

Carriage of meningococci in contacts of patients with meningococcal disease

“Kissing contacts” need to be defined

EDITOR—In their study Kristiansen et al show high carriage rates of pathogenic strains of *Neisseria meningitidis* in household and kissing contacts of patients with invasive meningococcal disease.¹ While it is easy to define a household contact it may be more difficult to define a kissing contact. There are many types of kiss, ranging from a “peck on the cheek” to much more! In some cultures kissing is as common as shaking hands. In such situations widespread chemoprophylaxis to “kissing contacts” may not be appropriate. It would be valuable to know whether Kristiansen et al placed any restrictions on who was defined as a kissing contact.

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1 Kristiansen BE, Tveten Y, Jenkins A. Which contacts of patients with meningococcal disease carry the pathogenic strain of *Neisseria meningitidis*? A population based study. *BMJ* 1998;317:621-5. (5 September.)

Chemoprophylactic strategy needs to be determined

EDITOR—The study by Kristiansen et al addresses important questions about the use of chemoprophylaxis in contacts of patients with meningococcal disease.¹ We believe, however, that the data presented do not fully support the conclusions. Kristiansen et al found high rates of meningococcal carriers among class 1 contacts (12.4%) and advocated the use of chemoprophylaxis in this group, on the basis of their assumption that carrying the pathogenic strain increases the likelihood of contracting the disease. One concern is that this group accounts for only 18 of 42 contacts who were found to be carriers. More than half of the carriers would therefore not receive prophylactic treatment. Should classes 2 and 3 be excluded?

We accept that giving prophylactic treatment to all those in groups 2 and 3 seems excessive. It would have been interesting, however, if Kristiansen et al had assessed the characteristics of these carriers to identify those at highest risk and target chemoprophylaxis more effectively.

In addition, the carrier rates were compared with those in other Norwegian populations in which the definition of pathogenic strain was different.^{2,3} It would have been more appropriate to compare their

carrier rates with the prevalence among people in the Telemark area who had not been in contact with meningococcal disease.

Kristiansen et al's paper does not determine chemoprophylactic strategy conclusively. It also highlights the fact that there is still much to learn about the relation between carriage of meningococci and meningococcal disease.

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- 1 Kristiansen BE, Tveten Y, Jenkins A. Which contacts of patients with meningococcal disease carry the pathogenic strain of *Neisseria meningitidis*? A population based study. *BMJ* 1998;317:621-5. (5 September.)
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- 3 Caugant DA, Hoiby EA, Magnus P, Scheel O, Hoel T, Bjerne G, et al. Asymptomatic carriage of *Neisseria meningitidis* in a randomly sampled population. *J Clin Microbiol* 1994;32:323-30.

Age and other risk factors need to be taken into account

EDITOR—Kristiansen et al used an interesting study design looking for carriers of *Neisseria meningitidis* among contacts of patients with meningococcal disease.¹ The results show a strong relation between degree of contact and prevalence of carriage, with the highest prevalence rates among household and kissing contacts. The results are clear, and the prevalence of the pathogenic strain of 12.4% among household and kissing contacts is high.

The prevalence of meningococcal carriage is strongly associated with age, following a typical age distribution, and with other risk factors. This has been shown in studies from various countries, including one from Norway.² Peak rates are observed among people aged 15-30.

A recent study that was conducted after a local outbreak of meningococcal disease in the Netherlands made it clear that several risk factors are involved. The prevalence of meningococcal carriers in a systematic sample of the general population varied from 3% among children aged 2-5 to 39% among those aged 16-20 and was lower among those who had recently been taking antibiotics (odds ratio 0.3; 95% confidence interval

0.1 to 0.9). The prevalence of carriers of the pathogenic strain causing the outbreak in the population was low (0.5%).

This raises several questions. Have Kristiansen et al have studied age as a determinant of carriage? To what extent did different age distributions in the three contact classes vary from that in the general population, and did correction for age influence the rates of prevalence in the three groups? Does the prevalence of carriage among class 2 and 3 contacts (non-household and non-kissing contacts) then still exceed the prevalence found in the general population by two to three times? Has the effect of other known risk factors—for example, crowding or use of antibiotics in the weeks before the study—been evaluated?

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- 2 Caugant DA, Hoiby EA, Magnus P, Scheel O, Hoel T, Bjerne G, et al. Asymptomatic carriage of *Neisseria meningitidis* in a randomly sampled population. *J Clin Microbiol* 1994;32:323-30.

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Authors' reply

EDITOR—As Hayward points out, the meaning of “kissing contact” depends on cultural context. In the Norwegian context, this signifies mouth to mouth contact, and that is how we intended the term to be understood. As Dutton et al observe, exclusion of non-kissing, non-household contacts would mean that more than half of the carriers whom we found would not have received prophylaxis. Indiscriminate inclusion of these contacts would, however, have resulted in 1366 unnecessary courses of antibiotics. This is why we isolate and genetically characterise the carrier strains.

Are there simpler ways of selecting candidates for chemoprophylaxis? Reintjes specifically suggests age as a selective variable, and this prompted us to reanalyse our database. We found that the overall rate of meningococcal carriage is lower in children aged under 5 (17/203, 7.3%) and 5-12 (24/373, 6.4%) than in those aged 13-18 (70/345, 20.3%) and over 18 (121/614, 19.7%). This does not, however, seem to be reflected in the rates of carriage of the patient strains (6/203, 3%; 7/373, 1.9%; 6/345, 1.7%; and 23/614, 3.7%). Crowding is probably a relevant variable but is not easy to assess objectively. Previous antibiotic treatment would be expected to reduce overall carriage rates but may at the same time render the person treated more prone to colonisation by the patient strain. As Dutton et al have noticed, we cannot, on the basis of our data, determine whether or not the rate of carriage of the strains causing disease in non-kissing, non-household contacts is higher than that in the general population; our numbers are small, our confidence intervals are wide, and the best available comparable study of the general population was conducted in a distant part of the country. The correct population for comparison would be non-contacts from Telemark (as Dutton et al suggest), age matched with the contacts, and ideally collected over the same time (not achievable in this case). We acknowledge the value of such a study and consider it a priority in our future research programme.

