ER*. The general consensus in the literature seems to be that although up to 30% of resuscitations are initially successful, less than 15% of those patients will survive to discharge.[3] In certain groups, such as those with metastatic cancer,[4] renal failure,[4] septicaemia, and dependent functional status, this figure is in fact close to zero.

Clearly if medical practitioners are aware of these facts they are in a much better position to advise patients whether cardiopulmonary resuscitation is appropriate for them; patients greatly value doctors' advice on this issue.[5] As far as possible the decision should be discussed with the patient and probably the family, although in clearly futile cases this may be inappropriate and unnecessary.

If these issues are addressed then the decision becomes easier to reach, is less contentious, and is less stressful for all parties. The fears that are hyped up in the media could be allayed if the public was reassured by a consistent message, given by the medical profession as a whole.

Adam Dangoor *registrar in oncology*
Christchurch Hospital, Private Bag 4710, Christchurch, New Zealand
adangoor@paradise.net.nz

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Kaplow R. Use of nursing resources and comfort of cancer patients with and without do-not-resuscitate orders in the intensive care unit. *Am J Crit Care* 2000;9:87-95.
3 Marik PE, Craft M. An outcome analysis of in-hospital cardiopulmonary resuscitation: the futility rationale for do not resuscitate orders. *J Crit Care* 1997;12:142-6.

4 Ebell MH, Preston PS. The effect of the APACHE II score and selected clinical variables on survival following cardiopulmonary resuscitation. *Fam Med* 1993;25:191-6.
5 Johnston SC, Pfeifer MP. Patient and physician roles in end-of-life decision making. End of Life Study Group. *J Gen Intern Med* 1998;13:43-5.

Doctors must always act in their patients' best interests

EDITOR—I am increasingly disappointed at efforts to remove the duty of care for patients from doctors into the hands of relatives or, even worse, the courts. I thought that I spent five years at medical school and 12 years in postgraduate training in order that I might have the knowledge and experience to care for patients in a professional manner. This means treating the patients when it is appropriate to do so and not treating them when it is inappropriate to do so.

Now I am being told that even when it may be clear to me that a patient will not benefit from treatment (in this case cardiopulmonary resuscitation[1]) I must first ensure that this has been discussed with the family. How can family members have the required understanding of prognosis and treatment implications and the objectivity to make such a decision? What if the family disagrees? Am I then compelled to offer the futile treatment? Unfortunately, many doctors already seem to take this route; evidence the hopeless case in the intensive care unit, there because the family wanted everything done and now slowly dying without dignity.

Society is forgetting that death is an integral part of life and eventually comes to us all. It is becoming common practice for relatives, on finding someone dead at home, to call an ambulance. In the past it would have been the priest. Doctors' primary role is not to prevent death but to treat illness and alleviate suffering. Identifying patients for do not resuscitate orders is vital in modern high technology medical practice to prevent loss of dignity in otherwise inevitable deaths. Most patients with do not resuscitate orders will, I am afraid, be elderly with cancer, dementia, or other severe underlying illness limiting their life expectancy. This is not ageism but caring medical practice.

Michael O'Leary *staff specialist in intensive care*
St George Hospital, Kogarah, NSW 2217, Australia
m.oleary@unsw.edu.au

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)

Inadequacies of palliative care system need to be tackled

EDITOR—I recently looked after my elderly grandmother while she died of an abdominal tumour. I observed with horror the multiple inadequacies of hospital care, particularly of palliation, nursing care, and communication. I saw the brutal process of means testing for essential social care, and the distress and inadequacy that resulted. A "good death" is often just an aspiration.

I can hardly believe that Age Concern and Ebrahim suggest legislation to prevent doctors from deciding to withhold cardiopulmonary resuscitation from very frail dying people without their consent or that of their relatives.[1] It is even more disturbing to read that the BMA and the health secretary have some sympathy with their case, suggesting mandatory discussion with the family and patient. How many lay people can differentiate between cardiopulmonary resuscitation and normal medical treatment? How many can weigh up the pros and cons in an individual case? Might relatives have other agendas? Would it not distress many people to be asked to take on such an emotional burden? Would this not shake confidence in their medical team and induce needless anxiety?

Ebrahim admits that cardiopulmonary resuscitation has a low success rate. This is particularly so in patients with severe terminal illness and very elderly and frail patients. Must we still go through a charade of cardiopulmonary resuscitation for these people if a misguided relative insists? What if an entirely perverse decision results and dying patients, like my grandmother, are forced to spend a few more pain wracked days on the ward? What if resuscitation is successful and a very old, frail, and terminally ill patient occupies a bed which is then denied to a 29 year old asthmatic patient, who then dies during a motorway ambulance journey to a distant hospital?

Ebrahim suggests that doctors have stereotypes of who is not worth saving, with racist and ageist tendencies. I suggest that when these decisions are made, probable outcomes are the main factor in doctors' decision making. When I made such decisions the patients involved invariably had advanced terminal disease, and this was the predominant factor in the decision. I and my colleagues were aiming to give them, and their families, the comfort of a good death.

Ebrahim's suggestion that making these orders is a barometer of unethical care is perverse. I disagree. I believe that a heavy handed approach via legislation will result in an increase in the sum total of human misery. Ebrahim and Age Concern could more profitably tackle the deep inadequacies of the palliative care industry that gave my grandmother such inadequate and flawed care.

M D Oliver *general practitioner*
Browning Street Surgery, Stafford ST16 3AT
mark.oliver@excite.co.uk

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)

All -isms are intolerable

EDITOR—Ebrahim's editorial on entrenched ageism shows the ugly side of medical practice.[1] Perhaps we cannot help it; we are humans and products of our time and culture. We are tribal creatures, and unless the forces maintaining tribalism are addressed it will remain.

Working among people who have problems with alcohol, other drugs, and mental health, my colleagues and I see classism, ageism, and racism daily. My belief is that our culture has defined which health problems are "more unpleasant" and which are "less unpleasant"; not surprisingly, the nicer ones are those that the vocal, well connected, well off middle class have. They can usually be externalised and treated with high tech, high cost interventions. Heart disease and certain cancers are in this group. But younger, less vocal people with drug problems or mental health problems are not in this group; their problems are "internal" problems, perhaps due to moral weakness (yes, even in this enlightened age) and not at all pleasant. Ignore them if possible, even if these problems are the most important of all health issues for the global burden of disability.

What of Virchow's admonition that we are the natural attorneys of the poor and should solve social problems? It's not just ageism we should fight, it's all of the -isms, now creeping back into a surgery or hospital somewhere near you.

Rod MacQueen *visiting medical officer*
Lyndon detox, Orange, NSW, Australia
randjmac@ix.net.au

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)

Without discussion, these orders are unethical at any age

EDITOR—The subheading to Ebrahim's editorial on do not resuscitate decisions is: "Resuscitation should not be withheld from elderly people."[1] Surely doctors should say instead that resuscitation *must* not be withheld. . . ." Ebrahim spells out the reality hiding behind the rhetoric of the BMA, Resuscitation Council (UK), and Royal College of Nursing. It would help if hospitals were required when booking in patients to offer them the opportunity to complete a form indicating, among other things, their attitude to resuscitation, whether they have a living will, and if they consider starving to death (under certain circumstances) to be acceptable.

The current practice of treating elderly patients and their relatives with total disrespect negates every principle of what constitutes a civilised health service. It is hardly surprising that Patient Concern is being inundated with requests for its "How to Survive" leaflets by people terrified at the prospect of having to go into hospital.[2-4] (Each leaflet is available from the organisation for two first class stamps.) I would add only that the usual hopeless solution includes guidelines.

Do not resuscitate orders at any age, without discussion, are unethical. Eradicating this practice in the NHS requires legislation, full stop.

