- All letters must be typed with double spacing and signed by all authors.
- No letter should be more than 400 words.
- For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the *BMJ*.
- We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.
- Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.

Airs, waters, places, and doctors

SIR,—Tony Delamothe's editorial highlights the importance of doctors' involvement in environmental issues that relate to health.¹

In January Greenpeace sent a letter to 30 000 general practitioners pointing out the health implications of increasing ultraviolet B radiation reaching the earth as a consequence of ozone depletion. Nearly 4000 responded, indicating the widespread concern among health professionals.

Ozone depletion and the dangers of increased ultraviolet B radiation are no longer issues restricted to Antarctica and the southern hemisphere. Figures released by the National Aeronautics and Space Administration showed that levels of chlorine monoxide in the stratosphere were "approximately 1 part per billion by volume, comparable to levels observed within the Antarctic ozone hole" (NASA press release, 3 Feb 1992). These high chlorine monoxide levels extended over London, Moscow, and Amsterdam. Atmospheric conditions combined with the eruption of Mount Pinatubo and high loads of manmade chlorine chemicals such as chlorofluorocarbons mean that ozone depletion over the northern latitudes may soon be similar to that in Antarctica. Increased ultraviolet B radiation reaching the earth, associated with the Antarctic ozone hole and the break up of the ozone layer, have already been recorded in both Antarctica² and Australia.³

The United Nations environment programme recently published an update on the environmental effects of ozone depletion. It predicted that a sustained 10% decrease in ozone would lead to more than 300 000 cases of non-melanoma skin cancer and 4500 cases of melanoma worldwide each year. This is a conservative estimate: more than twice that increase is possible. Major adverse ocular effects may also occur.⁴ As worrying are the potentially damaging effects of increased levels of ultraviolet B on some plants⁵ and phytoplankton,⁶ which may ultimately lead to a decrease in biomass for human consumption and reduced uptake of carbon dioxide, thereby potentiating the greenhouse effect.

We will be asking general practitioners who responded to the original letter to put forward motions for the BMA's annual representative meeting requesting the BMA to urge the government to ban the production of all chemicals that destroy ozone immediately and to take urgent steps to examine the health risks of ozone depletion over the United Kingdom. The tiny requirement for chlorofluorocarbons used in medical applications, such as asthma inhalers, by patients who are not able or prepared to use powder inhalers should be met by recycling existing chlorofluorocarbons.

We urge all general practitioners and any other health professionals to add their voices to calls

for changes in policy that will help protect the ozone layer, and we are happy to provide more information on this topic.

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- 1 Delamothe T. Airs, waters, places, and doctors. *BMJ* 1992;304: 268-9. (1 February.)
- 2 Frederick JE, Alberts AD. Prolonged enhancement in surface ultraviolet radiation during the Antarctic spring of 1990. *Geophysical Research Letters* 1991;18:1869-71.
- 3 Roy CR, Gies HP, Elliot G. Ozone depletion. *Nature* 1990;347: 235-6.
- 4 Longstreath JD, de Grijl FR, Takizawa Y, van der Leun JC. Human health. In: *Environmental effects of ozone depletion: 1991 update*. Nairobi: UN Environment Programme, 1991:15-24.
- 5 Caldwell MM, Teramura AH, Tevini M. The changing solar climate and the ecological consequences for higher-plants. *Trends in Evolution and Ecology* 1989;4:363-7.
- 6 Worrest RC, Hader D-P. Effects of stratospheric ozone depletion on marine organisms. *Environmental Conservation* 1989;16: 261-3.

Hepatitis C virus and organ donor cards

SIR,—Since 1 September last year all blood donations have been tested for antibodies to hepatitis C virus. In the South Western region an initial screening test with an enzyme linked immunosorbent assay (ELISA) (UB1) is performed and repeatedly reactive samples are subjected to confirmatory testing with recombinant immunoblot assay-2. Counselling at a private interview is offered to donors whose results are indeterminate or confirmed as positive by recombinant immunoblot assay. A confidential questionnaire is completed. This questionnaire includes an inquiry about whether the donor carries an organ donor card or has expressed to close family a desire to donate organs.

In the Avon area, of the first 15 donors positive for antibody to hepatitis C virus or with indeterminate results who were interviewed, 10 carried organ donor cards. Those who carried donor cards (six men) tended to be older (median age 36 (range 29 to 60)) than those who did not (30 (19 to 42)) and to have donated more units of blood (14.5 (1-63) v 4 (2-34)).