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Primary care arrangements for elderly people in residential and nursing homes



EDITOR—McCormack highlights variations, inequities, and problems in care for elderly people discharged after short stays in hospital.¹ Declining long stay provision in the NHS and shorter acute inpatient stays have increased pressure on community services,

Arrangements for visits by general practitioners to residents of nursing and residential homes (figures in parentheses are percentages)

	Random sample of Kent nursing homes* (n=27)	Sample of homes from social services organisation project† (n=11)
Registration:		
No registered as nursing home only	14 (52)	1 (9)
No registered as residential home only	0	7 (64)
No with dual registration	13 (48)	3 (27)
No of residents per home:		
Mean	34	32
Median	31	24
Range	12-67	14-85
No of homes where 1 GP was responsible for all residents		
	3 (11)	3 (27)
No of GPs per home:		
Mean	4.0	2.2
Median	6.0	3.0
Range	1-33	1-13
Number of homes with regular clinics:		
None	14 (52)	5 (46)
Weekly	11 (41)	4 (36)
Monthly	1 (4)	2 (18)
Less frequently	1 (4)	0 (0)
% Of residents who had consulted GP in past month:		
Mean	49	56
Median	29	42
Range	8-100	27-100
Consultation rate in past month (for people who had consulted):		
Mean	2.6	1.9
Median	1.5	1.0
Range	1.0-8.9	1.0-4.6
No of consultations per visit by GP:		
Mean	5.0	4.8
Median	1.0	1.9
Range	1.0-27.8	1.0-18.9

GP=General practitioner.
*Six homes were ineligible (two had closed and four did not provide elderly care), and one refused to participate, leaving sample of 27.
†One home refused to participate, leaving sample of 11.

exacerbating perverse incentives between health and social care.¹ As long term care of elderly people is redefined as social care general practitioners have become responsible for the health care of increasing numbers of frailer residents of residential and nursing homes. Evidence on the effect of this is scarce.²

We conducted preliminary research by examining residents' arrangements for general practitioner consultations. We approached two samples of homes in the independent sector: a 20% random sample of nursing homes in Kent and 12 residential homes chosen from a study of social services organisation³ in Kent (n=4), London (n=3), and Sheffield (n=5). Letters to home managers were followed by telephone interviews (December 1997 to February 1998).

Few homes dealt with only with one general practitioner; typically they dealt with four or five (table). Regular clinics, held in half of the homes (usually weekly), were open only to

patients of the general practitioner organising the clinic. For other residents, general practitioners visited only when asked to do so by home staff. Arrangements varied: one general practitioner did a weekly “ward round” to 85 residents, but most visits were to individual patients. Overall, the reported number of contacts with residents was high, albeit mainly in the winter.

Payments under the general practitioner contract seem small for these levels of activity and provide a poor incentive for quality care. Some home staff reported difficulties getting general practitioners to visit residents, while many homes that did not have regular clinics wanted them. One nursing home with regular clinics and good reported liaison between staff and the general practitioner paid the general practitioner £3000 quarterly, further blurring both the boundary between health and social care and professional accountability.

Although our data come from uncorroborated telephone interviews with a small number of homes mainly concentrated in southeast England, they are consistent with issues raised by McCormack. They show that the boundary between health and social care is further complicated by the division of primary and secondary healthcare funding and responsibilities. The role of general practitioners and their professional responsibilities need to be clarified.⁴ Primary care groups have potential,⁵ but details must be clarified.

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- 1 McCormack B. Community care for elderly people. *BMJ* 1998;317:552-3. (29 August.)
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Treating type 2 diabetes

Study was conducted in exemplary fashion

EDITOR—The United Kingdom Prospective Diabetes Study has shown over 10 years of follow up that people with newly diagnosed type 2 diabetes can maintain excellent glycaemic control (concentrations of haemoglobin A_{1c} of 7%) and that this can significantly reduce microvascular complications.¹ It has also shown that strict blood pressure control can significantly reduce mortality as well as microvascular and macrovascular complications among these people.² The study group thus answered its primary research questions. The design of the study meant that several secondary

questions could not be answered convincingly.³ Several lessons in ethics and public health can, however, be learnt.

The fact that the comparison group maintained a comparatively low concentration of haemoglobin A_{1c} (7.9%) over 10 years of follow up means that the researchers were ethical to the point of risking a null finding. In contrast, in their enthusiasm to establish the efficacy of specific treatment(s) some investigators replace standard drug treatment with an inactive placebo.⁴ The researchers continuously adapted the intervention to changes in scientific knowledge and clinical practice, which is reasonable and justifiable in a 20 year trial that chooses to adhere to sound ethical principles.

The study was conducted in primary healthcare settings rather than specialist centres or university hospitals, and the results are therefore likely to be closer to clinical practice than those from other large clinical trials would be.⁵ By simulating clinical practice as closely as possible, the study group has given data on effectiveness that are more suitable for translating into public health practice than are efficacy data collected in controlled and ideal environments. In including a blood pressure control trial,² the investigators acknowledged that complications of diabetes are multifactorial in aetiology; glycaemic control is but one aspect. The vast burden of complications on the population can be effectively and efficiently tackled only if risk factors such as high blood pressure, dyslipidaemia, and smoking receive at least as much attention as glycaemic control. The study results may have their biggest influence in better management of blood pressure among people with type 2 diabetes.² The fact that conventional glycaemic treatment for people in the comparison group resulted in a relatively low haemoglobin A_{1c} concentration suggests that some attributes (for example, universal health care, emphasis on primary care, relationship between primary and specialist care, patient education) of the British model of health care may be particularly suitable for managing chronic diseases. Countries such as the United States may benefit from examining some of these attributes and modifying their approaches to the management of chronic diseases accordingly.