Roger M Goss *director*
Patient Concern, PO Box 23732, London SW5 9FY
rogerconcern@hotmail.com

1 Ebrahim S. Do not resuscitate decisions: flogging dead horses or a dignified death? *BMJ* 2000;320:1155-6. (29 April.)
2 Robins J. *How to survive surgery*. London: Patient Concern, 2000.
3 Robins J. *How to survive doctors*. London: Patient Concern, 2000.
4 Robins J. *How to make a living will*. London: Patient Concern, 2000.

Summary of rapid responses bmj.com

We posted 50 rapid responses by 49 correspondents from 27 April to 5 June 2000—32 responses by 12 May.[1] The responses were serious and thoughtful, and we found it difficult to choose which ones to publish here. In addition, we were unable to post several other responses mentioning specific cases of patients who had died because of the difficulties in obtaining consent from the patients' relatives.

1 Electronic responses. Do not resuscitate decisions: flogging dead horses or a dignified death? bmj.com 2000;320 (www.bmj.com/cgi/content/full/320/7243/1155#responses; accessed 4 Jan 2001).

Benign prostatic hyperplasia has precise meaning

EDITOR—Kirby's editorial on benign prostatic hyperplasia presented a simplistic view of medical treatment for suspected benign prostatic obstruction.[1]

Benign prostatic hyperplasia is a specific histological term often misused in general parlance. The importance of distinguishing between benign prostatic hyperplasia and benign prostatic enlargement and bladder outlet obstruction is fundamental. If men live long enough they will all develop histological benign prostatic hyperplasia, but only around half of them will develop benign prostatic enlargement; only around half of these will become obstructed and require treatment. It may suit those wishing to capture more patients in the treatment net to use terms imprecisely, but it is not beneficial for the medical community or patients as they may receive unnecessary treatment, with attendant morbidity and cost. My previous editorial in 1994 advocated the more precise use of terms[2]; indeed these terms have been taken up by the World Health Organization's sponsored consultation on the subject.[3] Kirby's editorial refers to men with presumed prostatic obstruction due to benign prostatic enlargement, which is likely to be associated with histological benign prostatic hyperplasia.

Kirby's statement that the risk factors leading to acute retention can now be identified is an oversimplification. Severe lower urinary tract symptoms, reduced maximum urine flow rate, an enlarged prostate, and old age are associated only weakly with the occurrence of retention.[4] Thus, which men will develop urinary retention cannot be predicted. The data quoted show that only a few patients develop retention over three years.

Two groups of drugs are active in reducing symptoms and partly relieving bladder outlet obstruction. 5α-Reductase inhibitors (including finasteride) have been investigated in long term studies because of their slow effect. α Adrenergic antagonists have not been investigated in long term placebo controlled studies, which in some countries would be regarded as unethical, largely because they work quickly. Hence whether α blockers prevent men from developing urinary retention is not known. Kirby did not mention that the degree of relief of symptoms and of obstruction is modest when compared with the results of conventional surgery such as transurethral resection of the prostate. Therefore in advising that men with big prostates should take finasteride to prevent complications, the advantages (a small reduction in acute retention (3% *v* 7% in the placebo group) and a modest improvement in symptoms) need to be weighed against the disadvantages (side effects such as impotence and the cost of prescriptions to patients and the state).

These issues were not discussed in the editorial, whose conclusions were misleading. Neither finasteride nor any other drug provides relief of symptoms in all but a few patients, and a reduction in long term complications is certainly unpredictable in individual men. Statistical associations are not necessarily clinically significant facts. The precise use of terms is crucial.

Paul Abrams *consultant urologist*
Bristol Urological Institute, Southmead Hospital, Bristol BS10 5NB
paul_abrams@bui.ac.uk

Competing interests: PA has spoken at symposiums on behalf of pharmaceutical companies that manufacture products for treating benign prostatic hyperplasia.

1 Kirby R. Benign prostatic hyperplasia. *BMJ* 1999;318:343-4.
2 Abrams P. New words for old: lower urinary tract symptoms for "prostatism" *BMJ* 1994;69:929-30.
3 Denis L, McConnell J, Yoshida O, Khoury S, Abrams P, Barry O, et al. The evaluation and treatment of lower urinary tract symptoms (LUTS) suggestive of benign prostatic obstruction. In: Denis L, Griffiths K, Khoury S, Cockett ATK, Chatelain C, McConnell J, et al, eds. *Fourth international consultation on benign prostatic hyperplasia (BPH).* Paris: SCI, 1998:669-84.
4 Jacobsen SJ, Jacobsen DJ, Girman O, Roberts RO, Rhodes T, Guess H, et al. Natural history of prostatism: risk factors for acute urinary retention. *J Urol* 1997;158:481-7.

Future of research into rotavirus vaccine

Cost effectiveness of vaccine is being assessed

EDITOR—Weijer states that the benefits of rotavirus vaccine may outweigh risks for children in developing countries.[1] The issue of cost effectiveness is therefore central to the choice of whether developing countries should adopt a rotavirus vaccine. We are involved in a project funded by the United Kingdom's Department for International Development that will model the impact and incremental cost effectiveness of introducing a rotavirus vaccine into routine infant immunisation programmes in Bangladesh and Peru.

Frequently, poor families in developing countries must sell assets at a loss, or take out loans at high interest rates, to pay for care.[2] Hence optimising the use of vaccines will increase the potential for economic development of the poorest groups by reducing their out of pocket costs of obtaining treatment, especially for more severe disease. Governments also stand to benefit through reducing the burden on frequently overstretched health systems. In addition, gains will occur at the societal level, as care givers will require less time off work to provide and seek care. Yet the introduction of new or underused vaccines in developing countries has been hindered by the paucity of data related to the economic and epidemiological burden of diseases that can be prevented by vaccination.

Recently Miller and McCann conducted a cost effectiveness analysis to estimate the impact of vaccination against rotavirus in national immunisation schedules.[3] They estimated the cost per life year saved to be $16 to $31 in a low income setting, assuming a cost per dose of $1 and vaccine efficacy of 60%; their results are encouraging. They did not include potential savings from the reduction in costs of admission to hospital, but a study from Argentina has illustrated the substantial burden placed on some health systems by rotavirus: in 1991 rotavirus infection led to roughly 84 500 outpatient visits and 21 000 admissions, each averaging four days, with associated direct medical costs of $27.7m.[4]

It is important to identify, measure, and value the associated costs of providing the vaccine, including the cost of treating adverse events.[5] Further modelling and economic analyses will enable an empirical measurement of the vaccine's costs and benefits; its utility for low income settings should not be dismissed prematurely. We hope that our research will help shed light on the appropriateness of the vaccine in developing countries once it becomes available.

Damian Walker *research fellow in health economics*
Health Policy Unit, London School of Hygiene and Tropical Medicine, London WC1E 7HT
damian.walker@lshtm.ac.uk

S M Akramuzzaman *senior medical officer*
Clinical Sciences Division, ICDDR,B: Centre for Health and Population Research, GPO Box 128, Dhaka 1000, Bangladesh

Claudio F Lanata *senior researcher*
Instituto de Investigación Nutricional, Apartado 18-0191, Lima-18, Peru

1 Weijer C. The future of research into rotavirus vaccine. *BMJ* 2000;321:525-6. (2 September.)
2 Andersson N, Paredes S, Legorreta J, Ledogar RJ. Who pays for measles? The economic arguments for sustained immunization. *Health Policy and Planning* 1992;7:352-63.
3 Miller M, McCann L. Policy analysis of the use of hepatitis B, Haemophilus influenzae type b, Streptococcus pneumoniae conjugate and rotavirus vaccines in national immunization schedules. *Health Econ* 2000;9:19-35.
4 Gomez J, Nates S, de-Castagnaro N, Espul C, Borsa A, Glass R. Anticipating rotavirus vaccines: review of epidemiologic studies of rotavirus diarrhoea in Argentina. *Rev Panam Salud Publica* 1998;3:69-78.
5 Intussusception among recipients of rotavirus vaccine—United States, 1998-1999. *MMWR* 1999;48:577-81.