This high proportion of people carrying donor cards is not unexpected. Blood donors are atypical of the general population—by donating blood they are behaving altruistically. In addition, literature encouraging organ donation is displayed at all blood donation sessions in the South Western region and elsewhere. This finding, however, has important implications with regard to health policy. Pereira *et al* recommended that organs from

people positive for antibody to hepatitis C virus should not be used for transplantation.^{1,2} Therefore all blood donors found to be positive for these antibodies need to be specifically asked whether they carry organ donor cards, have made arrangements with close family to agree to organ donation, or are registered on a bone marrow donor panel. If so they need to be instructed to cancel these arrangements. Blood donors who have not yet decided to donate organs must be similarly advised.

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- 1 Pereira BJG, Milford EL, Kirkman RL, Levey AS. Transmission of hepatitis C virus by organ transplantation. *N Engl J Med* 1991;325:454-60.
- 2 Ho M. Hepatitis C virus: another agent transmitted by transplanted organs. *N Engl J Med* 1991;325:507-9.

Junior doctors on the warpath

SIR,—I read A P J Ross's comments¹ questioning the accuracy of Luisa Dillner's editorial on junior doctors' hours² with considerable concern. Junior doctors' representatives, who are attempting to ensure that the "new deal" is implemented, can confirm that the editorial is a fair reflection of the current, worrying rate of progress. Furthermore, we believe that it is largely because of his great efforts that Ross has been able to report some improvement in his own region. We regret that the same cannot be said for the rest of the United Kingdom.

The new deal clearly recognises that junior doctors, who continue to work dangerously long hours at a higher intensity than ever before, do so in an inefficient manner because of the constraints of a system based on consultant firms and because much of their time is spent performing tasks that should more appropriately be performed by other staff.³ The regional task forces and implementation groups are responsible for fuelling and monitoring progress. The new deal states that every training post must be identified and current working practice ascertained.

It is only by creating such a database that national decisions regarding alterations in working practices, redistribution of junior manpower, and allocation of additional staff can be achieved. It is widely acknowledged that most of the task forces

and implementation groups have yet to complete even this primary task. The fact that examples of "best practice" exist merely serves to show that changes can be achieved given sufficient commitment.

Junior doctors have been angered by claims of success in reducing hours below a weekly average of 83. These claims have been based, almost without exception, on payroll data; it is relatively simple to reduce the number of units of medical time that will be paid for any job while relying on the good will of juniors to perform additional, uncontracted out of hours work to cope with an unchanged workload. Juniors were further angered by the flagrant delay imposed on the release of the review body's supplementary report, which created great suspicion about the government's commitment to the new deal.⁴

It is now 10 years since district working parties were called on to reduce all junior doctors' hours below 84 a week. By Ross's own admission this has not yet been achieved even in Wessex, the region recognised to have done the most in reducing hours in that initiative. There can be little wonder that many junior doctors consider that the new deal, though potentially a great advance in reducing hours, is currently little more than a paper exercise.

Junior doctors' representatives clearly reflected these concerns when they called for a ballot to be performed. Well aware of the potential ethical implications, they have called for a form of protest action—24 hour emergency only cover at selected sites—an imposition on the NHS already occurring all too frequently as a result of its chronic underfunding.

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- 1 Ross APJ. Junior doctors on the warpath. *BMJ* 1992;304:385. (8 February.)
- 2 Dillner L. Junior doctors on the warpath. *BMJ* 1992;304:270. (1 February.)
- 3 NHS Management Executive. *Junior doctors: the new deal*. London: NHS Management Executive, 1991.
- 4 Review Body on Doctors' and Dentists' Remuneration. *Second supplement to twenty first report*. London: HMSO, 1991. (Cm 1759.)

SIR,—Luisa Dillner's editorial¹ accepts the possibility of strike action by junior doctors without even a mention of whether such action is a legitimate weapon for medical practitioners. This is of major concern for many who believe that strikes are not an option available to those who have the privilege of looking after patients.

The public does not look kindly on the use of the sick as a bargaining counter, despite the protestations by the strikers that the action is in the public interest. The likely response from the press can be judged from the tone of a recent editorial in the *Times* commenting on the current dispute between solicitors and the government. It stated that it was as unthinkable for a solicitor to strike against his client as it was for a surgeon to strike against his patient. Nurses have already learnt this lesson, with the result that the Royal College of Nursing does not countenance strike action. Junior doctors should recall the disastrous effects of the last such action, from which it took many years for doctors to recover their image as a dedicated and caring profession putting the welfare of their patients above all else. It must be remembered that the status of a doctor in society, and the relatively high financial rewards and job security at a time of national recession, are not a right but depend on public and political support.

In March the council of the British Medical Association has to ratify the junior doctors' recommendation before the ballot can proceed. Should it do so, it must not be surprised if doctors who

cannot countenance strike action follow the example of likeminded teachers who broke away from the existing unions to form the Professional Association of Teachers.

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- 1 Dillner L. Junior doctors on the warpath. *BMJ* 1992;304:270. (1 February.)