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Difference needs to be explained

EDITOR—The UK Prospective Diabetes Study Group reports Kaplan-Meier plots of proportions of patients who died of disease related to diabetes.^{1,2} The first article compares less tight control of blood pressure with tight control and showed that about 30% died of a disease related to diabetes. The corresponding figure in the second article gave a rate of about 15%. Can the authors explain that difference? Why was the control group not allowed to be treated with β blockers or angiotensin converting enzyme inhibitors?

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- 2 UK Prospective Diabetes Study Group. Efficacy of atenolol and captopril in reducing risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 39. *BMJ* 1998;317:713-20. (12 September.)

Numbers needed to treat need to be clarified

EDITOR—The results of the UK Prospective Diabetes Study Group regarding tight blood pressure control and type 2 diabetes¹ alerted us that many of our patients share similar characteristics with the study population and the findings are applicable to our practice.

We used an evidence based medicine approach in attempting to calculate the numbers needed to treat on the basis of the data presented. The numbers needed to treat that are stated in the article are different from those that can be calculated. The study states that the numbers needed to treat over 10 years are 6.1 to prevent any complication and 15.0 to prevent death from a diabetes related cause. We calculated the numbers needed to treat by using the values in figure 4 (based on a median follow up of 8.4 years) and concluded that the numbers needed to treat are 11 to prevent any complication and 20 to prevent death. The table describes our method.

We appreciate the quality of the patient oriented research conducted in this study. We would have found it more useful,

however, if an explanation had been included that described the study group's derivation of the numbers needed to treat.

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Important findings should not be published in two journals

EDITOR—The findings of the UK Prospective Diabetes Study Group have been eagerly awaited by clinicians in primary care for some time. Consequently, I was surprised to discover that some papers were published in the *BMJ*¹⁻³ and some in the *Lancet*.^{4,5} Why was this done? The *Lancet* is not as available to clinicians in primary care as the *BMJ*. I have met only one colleague who subscribes, whereas many receive the *BMJ*. The *Lancet*, furthermore, is not available electronically to non-subscribers. Our audit group is collating and summarising the findings from both journals, knowing that the *Lancet* papers are not as accessible for critical appraisal. Who chose which journal each paper would appear in? How will the correspondence generated by the papers be integrated? Who will critically evaluate the effects of the decision to publish in this way?

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- 2 UK Prospective Diabetes Study Group. Efficacy of atenolol and captopril in reducing risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 39. *BMJ* 1998;317:713-20. (12 September.)
- 3 UK Prospective Diabetes Study Group. Cost effectiveness analysis of improved blood pressure control in hypertensive patients with type 2 diabetes: UKPDS 40. *BMJ* 1998;317:720-8. (12 September.)
- 4 UK Prospective Diabetes Study Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998; 352:837-53.
- 5 Nathan DM. Some answers, more controversy, from UKPDS. [Editorial.] *Lancet* 1998;352:832-3.

Authors' reply

EDITOR—Narayan et al think that the design of the study is such that the reduced risk of complications by improving glucose control and improving blood pressure control should be able to be applied generally. The y axis of figure 6 in our first study (38), which Christiansen queries, is incorrectly scaled and should be identical to that for figure 5 in our

Blood pressure control to prevent complications in patients with type 2 diabetes

Clinical end point (related to diabetes)	Absolute risk (No (%) of patients)		Reduction (%)	No needed to treat (over 10 years)
	With tight control (n=758)	With less tight control (n=390)		
Any complication	259 (34.2)	170 (43.6)	9.4	11 (1/0.094)
Death	82 (10.8)	62 (15.9)	5.1	20 (1/0.051)

1 UK Prospective Diabetes Study Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* 1998; 352:837-53.

2 UK Prospective Diabetes Study Group. Tight blood pressure control and risk of macrovascular and microvascular

second study (39). Angiotensin converting enzyme inhibitors and β blockers were not given to the control group to minimise potential confounding effects from crossover of treatments.

We calculated the numbers needed to treat by using the attributable risk based on events per 1000 person years follow up. The method described by Groetsch et al does not adjust for duration of follow up and gives a less accurate result when there is a difference in survival between the two groups, in this case a non-significant 18% reduction in mortality from all causes in the group with tight blood pressure control compared with the group with less tight blood pressure control.

Richards asks why two journals were chosen, the *Lancet* for the glucose control papers and the *BMJ* for the blood pressure control papers. Both are widely read, excellent journals. We are grateful to the editors and staff of both journals, who enabled publication of these papers coincident with the first announcement of the results at the meeting of the European Association for the Study of Diabetes.

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Long stay care and the NHS

Multidisciplinary assessment is needed

EDITOR—Long term care of frail elderly people remains neglected, as Turrell et al point out.¹ A key factor in balancing demand, needs, and supply, and in the appropriate use of resources, has been the gatekeeping role of effective multidisciplinary assessment. In many areas the quality of this assessment has been undermined by the lack of a thorough medical review of older people.

A recent joint audit involving social and health agencies looked into the assessment process over six months, for a base population of 26 000. Thirty three patients were identified as needing institutional care and requiring local authority finance. Only nine of 17 patients in the community had had any form of documented medical assessment, though this is viewed as mandatory by community care legislation.² Opportunities for intervention and rehabilitation may well have been missed, and this small study supports the requirement for an independent specialist assessment to be a statutory part of the community care assessment, in addition to the information obtained from primary care.

Many of the patients in this study did not wish to leave their homes, and the failure to assess their needs properly is a matter of concern. Over recent decades the age specific rate of institutionalisation has risen³; this can be reversed by improved assessment procedures, proper access to rehabilitation, and augmented home support.

Turrell et al do not specifically mention the responsibilities of the NHS for long term care of people with specialist care needs.⁴ The population with complex care requirements that cannot be met in primary care settings is small, but these patients require protection and an appropriate environment and staffing. Most elderly people requiring institutional care can be well supported through the provision of independent, voluntary, and local authority residential and nursing homes, although the need for improvement in the quality of medical support is widely recognised.