Developing countries must apply mathematics to take their own decisions

EDITOR—As Weijer pointed out in his editorial, some people assume that inaction is a morally neutral state.[1] This is dramatically true for the developing world, such as Latin American countries, because our politicians and public health authorities are still not aware that both action and inaction have consequences, with costs that have to be established. Nobody wishes to be responsible for the cost of the decisions taken, but it is necessary to know the risks and benefits before taking a decision such as the one to

withhold the tetravalent rhesus rotavirus vaccine.

There are few aspects in favour of initiating a randomised controlled trial with this vaccine. Firstly, it is necessary to know the vaccine's efficacy and effectiveness in a country with high mortality. Secondly, information about the epidemiology of intussusception in developing countries is scarce. Rates of intussusception are probably lower than in developed countries, and therefore the risk of intussusception associated with this vaccine is not necessarily that observed in the United States. Thirdly, large studies of effectiveness will give additional information about the potential risk of intussusception with use of rotavirus vaccine. Finally, assuming the worst scenario of a 25% fatality rate from intussusception, 2000-3000 of the deaths caused by rotavirus vaccine will also occur without the vaccine.

In Venezuela, a country with low mortality from rotavirus diarrhoea (1 in 6000 infants aged <1 year die each year because of rotavirus infection; unpublished data), data indicate that in a cohort of 600 000 births/year about 100 deaths will be caused by rotavirus infection. If the risk of intussusception associated with the vaccine is 1/10 000 there will be 60 cases and 15 deaths (25% fatality rate) from intussusception. This means that by withholding the vaccine we will prevent 15 deaths due to intussusception, but 80 infants (vaccine will prevent 80% of deaths) will die from rotavirus diarrhoea. This is the kind of mathematics we should apply in order to take our own decisions in developing countries.

Irene Pérez-Schael *chief of enteric disease section*
Instituto de Biomedicina, Ministerio de Sanidad y Desarrollo Social, Universidad Central de Venezuela, AP 4043, Carmelitas, Caracas 1010A, Venezuela
Iperez@telcel.net.ve

1 Weijer C. The future of research into rotavirus vaccine. *BMJ* 2000;321:525-6. (2 September.)

Intranasal midazolam for treating febrile seizures in children

Caution is advised in interpreting trial conclusions

Editor—The importance of the study by Lahat et al[1] is acknowledged both in the editorial by Koren[2] and in subsequent correspondence, which recognises the need for effective and safe treatment for acute seizures in the community. But important methodological and analytical issues need to be clarified before the conclusions can be accepted.

The logistics of randomisation are not described in detail, although, firstly, apparently parents were asked to sign a consent form for enrolment in the study after seizures were controlled. The usual ethical practice in randomised controlled trials is to seek consent to randomisation before treatment; here, the order seems to have been reversed unless the controlled seizure actually preceded the seizure for which randomised treatment was allocated. Secondly, randomisation was apparently performed in advance, although this could refer to the frequent practice of drawing up a sequence of treatment allocations before the start of the trial, or it could mean in advance of the trial seizure itself, in which case we would need to know how far in advance. Thirdly, although 100 episodes of febrile seizure were randomly assigned to the two treatments, the analysis is confined to just 52. Under the principle of intention to treat, Lahat et al should report the outcome for all randomised patients' seizures and include them in their primary analysis. It is vital to know exactly what happened to the 48 randomly assigned episodes that are not mentioned further.

Lahat et al conclude that the drugs were equally effective at stopping seizures. This conclusion is drawn from the observation that out of 26 seizures treated with intravenous diazepam 24 responded, compared with 23 out of 26 treated with nasal midazolam; the difference between the percentages is small, at 3.8%. The 95% confidence interval, however, for this difference (diazepam minus midazolam) ranges from −12.2% to 19.8% and is too wide to justify the conclusion that the two treatments are equally effective in treating an acute condition. With 90% responding, maximum allowable clinical difference for equivalence of 10%, 95% confidence interval, and power for equivalence of 90%, a randomised controlled trial requires randomisation of about 400 seizures, preferably in independent patients.[3] Finally, the results section of both the abstract and the paper report treatment group means (with standard deviations and confidence intervals) for time from arrival at hospital to giving drug, to seizure cessation. There are no useful comparative summary statistics such as the differences between treatment group means (with 95% confidence interval); these should be the focus of interest.

Tony Johnson *statistician*
Medical Research Council Biostatistics Unit, Institute of Public Health, University of Cambridge CB2 1TN
tony.johnson@mrc-bsu.cam.ac.uk

Competing interests: None declared.

1 Lahat E, Goldman M, Barr J, Bistritzer T, Berkovitch M. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ* 2000:321:83-6. (8 July.)
2 Koren G. Intranasal midazolam for febrile seizures. *BMJ* 2000;321:64-65. (8 July.)
3 Machin D, Campbell M, Fayers P, Pinol A. *Sample size tables for clinical studies*. 2nd ed. Oxford: Blackwell, 1997.

Buccal midazolam should be preferred to nasal midazolam

Editor—The report by Lahat et al of intranasal midazolam in the emergency treatment of febrile convulsions and the editorial by Koren point to a therapeutic effect in the 26 children studied.[1 2] Neither publication reviewing the emergency treatment mentions our studies, which show the rapid absorption into venous blood and rapid brain effect after administration of buccal midazolam[3] and the efficacy of buccal midazolam in the treatment of prolonged seizures in childhood.[4 5]

We have several reasons for supporting the buccal rather than the nasal route:

- It is easy to insert the liquid between the cheek and teeth—by the buccal rather than the sublingual route
- The liquid does not need to be dripped into the buccal mucosa, but can be given as a bolus. A greater volume can be inserted into the buccal cavity. As midazolam cannot be concentrated to greater than 5 mg/ml, if nasal administration was to be used in older children and adults large volumes would need to be placed into the nose. Larger volumes may also be blown out of the nose during respiration
- Pain is a common side effect of nasal administration. This may be a result of the low pH of dissolved midazolam. Although the children are unconscious, it is reasonable to regard pain as a surrogate marker of potential damage to the nasal mucosa
- Direct comparisons of the nasal and buccal routes of administration support the view that buccal administration has advantages over the nasal route. It is more readily acceptable, achieves higher plasma levels, and has the least variable absorption.[6]

The usefulness of the new report is the use of midazolam in the treatment of prolonged seizures in children under the age of 5 years and in providing a novel approach to the ethical dilemma of how to perform randomised studies in the acute setting.

Rod C Scott *Wellcome advanced fellow*
Neurosciences Unit, Institute of Child Health, Wolfson Centre, London WC1N 2AP

Frank M C Besag *medical director*
St Piers Lingfield, Lingfield RH7 6PW

Brian G Neville *professor of paediatric neurology*
Institute of Child Health, Wolfson Centre, London WC1N 2AP

Competing interests: None declared.

1 Lahat E, Goldman M, Barr J, Bistritzer T, Berkovitch M. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ* 2000;321:83-8. (8 July.)
2 Koren G. Intranasal midazolam for febrile seizures. *BMJ* 2000;321:64-65. (8 July.)
3 Scott RC, Besag FM, Boyd SG, Berry D, Neville BG. Buccal absorption of midazolam: pharmacokinetics and EEG pharmacodynamics. *Epilepsia* 1998;39:290-4.
4 Scott RC, Besag FM, Neville BG, Boyd SG. Nasal midazolam for the acute treatment of seizures [letter]. *Dev Med Child Neurol* 1997;37:311-2.
5 Scott RC, Besag FM, Neville BG. Buccal midazolam and rectal diazepam for the treatment of prolonged seizures in childhood and adolescence: a randomised trial. *Lancet* 1999;353:623-6.
6 Karl HW, Rosenberger JL, Larach MG, Ruffle JM. Transmucosal administration of midazolam for premedication of pediatric patients. Comparison of the nasal and sublingual routes. *Anesthesiology* 1993;78:885-91.