SIR,—Luisa Dillner's editorial concerning the alleged slowness of reform of junior doctors' hours is welcome but too simplistic in its approach to the problem.¹ The fact that junior doctors' hours have not yet fallen is not due, as Dillner implies, solely to a lack of information on the number and intensity of hours worked by juniors or to the inability of some task forces to produce good questionnaires to improve the accuracy of such information. Indeed, immediate reductions in hours cannot be realised if changes in working habits are to be achieved and, particularly, if we are to ensure that junior doctors' training is not jeopardised in the process.

Trent's regional task force has been in "top gear" since it was formed last July. We decided that a small team, which included both a senior clinician and a junior doctor, should visit each hospital unit, spending one day in most hospitals and two days in the larger teaching units. At each visit the team has talked to both consultants and management but especially to as many junior staff as possible. Attention has focused on the actual, rather than the contractual, hours worked by junior doctors as well as the conditions of their working environment such as the hospital mess and on call facilities, the availability of electrocardiography and phlebotomy services, the extent of the role of the nurse, and the provision of a bed finding service, all of which have been highlighted in a questionnaire before the visit.

To date 95% of the acute units in Trent, the second largest health region, have been visited. An agreement has been reached between management and the senior and junior medical staff of each specialty on the way in which hours are to be reduced to reach the required targets within available resources while at the same time safeguarding the safety and standards of medicine for the community we serve and the training and educational opportunities of our junior doctors.

The lack of an immediate reduction in junior doctors' hours is therefore to be expected because, certainly in the Trent region, our concern is to address every aspect of the problem. We are determined, however, to make progress as quickly as possible consistent with our commitment to doing the job properly.

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- 1 Dillner L. Junior doctors on the warpath. *BMJ* 1992;304:270. (1 February.)

SIR,—In her editorial Luisa Dillner suggests that in the 12 months since the ministerial group agreed a timetable for reducing junior doctors' hours "little or nothing has changed."

This is certainly not our view in Trent region. The first and main battle in reducing doctors' hours was always going to be persuading those with power—that is, consultants and managers—that it was a problem that had to be addressed. In this regard we have seen a fantastic change in Trent region over the past year. It is only once a problem has been acknowledged that changes will be made.

It is because of this clear change in attitudes in Trent that we did not think that a ballot on industrial action was appropriate.

Dillner accuses some of the task forces of being incompetent. We believe that Trent's regional task force has been far from incompetent—probably largely because, rather than waste time producing questionnaires that have only a poor response rate and produce some dubious information, it has visited almost every unit in the region and seen for itself where the problems are.

We believe that it is precisely because of this policy of making direct contact with consultants and managers in their hospitals that we have been able to impress on them the absolute necessity to get all juniors' hours in line with the agreement, not by the end of 1994 or 1996 but as soon as possible.

Other task forces may consider that questionnaires are the way forward. We believe that our task force has been more effective by taking a slightly different approach.

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- 1 Dillner L. Junior doctors on the warpath. *BMJ* 1992;304:270. (1 February.)

Bronchodilator treatment in asthma: continuous or on demand?

SIR,—We wish to express concern regarding the design of Constant P Van Schayck and colleagues' study and the interpretation of the results.¹

It is surprising that, despite the breadth of evidence that smoking, bronchial responsiveness, and diagnosis (asthma, chronic obstructive pulmonary disease) influence the decline in forced expiratory volume in one second (FEV₁),^{2,5} these findings were not reproduced in this study. Additionally, when these factors are considered, it is unfortunate that the study was conducted in a mixed population. The study would have gained credibility if a homogeneous population had been studied and stricter criteria applied to the measurements of FEV₁—for example, intervals between measurements, timing to avoid diurnal variations, and standardisation of bronchodilators before measurements. Lack of control of these variables makes it impossible to conduct an explanatory analysis and will render the results meaningless.

As peak expiratory flow rate is a valuable tool for monitoring the severity of disease or response to treatment, or both, was the daily flow rate recorded and, if so, did it differ from the measurements of FEV₁?

The linear regression model chosen to evaluate the decline in FEV₁ assumes a linear structure in the data. In addition, autoregression analysis assumes linearity and equally spaced time points. Clearly, time points were not equally spaced in this study, nor were the assumptions of linearity verified.

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- 1 Van Schayck CP, Dompeling E, van Heerwaarden CLA, Folgerin H, Verbeek ALM, van der Hoogen HJM, et al. Bronchodilator treatment in moderate asthma and chronic bronchitis: continuous or on demand? A randomised controlled study. *BMJ* 1991;303:1426-31. (7 December.)
- 2 Postma DS, de Vries K de, Koeter GH, Sluiter HJ. Independent influence of reversibility of airflow obstruction and non-specific hyperreactivity on the long-term course of lung