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- 1 Turrell AR, Castleden CM, Freestone B. Long stay care and the NHS: discontinuities between policy and practice. *BMJ* 1998;317:942-4. (3 October.)
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Scottish Health Resource Utilisation Groups measure is helpful

EDITOR—Turrell et al describe the consequences of the lack of information in the United Kingdom about the health needs of older people in long stay homes.¹ In Scotland a measure has been devised by a group comprising geriatricians, nurses, and staff of the Information and Statistics Division to provide a measure for describing the characteristics of elderly people in all forms of continuing care. This, the Scottish Health Resource Utilisation Groups measure, comprises three categories of care need and three of dependency.

Care needs are described in terms of needs for special care, clinically complex treatments, and behaviour; dependency is described in terms of feeding, toileting, and transferring position. Supplementary information includes details of clinically complex conditions, continence, visual and hearing impairment, and problems of communication for the resident. The method has also been developed to incorporate social care variables.

Trained interviewers obtain data from care staff who know the residents well. These staff are asked to provide a profile of each resident based on observations over the previous seven days. Responses are scored, which takes roughly 90 minutes for 20 residents. Individuals are grouped into small numbers of care categories, which are each described in terms that would be readily understood by care professionals—for example, “has behavioural difficulties and low dependency.” Reliability testing shows satisfactory test-retest characteristics. Development studies show that the resource costs of each of the categories has a range of nearly three from the highest to the lowest.

The categories of the Scottish Health Resource Utilisation Groups provide a relatively cheap method of estimating resource use. They also provide a basis for dialogue about the nature and quantity of services provided, including unmet need and changes over time. The measure is evolving with experience, although it is important to maintain a constant core dataset to analyse changes over time. At present the measure is used in 86% of NHS continuing care beds and in increasing numbers of nursing and residential homes in Scotland. In addition, the Information and Statistics Division is piloting an admission and discharge record for residents of nursing homes that is similar to hospital based information. This is completed by nursing home staff and provides demographic data, funding source, whether admitted from home or hospital, outcome, and length of stay. The two datasets could ultimately be linked.

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- 1 Turrell AR, Castleden CM, Freestone B. Long stay care and the NHS: discontinuities between policy and practice. *BMJ* 1998;317:942-4. (3 October.)

Scotland needs a bed inquiry

EDITOR—The National Bed Inquiry for England is welcome, especially if the remit extends to issues of accuracy and definition.¹ My experience suggests that a similar inquiry is required for Scotland.

On 27 October 1997, in reply to a parliamentary question, Tam Dalyell was informed that with the completion of Lothian Health Board's acute services strategy there would be 2042 acute hospital beds in the board's three acute hospitals.² These figures were grossly inaccurate, relating to a superseded 1993 strategy document. The true number of projected acute beds in the three hospitals is 1413 (31% fewer) in 2003. I obtained these numbers from the board with considerable difficulty.

In October 1997 I sent a paper to the board's area medical committee expressing reservations about the large projected loss of acute hospital capacity in Lothian's hospitals (available from MGD). In November the British Medical Association held a press conference to highlight the concerns expressed in my “BMA paper.” In response the board issued rebuttals in a press statement and in a paper (subsequently shown to contain serious errors) which was sent to all general practitioners in Lothian.³ The paper was used to reassure local councillors and members of parliament that the projected bed numbers in the BMA paper were misleading and inaccurate. In

Number (percentage) of acute bed reductions in Lothian Health Board hospitals by sources

Years	BMA*	Lothian Health Board†	Information and Statistics Division (Scotland)‡
1990-6	694 (25)	400 (15)	671 (24)
1996-2003	744 (35)	348 (18)	580 (28)

*Author's table 2. †Tables 1 and 2. ‡Sections 1.4 and 5.18.⁴

August 1998 Lothian Health Board signed a contract for the largest new hospital financed through the public finance initiative in the United Kingdom.

Publicly available documents relating to the acute services strategy contain no hospital activity data. My subsequent access to the board's database, negotiated by the BMA, and an independent review by the Information Services Division of the NHS in Scotland¹ showed that the data in the board's rebuttal paper had departed from conventional definitions of acute specialties beds and inpatient activity. These departures resulted in substantial differences in historical and projected bed reductions (table), case load, and throughput between the BMA and Lothian Health Board.

Publicly accountable bodies should be required by statute to provide current and future projections of activity data and beds in a standard format and to make these data publicly available in all documents relating to new hospital planning developments. The Accounts Commission for Scotland have been given relevant documents relating to the issues discussed above.

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I am a member of the NHS Consultants' Association and the BMA. I thank Dr Brian Potter, Scottish BMA secretary, for help in obtaining the data discussed above.

- 1 Warden J. NHS bed cuts to be reviewed. *BMJ* 1998;317:966. (10 October.)
- 2 Scotland: hospital beds. *House of Commons Official Report (Hansard)* 1997 October 27:col 6983.
- 3 Jones T, Heading RC. Lothian Area Medical Committee: Lothian integrated healthcare plan. Edinburgh: Lothian Health Board, 1997.
- 4 *Lothian Health/BMA information issues. Final report.* Edinburgh: Information and Statistics Division of NHS in Scotland, 1998.

Sildenafil (Viagra) is used as a recreational drug in England

EDITOR—To add to the debate about the use of sildenafil (Viagra) recreationally, we have evidence of such use by apparently healthy women and men in England.

Our two year study funded by the Economic and Social Research Council explored the health of customers in night clubs, looking in particular at illicit drug use. As part of this research, 2056 customers completed short structured interviews in three clubs in north west England over six months in 1998. Fieldwork in two clubs occurred before sildenafil was licensed in the United Kingdom (September 1998). In the

third club it occurred during October. Interviews with customers and staff showed that supplies of sildenafil were readily available in the third club for £10 a tablet (50 mg). We therefore incorporated questions on sildenafil usage into the survey (n = 519).