Safety is as important as efficacy

Editor—The paper on treatment of febrile status by Lahat et al was useful in that it clearly showed the more rapid response time in practical terms of using a more easily accessible route of drug administration than the intravenous route.[1] Subsequently several electronic correspondents have commented on the probable superiority of the buccal route over the intranasal route for the administration of midazolam.

Lahat et al did not, however, address the important issue of safety combined with

efficacy, despite its stated aims. We know that buccal or nasal midazolam "works." We also know that rectal or intravenous diazepam works. The important question is, which drug is the safest and most efficacious in terminating status epilepticus in undifferentiated patients. The answer to this question would enable us correctly to advise parents, paramedics, doctors, and nurses in hospital and in the community as to their best course of action when presented with this emergency, the underlying cause of which can be determined only after emergency treatment has been given. Lahat et al say that they found only three cases of respiratory depression in 843 patients (treated with diazepam) with seizures. They clearly have not seen a paper from our hospital showing that almost 10% of undifferentiated children in status epilepticus receiving diazepam by any route had respiratory depression.[2] A large study is required to show safety and efficacy so that practical recommendations can be made to parents, paramedics, general practitioners, nurses, and hospital doctors when treating any patient with an acute prolonged tonic-clonic convulsion, including status epilepticus. As Whitehouse has mentioned in an electronic response,[3] we and others are about to start a funded, ethically approved multicentre study, intending to enrol over 200 patients, which should give a statistically sound answer (90% power, 5% significance level) to this very important practical question in two years' time.

Barbara Phillips *consultant in paediatric emergency medicine*
Richard Appleton *consultant in paediatric neurology*
batemill@compuserve.com

Royal Liverpool Children's Hospital, Alder Hey, Liverpool L2 2AP

Competing interests: None declared.

1 Lahat E, Goldman M, Barr J, Bistritzer T, Berkovitch M. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ* 2000;321:83-86. (8 July.)
2 Norris E, Marzouk O, Nunn A, McIntyre J, Choonara I. Respiratory depression in children receiving diazepam for acute seizures: a prospective study. *Dev Med Child Neurol* 1999;41:340-3.
3 Whitehouse W. Buccal midazolam may be more effective than nasal. Electronic response to: Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children. bmj.com 2000;321 (www.bmj.com/cgi/eletters/321/7253/83#EL1; accessed 4 Jan 2001).

Buccal midazolam for childhood seizures at home preferred to rectal diazepam

EDITOR—In their paper on treating febrile seizures in children Lahat et al say that intranasal midazolam could be used by parents and carers to treat epileptic seizures at home.[1] They say, however, that upper respiratory tract infections could impair the effectiveness of midazolam by this route.

We have been using buccal midazolam at home,[2] and the preliminary results of a prospective audit of outcome and parent preference are encouraging. Parents of children with epilepsy at risk of convulsive status epilepticus were taught how to administer midazolam (5 mg to 15 mg, depending on the child's age) into the buccal fossa, and completed a standardised questionnaire prospectively.

Seventeen previously unreported children were treated for 38 seizures; 21 were prolonged seizures, and 17 were serial seizures, duration two to 810 minutes (mean 61 minutes). Twenty two of 38 seizures (57%) stopped within 10 minutes of buccal midazolam being given, 28 (73%) within 30 minutes. Eight relapsed between 20 minutes and 21 hours. Twenty six of 38 episodes (68%) were followed by sleep, two (5%) by hyperactivity, and two (5%) by ataxia. One child exhibited odd behaviour and one mild respiratory depression requiring no medical intervention. Parents of 15 of the 17 children had previous experience of rectal diazepam; 13 of these 15 (86%) preferred buccal midazolam.

This audit is ongoing but results to date are encouraging.

Evangeline Wassmer *specialist registrar*
Bernie Morris *clinical nurse specialist*
Leanna Fernando *senior house officer*
Meena Rao *senior house officer*
William P Whitehouse *consultant paediatric neurologist*
william.whitehouse@bhamchildrens.wmids.nhs.uk

Department of Paediatric Neurology, Birmingham Children's Hospital, Birmingham B4 6NH

Competing interests: None declared.

1 Lahat E, Goldman M, Barr J, Bistritzer T, Berkovitch M. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ* 2000;321:83-6. (8 July.)
2 Chattopadhyah A, Morris B, Blackburn L, Wassmer E, Whitehouse W. Buccal midazolam and rectal diazepam for epilepsy. *Lancet* 1999;353:1798.

Caution is required in applying hospital based evidence to primary care population

EDITOR—As a parent who witnessed his eldest daughter's febrile seizure and a general practitioner who has witnessed many among his patients, I fully concur with Koren that uncomplicated febrile seizures are extremely stressful for both families and medical staff.[1] Most febrile seizures are, however, generalised, brief (< 15 minutes) and occur only once during a febrile illness.[2] Most resolve without treatment. They are not associated with long term neurological, intellectual, or behavioural effects.[3 4] Two thirds of children who have a febrile seizure experience only one.

Lahat et al advocate the use of intranasal midazolam in general practice.[5] They base this on the results of their randomised control study comparing intranasal midazolam with intravenous diazepam in a hospital setting in 44 children. They crudely estimated (from travel time) that children had 10 minutes of seizure activity before admission, although I think that the distribution of seizure time was significantly skewed to the right. Thirty four had previous febrile seizures, 10 had recurrent febrile seizures, and 15 had either bronchopneumonia or shigella dysentry. Three children required intravenous phenobarbitone to stop their seizure.

Lahat's study population is not representative of the population of children in primary care who have febrile seizures. Their conclusions must be treated with caution in general practice. It is possible that when benign febrile seizures are treated with intranasal midazolam in general practice the number needed to harm is unacceptably low.

Anthony Harnden *clinical research fellow*
Department of Primary Health Care, University of Oxford, Institute of Health Sciences, Oxford OX3 7LF
anthony.harnden@dphpc.ox.ac

Competing interests: None declared.

1 Koren G. Intranasal midazolam for febrile seizures. *BMJ* 2000;321:64-65. (8 July.)
2 Verity CM, Butler NR, Golding G. Febrile convulsions in a national cohort followed up from birth. I. Prevalence and recurrence in the first five years of life. *BMJ* 1985;290:1307-10.
3 Nelson KB, Ellenberg JH. Prognosis in children with febrile seizures. *Pediatrics* 1978;61:720-7.
4 Verity CM, Greenwood R, Golding J. Long-term intellectual and behavioral outcomes in children with febrile convulsions. *N Engl J Med* 1998;338:1723-7.
5 Lahat E, Goldman M, Barr J, Bistritzer T, Berkovitch M. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ* 2000;321:83-86. (8 July.)

Can we trust elderly donor grafts for corneal transplantation?

EDITOR—Davis described the general increasing demand for donor organs in the United States and worldwide.[1] Ophthalmology has special problems in this regard as corneal penetrating keratoplasty has become one of the most widely performed transplantations. Worldwide estimates are of 100 000 transplants performed annually, including 40 000 in the United States and 3500-4500 in Germany. The requirements for donor tissue exceed currently available tissue 20-fold.[2]

Younger corneas are preferred as they generally have more endothelial cells. This non-replicating endothelium is essential for the nutrition and clarity of the graft and plays a key part in preoperative evaluation of donors.[3] After penetrating keratoplasty a dramatic loss of cells (60%) occurs within the first three years, followed by a stabilisation. Questions have remained whether the endothelial cell count might be high enough in older donors to survive a period of 10 years.