Sildenafil was used as a recreational drug by 15 respondents (3%) (10 men, 5 women; 14 white, 1 African-Caribbean; mean age 26, range 19-34). All reported having used at least one other illegal or illicit drug in their lifetimes. Fourteen had used amyl nitrite (poppers), 13 amphetamines, 13 cannabis, 11 methylenedioxymethamphetamine ("ecstasy"), 10 cocaine, 8 (γ -hydroxybutyric acid, 6 lysergide (LSD), 5 tranquillisers, 2 crack cocaine, and 1 heroin. Fourteen had used drugs within the previous three months. Most reported having taken sildenafil simultaneously with illegal drugs (methylenedioxymethamphetamine, cocaine, cannabis), illicit drugs (amyl nitrite, (γ -hydroxybutyric acid), and alcohol.

Some used sildenafil in clubs, others at home. All reported positive effects: enhanced sexual desire and love making and feelings of "warmth." Fewer than half reported negative effects: headaches, genital soreness, and intoxication. All said they would take the drug again, which had been obtained from friends, dealers, sex shops, and the internet.

These results show potentially dangerous recreational use of sildenafil in combination with other drugs. The combination with amyl nitrite is particularly worrying as both drugs dilate blood vessels, which can result in a dangerous drop in blood pressure and possibly myocardial infarction or stroke.

Within weeks of being licensed sildenafil was available in English night clubs, which shows the willingness of women and men to experiment with drugs. Our findings also provide further evidence for the normalisation of recreational drug use in Britain.

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- 1 Kirby R. Does Viagra enhance your potency? *Student BMJ* 1999;7:11. (February.)
- 2 Parker H, Aldridge J, Measham F. *Illegal leisure: The normalization of adolescent recreational drug use.* London: Routledge, 1998.

Contributors to antibiotic resistance

Antibiotics should not be first treatment for acne

EDITOR—The recent edition of the *BMJ* on antimicrobial resistance¹ and the booklet *The Path of Least Resistance*² raise important issues about the use of antibiotics. It is perhaps surprising, therefore, that the widespread and long term use of antibiotics in acne has not been addressed.

Conventional treatment of acne uses both topical and systemic broad spectrum antibiotics. Treatment is for a minimum of three months and often for several years. It is not unusual to adopt a policy of rotational

treatment, changing antibiotics every six months or so. The antibiotics prescribed for acne include tetracyclines, erythromycin, trimethoprim, and topical chloramphenicol. Although individual acne patients may not suffer from antibiotic resistance, long term use of antibiotics may contribute to the pool of resistant organisms.

Acne can be treated without antibiotics by using retinoids such as tretinoin topically and isotretinoin orally. Isotretinoin is more effective than antibiotics³ and more cost effective.⁴ However, because isotretinoin can be prescribed only by hospital dermatologists, and hospital funds for this drug are limited, antibiotics are considered first line treatment.

In the light of concern about increasing antibacterial resistance it is important to reconsider the guidelines for treating acne and to make funding for retinoids more accessible to dermatology departments. This would be a helpful topic for the Standing Medical Advisory Committee subgroup on antibacterial resistance to consider.

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- 1 Antimicrobial resistance. *BMJ* 1998;317:609-90. (5 September.)
- 2 Standing Medical Advisory Committee Subgroup on Antibacterial Resistance. *The path of least resistance.* London: Department of Health, 1998.
- 3 Jones DH, Forster RA, Mitchell J, Cunliffe WJ. A comparison of 13 cis retinoic acid and erythromycin treatment in severe acne. *Br J Dermatol* 1983;109(suppl 24):27.
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Hospital use of antibiotics is often unproved

EDITOR—By focusing attention on public and general practice, the *BMJ* issue on the problems of antimicrobial resistance¹ directs our attention away from where many problems have been caused and continue to lie. Many of the people who wrote articles for the issue may have been involved in promoting the inappropriate use of antibiotics, but they may challenge me on this.

Many of the current uses of antibiotics in hospitals are unproved and may be contributing to our problems. Here are a few examples. (1) Prophylaxis of endocarditis in patients with heart valve defects. Although this process has some microbiological logic, it has not been adequately investigated in randomised controlled trials.

(2) Rifampicin and ciprofloxacin are widely used to treat contacts of meningococcal disease without adequate evidence that they prevent secondary cases. These are, in any case, rare in the United Kingdom.

(3) Prophylactic use of antibiotics after implantation of prosthetic material and other metal components in orthopaedic surgery. There is no satisfactory trial showing efficacy when ultraclean facilities are used.

(4) Prophylactic use of antibiotics after caesarean section. Our audit showed a wide variation in postoperative wound infection that was unrelated to use of antibiotics.²

(5) Third generation cephalosporins are increasingly used for community acquired pneumonia, although they have not been shown to be more effective than

penicillin for *Streptococcus pneumoniae* in the United Kingdom.

(6) Prophylaxis of urinary tract infection in children awaiting investigation also produces substantial selective pressure on a person's microbiota.

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1 Antimicrobial resistance. *BMJ* 1998;317:609-90. (5 September.)

2 Nice C, Feeney A, Godwin P, Mohanraj M, Edwards A, Baldwin A, et al. A prospective audit of wound infection rates after caesarean section in five west Yorkshire hospitals. *J Hosp Infect* 1996;33:55-61

Antibiotics should not be used for non-ulcer dyspepsia

EDITOR—Further to the *BMJ* issue on the problem of antibacterial resistance¹ I would like to consider eradication therapy for *Helicobacter pylori*. Eradication treatment seems to be sky rocketing as the amount of medical literature on the role of the bacterium in gastroduodenal disorders and other diseases is becoming overwhelming.