In a prospective blind postoperative study we re-examined 90 eyes with a single abnormality.[4] Each had received either transplants from young donors (under 55 years of age at the time of transplantation) or old corneal transplants (aged 100 years to date) with a presumed bad prognosis.

After a mean follow up of 15 years range (7-25 years) we could not find a significant difference in survival, visual outcome, and endothelial cell count between the groups. The endothelial cell count values were scattered over a wide range in both groups, indicating that the postoperative history, not the age of the group, influenced the individual prognosis. Over time, the examiner was unable to determine the age of the cornea or distinguish between the groups. A graft from our oldest donor, who was born in 1889, was transplanted more than 18 years ago and is still functioning and clear. Other studies showed that individual endothelial cell count, not the age of the

donor, is a quality factor for prognosis. Mattern et al determined that 72% of previously rejected donors fulfilled all quality criteria for transplantation except age.[5]

Neglecting material from donors aged >70 years limits the natural resources of donor material. In the era of specular microscopy, individual assessment of donor corneas should play the main part in the acceptance of corneal donor tissue. Increasing the number of donor corneas that undergo full evaluation could have an important impact on the number of eligible corneas and increase quality standards for all donor transplants. The pool of corneal transplant tissue could be increased appreciably and the waiting list reduced.

Carsten H Meyer *research fellow*
Department of Ophthalmology, Duke University Medical Center, Durham, NC 27710, USA
meyer027@mc.duke.edu

Maya F Müller *attending physician*
Department of Ophthalmology, Medical University Lübeck, D-23538 Lübeck, Germany

Hans-Jürgen Meyer *professor (emeritus)*
Department of Ophthalmology, Marienhospital Osnabrück, D-49074 Osnabrück, Germany

This study received the Ruttlan award at the Barraquer Institute in Barcelona in March last year.

1 Davis RM. Meeting the demand for donor organs in the US. *BMJ* 1999;319:1382-3.
2 Duncker GIW. Keratoplasty and the cornea bank. *Ophthalmologe* 1995;92:366-76.
3 Bourne WM, Hodge DO, Nelson LR. Corneal endothelium five years after transplantation. *Am J Ophthalmol* 1994;118:185-96.
4 Meyer CH, Mueller MF, Foerster W, Meyer HJ. Can corneal grafts survive over 100 years? *Am Acad Ophthalmol* 1999, Abstract 206. (http://aao5.aao.org/am98_99/am/am/99/sciprog/Detail3.cfm?EVENTS_EIDNO=7730)
5 Mattern RM, Heck EL, Cavanagh HD. The impact on tissue utilization of screening donor corneas by specular microscopy at the University of Texas Southwestern Medical Center. *Cornea* 1995;14:562-7.

Training overseas doctors in the United Kingdom

Promoting training opportunities helps to promote British healthcare values

EDITOR—The editorial by Welsh and personal view by Sridhar raise the problems of overseas doctors seeking postgraduate education in the United Kingdom.[1 2] Welsh summarises the difficulties that overseas doctors experience in gaining access to training posts when they have made considerable investment in the Professional and Linguistic Assessment Board (PLAB) test. These difficulties are not mitigated by the fact that they are unequivocally advised by the British Council and other bodies that there is no link between PLAB test places and job vacancies. The number of approved training posts is not, however, necessarily governed by the limitations of the training process but by the perceived staffing needs. The Royal College of Anaesthetists has drawn a useful distinction between maximum training capacity and funded training posts of a clinical department, and it seems widely accepted that some departments have more capacity than funded posts. A mechanism that will allow overseas trainees to take up unused training capacity will help the training of overseas doctors and through their service commitment enable the overall level of training to be increased.

There is a group of doctors who are offered scholarships from their employers, international agencies, or the British government. These doctors are usually well advanced in their training and have very specific training objectives. The British Council is able to sponsor such doctors so that they can be awarded limited registration without the requirement to pass the PLAB examination. Some of these doctors are able to compete effectively for specialist registrar posts, but an alternative is needed for those with limited time and very specific objectives. Direct placement to a fixed term training position may become possible, and the British Council is pursuing a method by which this could be achieved.

For a number of overseas doctors there is no current formal solution to their needs. An alternative mechanism needs to be developed which would enable such individuals to come to this country for clinical training within the unused training capacity referred to above.

We at the British Council are aware of the high reputation of postgraduate medical training in the United Kingdom. We believe that promoting clinical training opportunities to leading overseas clinical trainees is one of the best ways of promoting British healthcare values.

Douglas J Buchanan *director, health*
Geoffrey Smith *medical adviser*
British Council, Manchester M1 6BB

The British Council has an interest in promoting the excellence and values of British health care.

1 Welsh C. Training overseas doctors in the United Kingdom. *BMJ* 2000;321:253-4. (29 July.)
2 Sridhar M. What is the future for training overseas graduates? *BMJ* 2000;321:307. (29 July.)

We need to debunk the myth about training

EDITOR—Welsh's editorial and Sridhar's Personal View surprise me.[1 2] The situation with regard to overseas doctors is not a crisis borne principally out of bad arithmetic in the post-Calman NHS. For many years now doctors from outside Europe have struggled to find positions. Blaming it on the changes within the NHS means ignoring more subtle, uncomfortable factors.

The NHS has, for too long, flattered itself in thinking that it has been training doctors to return to their home countries. Even before the introduction of the current training system many overseas doctors did not even manage to enter a training grade. As long as this pretence is maintained, planners and educationalists within the NHS are unlikely to acknowledge that overseas professionals give at least as much to the NHS as they receive. Debunking the myth about training will clear the air about service needs in the NHS, and then the sums will be easier. Welsh suggests that those sitting the Professional and Linguistic Assessment Board (PLAB) test must be given accurate information about the opportunities and level of competition. But most medical migrants know about these and are willing to enter into competition. It is more vital to be transparent by telling all applicants that they will be selected only if a suitable local graduate is not available. Countries without an open ended career route for overseas graduates are explicit to the point of putting applicants off. The NHS fears that being explicit might cause the pendulum to swing the other way, causing a crisis in service delivery.

The mixed signals that the General Medical Council gives by increasing the number of PLAB places, the lack of training grade jobs, and goalposts that keep moving within the colleges almost conspire to work against a doctor who qualified overseas. Combined with this is the ignorance of most sections of the medical system of issues that concern us. Many overseas graduates wonder if this is what institutional racism is all about. Support from individual colleagues and local departments tends to dispel some of these concerns. When one finds that advice or information on any aspect of work can often be inconsistent and misleading it becomes clear that it is more bureaucratic bungling and lack of concern rather than deliberate deception.

The central theme is, however, that overseas doctors, a mostly transitional demographic group, are treated badly. Welsh wants us all to wait for the report of the NHS Executive's review panel. At the risk of prejudging its results I expect it to be a reshuffle of the jigsaw, lacking imagination.

K S Madhavan *clinical assistant in radiotherapy*
Department of Clinical Oncology, Essex County Hospital, Colchester CO3 3NB
k.madhavan@virgin.net

1 Welsh C. Training overseas doctors in the United Kingdom. *BMJ* 2000;321:253-4. (29 July.)
2 Sridhar M. What is the future for training overseas graduates? *BMJ* 2000;321:307. (29 July.)

Consider moving to the US

EDITOR—I write in response to the articles by Sridhar and Welsh on training overseas graduates in the United Kingdom.[1 2] I abandoned training in Britain in 1997 to leave for the United States because of the extreme chaos of the training scheme in the United Kingdom. These days even well qualified British medical graduates are finding it hard to get decent training posts. Several junior doctor posts in the NHS are not really training posts. Overseas doctors tend to get positions only in those hospitals where the consultants are not particularly qualified or trained to be trainers. House officers often are not supervised for procedures. One to two hours of teaching per week is considered good for most of the senior house officer posts. There was no curriculum, no career counselling, etc. The evaluation of junior doctors, it is joked, is done by the staff nurses.