There is universal agreement that eradication therapy is essential for patients with peptic ulcer and strongly recommended for those with low grade gastric mucosa associated lymphoid tissue lymphoma. However, even the final report of a consensus conference supposedly aimed at giving clear guidelines adds to the general confusion.² For instance, eradication therapy in functional dyspepsia was defined as "advisable," although the scientific supportive evidence was recognised to be "equivocal." The use of antibiotics to eliminate *H pylori* from the gastric mucosa of dyspeptic patients, although fashionable, is highly questionable, as is shown by the results of a recent review.³

At least a quarter of the population complains of dyspepsia. Most patients have no endoscopic evidence of peptic ulcer or other substantial mucosal alterations, and up to 60% of patients with non-ulcer dyspepsia have *H pylori* infection.² The increasing tendency to treat with antibiotics a benign condition whose link to *H pylori* is unproved is a cause for serious concern in terms of antibiotic resistance.

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1 Antimicrobial resistance. *BMJ* 1998;317:609-90. (5 September.)

2 European Helicobacter Study Group. Current European concepts in the management of Helicobacter pylori infection. Maastricht consensus report. *Gut* 1997;41:8-13.

3 Talley NJ, Hunt RH. What role does Helicobacter pylori play in dyspepsia and nonulcer dyspepsia? Arguments for and against H pylori being associated with dyspeptic symptoms. *Gastroenterology* 1997;113:s67-77.

Dentists have a role in preventing antimicrobial resistance

EDITOR—We agree wholeheartedly with the views expressed in the issue of the *BMJ* devoted to antimicrobial resistance.¹ However, there was no reference to the role of oral flora and prescribing of antimicrobials by dentists in the generation of antimicrobial resistance.

There is some evidence that the antibiotic resistance genes in *Streptococcus pneumoniae* may have originated from oral streptococci² and that the tet M genes responsible for tetracycline resistance in *Neisseria gonorrhoeae* may also have been derived from oral flora.³ Within the oral flora, some members of the viridans group of streptococci (commonly implicated in native valve endocarditis and emerging pathogens in neutropenic patients) are showing an alarming increase in penicillin resistance.⁴ Data from our diagnostic laboratory have shown a shift in penicillin resistance from 4% to 23% and in erythromycin resistance from 9% to 15% among oral streptococci isolated from dentoalveolar abscesses during 1995-7.

Prescription of antibiotics costs the General Dental Services at least £4.5m a year, and much of this prescribing is probably inappropriate.⁵ The dental profession has begun to address these issues, and, judging from the responses to our recent survey on the use of bacteriological services by dentists, there is widespread support for improved communication between microbiologists and dentists.

The only certain way to determine whether appropriate antibiotics are being prescribed is by bacteriological examination and determination of antibiotic sensitivity profiles. This will allow the implementation of local prescribing protocols based on national guidelines. However, education of both dentists and the public that most uncomplicated dental infections can be treated surgically without the need for antibiotics is the fundamental message.

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1 Antimicrobial resistance. *BMJ* 1998;317:609-90. (5 September.)

2 Coffey TJ, Dowson CG, Daniels M, Spratt BG. Horizontal spread of an altered penicillin binding protein 2B gene between *Streptococcus pneumoniae* and *Streptococcus oralis*. *FEMS Microbiol Lett* 1993;110:335-40.

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5 Palmer NOA, Martin MV. An investigation of antibiotic prescribing by GPs: a pilot study. *Prim Dent Care* 1998;5:11-4.

"Medication concordance" is best helped by improving consultation skills

EDITOR—"Medication concordance" is a term used to signify that the doctor and patient have come to a shared agreement about therapeutic goals.¹ It is merely one end point; to have reached it the doctor

would have had to develop a rapport with the patient, understood the illness in his or her terms, come to a shared understanding and agreement about the diagnosis, and imparted information about the proposed treatment and given alternative choices. The doctor should provide the patient with alternative professionals for independent advice and allow time for the patient to decide on his or her future management. Medication concordance may require a radical change in consulting styles and a deeper understanding of patients' health beliefs. The term refers more to a metamorphosis within the profession than to us enforcing our agenda on the patient.

Collier and Hilton have suggested that the patient should enter into an agreement about the proposed treatment by signing his or her own prescription.² This distracts from the main task of improving doctor-patient communication. The power that the doctor has within the doctor-patient relationship cannot be underestimated; most patients would find it difficult to refuse to sign a prescription, whether during the consultation or afterwards. This is borne out by the fact that many prescriptions are cashed without the drugs being taken.³ Having to sign a prescription may make it even harder for patients to come back and tell the doctor that they broke the contract by failing to take the drug.

Once a prescription is issued, particularly for chronic illnesses, the process of fine tuning is important. Patients fail to take drugs for various reasons, some commonly known (for example, unwanted side effects) and others more pertinent to individual patients. Clinical pharmacists are sometimes used in general practice surgeries as medication counsellors.⁴ In a recent study I audiotaped 25 consultations and analysed them using qualitative methods. Patients tended consciously to modify their drugs rather than simply forget. Factors leading to non-adherence included patients' perceptions about the potency of their drugs, inadvertent overuse and potential poisoning, culturally led ideas about the use of drugs long term, and drugs with a reputation (such as antidepressants and their reputation for being addictive).

Patients signing a prescription would contribute little to improving medication concordance. Instead, more will be achieved by further improving consultation and communication skills as an integral part of doctors' training, disseminating more evidence from qualitative studies on patients' health beliefs, and carrying out more research on the potential use of medication counsellors.

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1 Blenkinsopp A, Bond C, Britten N, Feely M, George G, Green P, et al. *From compliance to concordance. Achieving shared goals in medicine taking. A working party report.* London: Royal Pharmaceutical Society of Great Britain and Merck Sharp and Dohme, 1997.

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Meeting health needs of asylum seekers

White paper will make access to health care more difficult

EDITOR—Jones and Gill outline the barriers currently affecting the ability of primary care to decrease the burden of ill health carried by refugees.¹ Primary care alone will not be able to address the complex health needs of this group. Indeed, the authors call for the institution of a comprehensive national strategy. The government's recent white paper on immigration and asylum lays out a strategic approach to the processing of asylum claims and the settlement of refugees in this country.² Unfortunately, no reference is made to improving their health. In fact, the white paper in many ways contradicts the government's commitment to reducing health inequalities set out in *Our Healthier Nation*.³

If the white paper's suggestions are implemented refugees entering the United Kingdom are likely to be dispersed widely around the country and will have no access to cash based benefits. Their increased isolation and poverty will lead to worsening health. Many services available in areas with a high density of refugees may not be available to more dispersed groups, including local health authority outreach services, comprehensive language support, and specialist mental health services targeted at victims of torture. General practitioners may also experience difficulty in dealing with the wide ranging social, psychological, and physical needs of these individuals if unsupported by such services. Particularly in London, refugee community groups provide vital support and advice to newly arrived refugees. Many are working with local health authorities to promote health within their own communities, and some have been able to lobby for increased recognition of their unique health problems. Dispersed refugees are unlikely to have access to refugee community groups or to attain the level of organisation required to form them. Under the new proposals refugees will face greater difficulties accessing the NHS, substantial barriers to appropriate specialist health services, and as a consequence poorer health.

Coming from a government whose stated aim is to reduce levels of ill health, particularly among vulnerable and socially excluded groups, the white paper is a disappointment and represents a lost opportunity to create a coherent national strategy which looks holistically at the health and social needs of refugees.

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- 1 Jones D, Gill P. Refugees and primary care: tackling the inequalities. *BMJ* 1998;317:1444-6. (21 November.)
- 2 Home Office. *Fairer, faster, and firmer—a modern approach to immigration and asylum*. London: Stationery Office, 1998. (Cm 4018.)
- 3 Department of Health. *Our healthier nation*. London: Stationery Office, 1998. (Cm 3852.)

Practical approaches can make care easier

EDITOR—Jones and Gill's article on refugees' health was timely.¹ More and more doctors outside multiethnic inner city areas will find themselves dealing with refugees and asylum seekers, especially as people from eastern Europe are being brought in by lorry and set down at ports and along major roads in the home counties. Furthermore, if the government's current proposals go ahead, asylum seekers will become the responsibility of national rather than local authorities and so may be dispersed across the country to wherever accommodation is available.

Working with asylum seekers is rewarding but can be difficult. There are, however, ways to make it easier. Language is often a problem. Trained interpreters are the ideal solution. (Contact your local health authority or social services department to find out about local provisions.) However, when an interpreter cannot be arranged, we have found the *Red Cross Emergency Multi-lingual Phrasebook* extremely useful. It is available from The British Red Cross, 9 Grosvenor Crescent, London SW1; price £8.50.

Asylum seekers who do not claim asylum at their "port of entry" (so called "in country applicants") are not allowed to claim income support or job seekers allowance and so can find it difficult to afford prescription charges, unless they are exempted on the grounds of age, pregnancy, etc. They can, however, obtain free prescriptions by filling in an HC1 "claim for health costs" form and sending it off for a HC2 exemption certificate. As these forms can take several weeks to process, during which time the person may need treatment, it is advisable to check whether asylum seekers are on income support when they first try to register with a general practitioner and, if not, to ask them to fill in a HC1 form. Better still, social services departments can be encouraged to ask "in country" applicants to fill in the form when they first have contact with them.

Health authorities are ideally placed to encourage and support general practitioners working with asylum seekers. Furthermore, the new arrangements available through Primary Care Act pilots, the salaried doctors scheme, and section 36 arrangements provide opportunities for innovative ways to meet the needs of this vulnerable population.

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- 1 Jones D, Gill PS. Refugees and primary care: tackling the inequalities. *BMJ* 1998;317:1444-6. (21 November.)

Register cannot replace prospective studies in sickle cell disease

EDITOR—We welcome the launch of a European register of patients with sickle cell disease treated with hydroxyurea¹ and will certainly offer anonymised details of our treated patients. However, Davies and Roberts-Harwood would be the first to agree that a register collecting data retrospectively cannot address research questions in the way that formal prospective controlled studies can.

We agree that the results of Charache et al's study of hydroxyurea² were convincing. However, there is wide clinical heterogeneity in this condition, and it cannot be assumed that the outcome would necessarily be identical in a different study population. Although the genotypes of patients in the United States are unlikely to differ radically from those of patients in the United Kingdom, it is important to recognise the extent to which the clinical phenotype in this disease can be influenced by previous experience of pain management and other social and environmental factors (K Maxwell, A Streeby, unpublished data). This might give rise to differences in outcome.

Furthermore, although the US study clearly showed the effectiveness of hydroxyurea in reducing pain episodes and certain other complications, it could not address all the relevant questions. For example, is the maximum tolerated dose necessary for maximum clinical benefit, is daily dosing more effective than intermittent dosing, would toxicity be reduced by intermittent doses, and what drugs might augment the clinical response to hydroxyurea?

We agree that these important clinical research questions need to be addressed by a collaborative approach between centres, and we look forward to seeing this established in the United Kingdom. However, even then, recruitment may still be an issue, as we outlined.³ If a large centre such as Brent can only accrue 10 patients slowly, we will have to wait a long time before the United Kingdom is going to make any contribution towards answering these important clinical questions. It should not be assumed that failure to recruit patients necessarily indicates poor study design or lack of an appropriate clinical question. Our failed studies were emphatically not designed to familiarise clinicians with hydroxyurea. For example, at the North Middlesex Hospital, our pilot study was designed to look at the possibility that recombinant human GM-CSF might augment the response to hydroxyurea, as might theoretically be expected. There was a clear research question, and we were most careful to articulate it sensitively and fully to our patients, but we recruited only four of the 20 we had hoped for.