Many bright and qualified doctors end up as staff grade doctors, which is a career cul de sac. This was not what I expected when I borrowed money for the flight ticket to the United Kingdom. Unfortunately the

work culture in the NHS tends to be "shut up and put up" (although this is not specific to overseas doctors). Once, when I tried to voice my concerns, I was asked, " If you are not satisfied, why don't you go back to where you come from?" Six months later I was in the United States.

In the United States the system is very homogeneous and there is not much difference in the substance of training between premier teaching hospitals and ordinary inner city hospitals. House staff are actually trained and not seen as just a pair of hands. Any violation of training guidelines will be picked up in annual anonymous surveys. Residency programmes are derecognised if they do not improve.

This is not to cheapen the value of the clinical training the NHS has to offer. Nor is this meant to offend my colleagues and friends in Britain. Someone has to say that the emperor has no clothes. I appeal to the General Medical Council to stop its racketeering with the Professional and Linguistic Assessment Board (PLAB) test. The GMC, royal colleges, the BMA, and the Home Office should sit together and get their act together. My advice to overseas doctors in the United Kingdom would be to consider moving to the United States. Residencies are not easy to get, but they are worth the effort. In three years these doctors will be well equipped to practise independently as primary care providers in their home countries. If they choose to immigrate they can have a fruitful career as a consultant.

Eswar Krishnan *fellow*
Division of Rheumatology, Stanford University School of Medicine, 1000 Welch Road, 203, Stanford, CA 94305-5755, USA
eswar.krishnan@stanford.edu

1 Sridhar M. What is the future for training overseas graduates? *BMJ* 2000;321:307. (29 July.)
2 Welsh C. Training overseas doctors in the United Kingdom. *BMJ* 2000;321:253-4. (29 July.)

Frequency of PLAB tests should match available jobs

EDITOR—We were pleased to see that someone has at last drawn attention to the future of training for overseas doctors in the United Kingdom.[1 2] The number of overseas doctors in training has increased over the past 10 years.[2] We believe that this is partly because the General Medical Council has made the Professional and Linguistic Assessment Board (PLAB) test more accessible by holding it in overseas centres.

The test is now held in two parts; part one costs £265.00 and will be held seven times in the United Kingdom and four times in nine centres overseas in the coming year. All overseas centres are in developing countries, where job opportunities after graduation are often unsatisfactory.

Part two costs £150.00 and will be held eight times in the United Kingdom over the next year. Although the GMC warns candidates that finding a job is their own responsibility, by holding the PLAB test multiple times it is enticing overseas candidates and worsening the imbalance between those passing the test and the number of training posts available to them. It seems that the PLAB test now serves the sole purpose of filling the GMC's coffers. The lure of good training in the United Kingdom provides overseas doctors with a means of escape from the inadequacies in their own national training systems. The British Council offices in developing countries usually provide little or no information regarding job opportunities for doctors. The website of the National Advice Centre for Postgraduate Medical Education, recommended by the GMC, gives some information about the difficulties of obtaining training posts, but this is inadequate, non-specific, and unrealistic. Failure to obtain a job in the United Kingdom is often conceived in their home countries as an inadequacy on the part of the doctor. Therefore many take up temporary unpaid observer attachments in the hope of transferring to a training post. It is time that the GMC decreased the frequency of the PLAB test to fit in with the number of available jobs.

E Shah *clinical research fellow in general surgery*
University College London, London W1W 7EJ
Lizshah@cs.com

P Dasgupta *specialist registrar*
Guy's Hospital, London SE1 9RT

1 Sridhar M. What is the future for training overseas graduates? *BMJ* 2000;321:307. (29 July.)
2 Welsh C. Training overseas doctors in the United Kingdom. *BMJ* 2000;321:253-4. (29 July.)

Orlistat associated with hypertension

Digit preference lays conclusions about orlistat open to doubt

EDITOR—The drug point by Persson et al provides an excellent example of the common and widely criticised practice of digit preference when recording blood pressure.[1] The British Hypertension Society guidelines recommend measuring blood pressure to the nearest 2 mm Hg.[2] Persson et al did not adopt this method of measurement because the chances of recording 12 zeros are several million to one.

Bias of this kind could have a profound effect on the study's conclusions. For example, Persson et al concluded that 170/100 mm Hg (when taking orlistat) was greater than 160/90 mm Hg (when not taking the drug). If a blood pressure of 166/96 mm Hg was rounded up to 170/100 mm Hg and 164/94 mm Hg was rounded down to 160/90 mm Hg, then the true difference would be 2/2 mm Hg rather than the 10/10 mm Hg as recorded by the observer. Given the open nature of the investigation, the considerable day to day variation that can occur in measuring blood pressure, and the strong digit preference observed in this study, the conclusions must be open to considerable doubt.

G D Johnston *professor of clinical pharmacology*
Department of Therapeutics and Pharmacology, Queen's University, Belfast, Belfast BT9 7BL

1 Persson M, Vitols S, Yue QY. Orlistat associated with hypertension. *BMJ* 2000;321:87. (8 July.)
2 Ramsey LE, Williams B, Johnston GD, MacGregor GA, Poston L, Potter JF, et al. Guidelines for management of hypertension: report of the third working party of the British Hypertension Society. *J Hum Hypertens* 1999;13:569-92.

Roche concludes that there is no evidence of a causal association

EDITOR—In their drug point Persson et al report that hypertension occurred in a woman when she took orlistat.[1] Further information indicates that the hypertensive events are not related to treatment with orlistat.

After finally stopping orlistat in August 1999 the patient was reported to have developed fever, headache, oedema, and joint pains in mid-November 1999. Diuretic treatment was restarted, and fever and oedema resolved; blood pressure was reported as normal during this period. In March 2000 the oedema and headache recurred and her blood pressure was 170/100 mm Hg; the patient had not taken diuretic treatment while on holiday for a week. Frusemide was resumed, and after a few days the oedema resolved and her blood pressure was 140/90 mm Hg. Information recently received indicates that investigations performed by a specialist internist concluded that the patient has idiopathic oedema.

Orlistat has been studied in over 20 000 patients, and since it was first launched in 1998 there have been more than 8.2 million patient treatments. It is well documented that weight loss due to diet alone is associated with a reduction in blood pressure. The Cochrane Collaboration recently completed a review indicating that a weight loss of 4-8% was associated with a decrease in blood pressure of about 3 mm Hg.[2]

In clinical studies, patients treated with orlistat lost significantly more weight than control patients (placebo plus diet)[3 4] and thus showed correspondingly greater reductions in blood pressure than control patients. A meta-analysis of five randomised, double blind, placebo controlled studies (3132 patients) showed that patients who had raised diastolic blood pressure at baseline (≥90 mm Hg) showed a 7.9 mm Hg reduction in diastolic blood pressure when treated with orlistat compared with a 5.5 mm Hg reduction in the control group.[5]

Finally, of the 1466 patients treated with placebo plus diet in the clinical trial database, 1.3% had hypertension of new onset or worsening hypertension and 0.1% had a hypertensive crisis. Of the 1913 patients treated with orlistat on that same database, 1.2% had new or worsening hypertension and none had a hypertensive crisis as an adverse event.

After a review of these and the cumulative data in the Roche safety database we have concluded that there is no evidence of a causal association between orlistat and hypertension. We trust that the information provided puts the drug point into perspective.

Martin H Huber *global head, safety risk management*
Pharmaceuticals Division Clinical Science, Safety Risk Management, F Hoffman-La Roche, CH-4070 Basle, Switzerland
Martin_harold.huber@roche.com

1 Persson M, Vitols S, Yue Q-Y. Orlistat associated with hypertension. *BMJ* 2000;321:87. (8 July.)
2 Mulrow CD, Chiquette E, Angel L, Cornell J, Summerbell C, Anagnostelis B, et al. Dieting to reduce body weight for controlling hypertension in adults. *Cochrane Database Syst Rev* 2000;(2):CD000484.
3 Sjöström L, Rissanen A, Andersen T, Boldrin M, Golay A, Koppeschaar HP, et al.Randomised placebo-controlled trial of orlistat for weight loss and prevention of weight regain in obese patients. *Lancet* 1998;352:167-72.
4 Davidson MH, Hauptman J, DiGiralmo M, Foreyt JP, Halsted CH, Heber D, et al. Weight control and risk factor reduction of orlistat in obese subjects treated for 2 years with orlistat: a randomized controlled trial. *JAMA* 1999;281:235-42.
5 Zavoral JH. Treatment with orlistat reduces cardiovascular risk in obese patients. *J Hypertens* 1998;16:2013-7.

Authors' reply

EDITOR—Johnston has pointed out the importance of following recommended guidelines when measuring blood pressure. We agree that this is necessary when performing a study to measure blood pressure. The difference is that we presented a case report of increased blood pressure associated with a drug newly approved in Sweden, the first in our pharmacovigilance spontaneous reporting system. The patient was never admitted, but when she consulted her doctor about her headache and oedema she was found to have raised blood pressure. With confirmatory results on stopping treatment and rechallenging with the drug we could not disregard the doctor's observation.

Huber found no evidence of a causal relation between orlistat treatment and hypertensive reaction in the reported case on the basis of the follow up information provided by us. We thought that other factors such as an infection may have played a part in the episode of fever, headache, oedema, and joint pains three months after stopping orlistat. We concluded that orlistat was associated with hypertension because the patient was healthy before orlistat was started, and her first episodes and the confirmatory results on dechallenging and rechallenging with orlistat showed a close temporal relation. Orlistat and the later infection seem likely to have provoked the episodes of oedema and increased blood pressure. Moreover, we have received four additional case reports of orlistat associated with increased blood pressure (table).

Rare undesirable reactions are often detected after a drug has been in widespread use. It is not surprising that a reaction with an incidence of less than 1/1000 exposed patients is not discovered in a clinical trial of 2000 patients. Average decreases in blood pressure will not exclude the possibility that individual patients may react differently. Although we do not know the plausible mechanisms, the signal of increased blood pressure during orlistat treatment should be further evaluated.[1]

Matty Persson *research nurse*
Sigurd Vitols *associate professor in clinical pharmacology*
Regional Centre for Pharmacovigilance, Karolinska University Hospital, S-171 76, Stockholm, Sweden
Qun-Ying Yue *associate professor in clinical pharmacology*
Pharmacovigilance Unit, Medical Products Agency, S-751 03, Uppsala, Sweden

1 Delamothe T. Reporting adverse drug reactions. *BMJ* 1992;304:465.

Spontaneous reports of hypertension associated with orlistat treatment in Sweden

Case No	Sex	Age (years)	Length of treatment with orlistat	Blood pressure with orlistat treatment (mm Hg)			Adverse reactions
				Before	During	After	
1*	F	41	Weeks, intermittently	Healthy	190/100	140/90	Hypertension, headache, oedema
2	F	70	9 months	165/90 (Healthy, BMI=36)	190/90	160/85	Hypertension
3	F	73	7 weeks intermittently	Orthostatic hypotension	185/100	Antihypertensive treatment	Hypertension
4	F	50	17 months	140/85 (Healthy, BMI≥30)	180-200/100	140-130/85	Hypertension, headache
5	F	70	6 weeks	180/90, (Levothyroxine treated hypothyroidism)	245/145	180/90	Blood pressure increased

BMI=body mass index. *Current case.

Familial hypercholesterolaemia is underdiagnosed after AMI

EDITOR—Neil et al report on the underdiagnosis of familial hypercholesterolaemia in routine practice.[1] Unfortunately, things are not much better with regard to care after acute myocardial infarction.

In 1995 we evaluated the care of 2153 consecutive patients admitted over three months with acute myocardial infarction to 20 adjacent hospitals in the former Yorkshire region. Altogether 404 patients were aged under 60 (age range 32-60; median 53.3 years). Only 292 of these patients had their cholesterol measured—that is, there was an investigation shortfall of 28%. Among these 292 cases we identified 36 cases of familial hypercholesterolaemia. Only six of these patients were already known to have hyperlipidaemia.

Of even more concern was the fact that only three patients were taking a statin at the time of admission to hospital. This increased to 13 patients at discharge, but there was still a therapeutic shortfall of 64%; this was in a subgroup of patients who had already had a premature coronary event.

The diagnosis and treatment of the relatives of these patients are also likely to be inadequate. We are aware that we are talking about small numbers of patients, and things may have improved over recent years. But the evidence (the Scandinavian simvastatin survival study (4S)[2] and the west of Scotland coronary prevention study (WOSCOP)[3]) was available before and during our study period. We hope that activities like the United Kingdom's national service frameworks for coronary heart disease will contribute to better care for these patients.

Micha F Dorsch *British Heart Foundation research fellow*
medmfd@leeds.ac.uk
Richard A Lawrance *British Heart Foundation research fellow*
Nigel P Durham *British Heart Foundation research fellow*
Alistair S Hall *professor of clinical cardiology*
British Heart Foundation Heart Research Centre, Leeds General Infirmary, Leeds LS2 9JT

1 Neil HAW, Hammond T, Huxley R, Matthews DR, Humphries SE. Extent of underdiagnosis of familial hypercholesterolaemia in routine practice: prospective registry study. *BMJ* 2000;321:148. (15 July.)
2 Scandinavian Simvastatin Survival Study Group. Randomised trial of cholesterol lowering in 4444 patients with coronary heart disease: the Scandinavian simvastatin survival study (4S). *Lancet* 1994;344:1383-9.
3 Shepherd J, Cobbe SM, Ford I, Isles CG, Lorimer AR, Macfarlane PW, et al. Prevention of coronary heart disease with pravastatin in men with hypercholesterolemia. *N Engl J Med* 1995;333:1301-7. (West of Scotland Coronary Prevention Study Group.)

Psychiatric disorders and risky sexual behaviour

Paper did not mention sexual orientation

EDITOR—The paper by Ramrakha et al on risky sexual behaviour in young adults did not mention sexual orientation.[1] It met its stated objective but would have had a much greater impact if it had included a discussion of sexual orientation.

Lesbian, gay, and bisexual adolescents face tremendous challenges growing up in a culture that is almost uniformly antihomosexual. They face an increased risk of medical and psychosocial problems that are not caused by their sexual orientation but by society's negative reaction to it. In response to the external pressure and isolation they often face, lesbian and gay young people are more vulnerable than others to psychosocial problems including substance abuse, depression, failure at school, early relationship conflicts, and homelessness. They are three times more likely to attempt suicide than heterosexual young people. One in four young adults living on the streets of the United States identify themselves as lesbian, gay, bisexual, or transsexual.[2] A survey conducted at the Hetrick-Martin Institute in New York city found that among those young gay men rejected by their families, 44% had suicidal ideation, and 41% of the lesbians and 34% of the gay male youth had attempted suicide.