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- 1 Davies SC, Roberts-Harwood M. European register of patients with sickle cell disease treated with hydroxyurea is being set up. *BMJ* 1998;317:541. (22 August.)
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Helping airline passengers

Guidance on legal position would be helpful

EDITOR—It is encouraging that the BMA wishes to clarify the position of doctors who give inflight help.¹ Over the years, I have helped out with problems ranging from myocardial infarction with emergency flight diversion, sickle cell crisis, and dyspepsia associated with excessive alcohol intake, to a scorpion sting. Although I admitted that my emergency room experience was limited to my early years of training, the airline staff (all British Airways) have always been most grateful. They explained that it gave them comfort to know that there was a person with at least some professional training.

Although I have always felt obliged to offer my help on these occasions and will continue to do so, guidance on one's legal position would be helpful. I presume that this will be influenced by several factors, including the airline, the nationalities of the passenger and the doctor, and the doctor's type of medical cover. As people travel more frequently and to greater distances, the problem is likely to get worse rather than better in future.

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¹ Dyer C. Doctor demands payment for helping airline passenger. *BMJ* 1998;317:701. (12 September.)

Doctors who expect to be paid should say so in advance

EDITOR—Dyer's news article on medical assistance for inflight emergencies¹ raises several issues. Many airlines have well tested ground based medical arrangements with their own or contracted advisers, but onboard help is nonetheless always appreciated. Our own records show that the recent trend among some doctors to bill for their services in "good Samaritan" situations² has not been mirrored by other groups of health professionals, such as nurses and paramedics, who also frequently provide help.

This airline's policy is to thank all helpers at the time of helping and present various tokens of appreciation which, depending on the problem, may extend to a free upgrade when the helper next travels. We also indemnify doctors who freely offer help. Most helpers accept such gestures of appreciation in the spirit they are intended, and some even refuse anything more than a plain "thank you." Doctors who can only countenance helping on a payment basis should make this clear when offering their services.

Legal responsibilities in this area vary with circumstances,³ but for those who prefer to be paid agents of the airline a pro forma contract could be used that outlines the doctor's legal responsibilities to the patient and also the airline in the event of poor advice leading to an unnecessary and costly diversion. Even then, the fees demanded should be in keeping with the doctor's skills. In this case, it is for the courts to decide if £120/hour (£250 000/year) for a doctor not trained in emergency medicine fits into this category. Of course, this may just be the airline rate while British Rail, London Transport, and Sainsbury are charged different rates by like minded doctors helping their customers.

I hope that the time will not come when the norm for our profession will be to pass by on the other side, or sit on our hands if the rewards for helping are not sufficiently attractive. Until then, I would like to say thank you to all the doctors who help in these situations, not just from the airlines, but of course from those passengers who have benefited.

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¹ Dyer C. Doctor demands payment for helping airline passenger. *BMJ* 1998;317:701. (12 September.)

² *Holy Bible*. Luke x, 30-7.

³ Newson-Smith MS. Passenger doctors in civil airliners—obligations, duties and standards of care. *Aviat Space Environ Med* 1997;68:1134-8.

Law needs to be clarified

EDITOR—Dyer's news item about a passenger taken ill on board a flight highlights a potentially serious problem.¹ I have sympathy for any doctors who take on the responsibility of providing medical care for airline passengers who become ill on board. Not only are they working in a strange environment but the equipment and drugs available may also be strange to them. I tried to interest British Airways in supporting courses for volunteer doctors in providing emergency medical care for airline passengers. Although I submitted a carefully evaluated programme in writing over 18 months ago, I was informed that such emergencies were so uncommon that helping doctors to obtain training and gain a knowledge of the medical kits carried by British Airways was not an appropriate activity for the airline to support.

In this American Airlines incident the law is quite clear. If a doctor spontaneously offers help to an ill passenger he or she is completely responsible for his or her actions and the consequences of the treatment. If, however, a call is put out by the captain of the aircraft for a doctor to help with the management of an ill patient then the captain and the airline are as responsible as the doctor. If your report is accurate then the airline is quite wrong in believing that it has no responsibility to the doctor. I would, however, have concerns about the type of doctor who bills an airline for £540 for a "good Samaritan" act.

I note that the BMA, which wants to clarify the position of doctors who give inflight help, is hoping to raise the issue with an international aviation advisory body, but unfortunately there is no international body that carries as much weight as a court of law. I hope this case goes to court because it will clarify the law, but I fear that both parties will come out of this action badly.

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Doctors have duty to public

EDITOR—We are troubled by Stevens's lawsuit against American Airlines for services rendered to an acutely ill passenger.¹ Although liability is a concern for doctors, no lawsuits have been brought against doctors treating inflight emergencies. In the United States, the Aviation Medical Assistance Act was passed into law on 24 April 1998. This law includes provisions to evaluate the adequacy of on board emergency kits, and the need for automatic external defibrillators and monitoring of deaths aboard airlines, and to protect airlines as well as doctors who come to the assistance of patients.²

Doctors have been granted special status by the public, which funds their education, subsidises hospitals, and grant monopolies of practice through the licensure process. This is in addition to their special status as healers, as those entrusted with healing knowledge and privileged to intensely personal information.³ As a result, do doctors not have a debt to the public? Is there not a moral obligation to respond to a request for help and not expect compensation?

We believe that Stevens's action sets an unfavourable precedent for "good Samaritans." He has tarnished the image of doctors and strengthened the public perception that doctors are an elitist, greedy, and selfish group. He neglects the hundreds of other passengers who were also inconvenienced by his call to divert the plane. Perhaps all those passengers can send him a bill for their trouble.

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¹ Dyer C. Doctor demands payment for helping airline passenger. *BMJ* 1998;317:701. (12 September.)

² Aviation Medical Assistance Act 1998 (H R 2843). At: <http://thomas.loc.gov>. Accessed 14 October 1998. [Search for "aviation medical assistance act."]

³ Dowling PD. Access to medical care: do physicians and academic medical centers have a societal responsibility? In: Dula A, Goering S. *It just ain't fair: the ethics of health care for African Americans*. Connecticut, USA: Praeger, 1994: 134-44.

Rapid responses



Rapid responses submitted directly to our website are available on www.bmj.com