Lesbian and gay young adults have few positive role models. Internalised homophobia can be considered a major stressor for these young people. It is compounded by stigma, which relates to expectations of rejection and discrimination, and by actual experiences of discrimination and violence. These three factors have been shown to have

a significant independent association with various mental health measures.[3]

It is estimated that 33-52% of gay and bisexual youth have had unprotected sexual intercourse within the past 6 to 12 months, and recent studies in New York and elsewhere suggest that higher risk sex is increasing among gay male youth. Finally, even governmental organisations in the United States are acknowledging that the lesbian and gay community has unmet healthcare needs.[4]

I work as a family physician in the South Bronx, a community with some of the highest rates of HIV infection in the United States, and I am the director of a non-profit community activist group advocating improved access to quality care for the local lesbian, gay, bisexual, and transsexual population. The major barrier to such access is the real or perceived homophobia of the healthcare system propagated by physicians and staff who at best ignore and dismiss the lesbian, gay, bisexual, and transsexual community in research and practice. Sexual orientation, identity, and behaviour must be included in any research looking at risky sexual behaviour in young adults.

Peter Meacher *family physician*
South Bronx Health Center for Children and Families, 871 Prospect Avenue, Bronx, NY 10459, USA
pmeacher@montefiore.org

1 Ramrakha S, Caspi A, Dickson N, Moffitt TE, Paul C. Psychiatric disorders and risky sexual behaviour in young adulthood: cross sectional study in birth cohort. *BMJ* 2000;321:263-6. (29 July.)
2 Gibson P. *Gay male and lesbian youth suicide, report of the secretary's task force on youth suicide.* Washington, DC: US Department of Health and Human Services, 1998:110-42.
3 Meyer I, Dean L. Patterns of sexual behaviour and risk taking among New York City gay men. *AIDS Educ* 1995;7: 13-23.
4 Office of Disease Prevention and Health Promotion, US Department of Health and Human Services. *Healthy people 2010.* Washington, DC: US DHHS, 2000. (Available at www.health.gov/healthypeople/)

Advice to authors

We prefer to receive all responses electronically, sent either directly to our website or to the editorial office as email or on a disk. Processing your letter will be delayed unless it arrives in an electronic form.

We are now posting all direct submissions to our website within 24 hours of receipt and our intention is to post all other electronic submissions there as well. All responses will be eligible for publication in the paper journal.

Responses should be under 400 words and relate to articles published in the preceding month. They should include ⩽5 references, in the Vancouver style, including one to the BMJ article to which they relate. We welcome illustrations.

Please supply each author's current appointment and full address, and a phone or fax number or email address for the corresponding author. We ask authors to declare any competing interest. Please send a stamped addressed envelope if you would like to know whether your letter has been accepted or rejected.

Letters will be edited and may be shortened.

bmj.com
letters@bmj.com

Risky sexual behaviour is part of two disorders examined

EDITOR—I have read the article of Ramrakha et al,[1] but I am perplexed by it. According to the *Diagnostic and Statistical Manual of Mental Disorders, fourth edition*, criteria for a manic episode include, under B (6), an increase in goal directed (sexual) behaviour, under B (7), excessive involvement in pleasurable activities that have a high potential for painful consequences, including sexual indiscretions. Criteria for hypomanic episodes are similar. The criteria for "301.7 Antisocial Personality Disorder" include, under A (5), reckless disregard for the safety of self or others.

An increased incidence of sexual promiscuous and risk taking behaviour are therefore not only expected but actually the main diagnostic criteria for two of the examined conditions.

Peter von Kaehne *general practitioner*
Springburn Health Centre, Glasgow G21 1TR
vkaehne@doctors.org.uk

1 Ramrakha S, Caspi A, Dickson N, Moffitt TE, Paul C. Psychiatric disorders and risky sexual behaviour in young adulthood: cross sectional study in birth cohort. *BMJ* 2000;321:263-6. (29 July.)

Screening for medium chain acyl-CoA dehydrogenase deficiency has still not been evaluated

EDITOR—Every baby born in the United Kingdom is screened for phenylketonuria and congenital hypothyroidism at 6-14 days of age. Several screening laboratories now use tandem mass spectrometry for estimating blood phenylalanine concentration. Tandem mass spectrometry can assay simultaneously, in the same sample, many other metabolites and can thus potentially detect other metabolic disorders, including medium chain acyl-CoA dehydrogenase deficiency.

Medium chain acyl-CoA dehydrogenase deficiency is almost as common as phenylketonuria, affecting roughly 1:15 000 births in the United Kingdom. Infants with the deficiency are well until challenged by a catabolic stress, most commonly a mild intercurrent infection or fasting. As a result of the acute encephalopathy, affected infants may die or be left with profound neurological damage. Undiagnosed, medium chain acyl-CoA dehydrogenase deficiency has a mortality of up to 20%, and 10-15% are left severely handicapped. But early treatment is simple, cheap, and effective. Among 41 patients treated in one centre for a median of 6.7 years there were no additional deaths even though the incidence of previous death among siblings was high.[1]

A possible concern about screening is the anxiety caused to parents whose infants with medium chain acyl-CoA dehydrogenase deficiency never become ill because they are never challenged. But it is indefensible to withhold the knowledge that the child is at an easily avoided risk. It is sometimes thought that we can rely on clinical acuity to diagnose the deficiency before severe damage occurs, but the non-specific features of the encephalopathy make this an ineffective strategy. The extra cost of screening for the deficiency is less than £1 per baby.

Two systematic reviews commissioned by the health technology assessment programme in 1993 recommended further studies on the application of tandem mass spectrometry to neonatal screening.[2 3] In keeping with the ethos that all screening programmes should be evaluated, a moratorium on the introduction of screening for medium chain acyl-CoA dehydrogenase deficiency was agreed pending pilot studies. The failure to fund these studies, however, has led to considerable frustration among all those involved. There is a risk that screening will be introduced without trials, as is already occurring in parts of Germany, Australia, and the United States. The opportunity for a structured evaluation may be missed.

Prevention is one of the challenges laid down in the National Plan for the NHS, but the health technology assessment process has failed in this case. The challenge now is how to move forward responsibly.

Stuart Tanner *professor of child health, University of Sheffield*
m.s.tanner@shef.ac.uk

Mark Sharrard *consultant paediatrician with a special interest in metabolic disease*
Sheffield Children's Hospital, Sheffield S10 2TH

Maureen Cleary *consultant paediatrician with special interest in metabolic disease*
John Walter *consultant paediatrician with special interest in metabolic disease*
Ed Wraith *consultant paediatrician with special interest in metabolic disease*
Willink Biochemical Genetics Unit, Royal Manchester Children's Hospital, Manchester M27 4HA

Philip Lee *consultant paediatrician/metabolic medicine*
Charles Dent Metabolic Unit, National Hospital for Neurology, Queen Square, London WC1N 3BG

James Leonard *professor of paediatric metabolic disease*
Biochemistry, Endocrinology and Metabolism, Institute of Child Health, London WC1N 1EH

Andrew Morris *senior lecturer in paediatric metabolic medicine*
Sir James Spence Department of Child Health, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP

Neil McIntosh *professor of child life and health*
University of Edinburgh, Edinburgh EH9 1UW

1 Wilson CJ, Champion MP, Collins JE, Clayton PT, Leonard JV. Outcome of medium chain acyl-CoA dehydrogenase deficiency after diagnosis. *Arch Dis Child* 1999;80:459-62.
2 Pollitt RJ, Green A, McCabe CJ, Booth A, Cooper NJ, Leonard JV, et al. Neonatal screening for inborn errors of metabolism: cost, yield and outcome. *Health Technol Assess* 1997;1(7):1-202. (www.hta.nhsweb.nhs.uk/)
3 Seymour CA, Thomason MJ, Chalmers RA, Addison MJ, Bain MD, Cockburn F, et al. Neonatal screening for inborn errors of metabolism: a systematic review. *Health Technol Assess* 1997;1(11):1-95. (www.hta.nhsweb.nhs.uk/)

bmj.com

Rapid responses

Correspondence submitted electronically is available on our website