were initially diagnosed as reflux oesophagitis (two cases) and a urinary tract infection (one case). But the blood pressure was not measured at the initial presentation in any of the cases. A urine sample was analysed in only one case and resulted in a diagnosis of a urinary tract infection. In all three cases pre-eclampsia was not diagnosed until two to five days later, when the blood pressure had been measured and a urine sample analysed and results of laboratory testing were confirmatory.

Delivery was effected, and in two cases the infant survived with no perinatal morbidity; in case 3 the fetus was not viable. The mothers also recovered uneventfully. We agree that epigastric pain is an indication for measurement of blood pressure and analysis of urine and that, if the results of these are abnormal, further investigations are necessary in hospital. We do not agree, however, that epigastric pain is often a grave symptom in pregnant women. In the absence of hypertension and proteinuria it is often a symptom of reflux oesophagitis and rarely of either pre-eclampsia or the syndrome of haemolysis, raised liver enzyme activity, and low platelet count. Women with epigastric pain who remain normotensive and do not have proteinuria are at such a low risk of pre-eclampsia that immediate admission to hospital is unlikely to confer a cost effective benefit. This policy would rapidly overwhelm hospital antenatal assessment facilities and cause unnecessary disruption to the mothers.

Repeat measurements of blood pressure and analysis of urine in the next 24-48 hours are justified if the pain seems atypical of reflux oesophagitis or if pain in the right upper quadrant worsens. In our experience, abnormal results of haematological and biochemical tests are rare in the absence of proteinuric hypertension, and laboratory tests are unlikely to be cost effective for diagnosis compared with the measurement of the blood pressure and analysis of urine.

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Drug users and sick notes

EDITOR,—General practitioners have been criticised for the increasing number of National Insurance certificates of sickness (MED 3) being issued. The government has expressed concern that the expenditure for people claiming invalidity benefit was forecast to exceed £4 billion.¹ Some patients attending our clinic have claimed that staff of the Benefits Agency have encouraged them to request National Insurance certificates of sickness—"doctor's sick notes"—from their general practitioner. We surveyed 215 clients to ascertain the proportion of our patients who were in receipt of such certificates. Thirty seven were in employment. Eighty nine were in receipt of sickness certificates.

The table lists the types of conditions reported as preventing those in receipt of National Insurance certificates of sickness from working. Nearly a third were prevented from working by their drug problem. Psychiatric conditions were the most common group of diagnoses, although nervous and anxiety disorders are often used as euphemisms for drug problems. Considerable morbidity is associated with drug misuse,² and this is reflected

Diagnoses given on National Insurance certificates of sickness issued to 89 drug users

Diagnosis	No
Addictive disease:	26
Drug misuse/addict/dependency	20
Methadone addiction	4
Opiate addiction	2
Psychiatric:	32
Nervous disorder/disability	16
Anxiety neurosis/disability	7
Depression	6
Mental illness	3
Conditions of drug misuse:	11
Deep venous thrombosis	9
Hepatitis B	2
General medical conditions:	28
Muscular/skeletal injury	9
Epilepsy	6
Asthma	5
Other	8

More than one diagnosis was included on some certificates.

by the infective and physical conditions related to drug misuse.

In some parts of Liverpool over 60% of men are unemployed, with the prospect of being so long term. After submitting National Insurance certificates of sickness for six months a claimant is entitled to invalidity benefit and age allowance, which is 51% higher than income support (£69.10 rather than £45.70 a week). Another perceived advantage to drug users is that they no longer have to attend training schemes to retain their income support.

Dinsdale has suggested that encouraging unemployed people to claim invalidity benefit is a politically motivated means of reducing unemployment figures.³ Another factor is that, with little commerce being attracted into Liverpool, increasing the amounts of benefits (funded by central government) paid to claimants would help the local economy.

One of the goals of drug treatment programmes is to stabilise lifestyles and enable people to remain in work or to gain employment. We consider that being on a methadone programme is not an acceptable reason for being unavailable for work. Attending training schemes can be an important part of the drug rehabilitation process and improves chances of employment and so standard of living. We recommend that general practitioners should not issue drug users with National Insurance certificates of sickness unless they have a coexisting medical or psychiatric condition.

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Bronchodilator treatment in asthma and bronchitis

EDITOR,—Several epidemiological studies have pointed to an association between the use of prescribed β_2 adrenergic drugs and death from asthma.^{1,2} Although such studies cannot provide evidence that bronchodilators themselves may increase mortality from asthma, they have caused concern about the possibly deleterious effects of long term continuous use of bronchodilators. This concern increased when, a few years ago, a two year study showed that continuous use of a bronchodilator was accompanied by a fall in forced expiratory volume in one second of 72 ml/year while use on demand was accompanied by a fall of only 20 ml/year.³ Of the 144 patients who

completed this study, 56 showed a fall of more than 80 ml/year and had at least one exacerbation a year.⁴ These patients were followed up for another two years, during which they took an inhaled corticosteroid.

The remaining patients were asked to continue the study for another two years with bronchodilators alone. The aim was to investigate whether the deterioration observed during the first two years was continued for another two years in those patients, who had been shown not to be dependent on steroids. It is not yet clear whether the continuous use of bronchodilators alone for several years might also have deleterious effects in patients with mild asthma or chronic bronchitis.

Eighty three patients (27 with asthma and 56 with chronic bronchitis) agreed to participate. At the start of the four year study patients were randomly assigned to one of two parallel treatment groups receiving continuous treatment (either salbutamol 1600 μ g or ipratropium bromide 160 μ g daily) or treatment on demand (only during exacerbations or periods of dyspnoea). Outcome variables were the annual decline in lung function, the variability in peak flow rate, bronchial responsiveness, exacerbation rate, and health experienced.

After correction for possibly confounding variables and for regression to the mean there was no difference in the decrease in lung function between the patients treated continuously and those treated on demand (difference 2 ml/year, $P=0.93$), irrespective of the drug used. The patients treated continuously did not differ from those treated on demand with respect to bronchial hyperresponsiveness, mean peak flow in the morning, diurnal (and week to week) variation in peak flow, the number of exacerbations, and the health experienced; this applied to both the patients with asthma and those with chronic bronchitis.

These findings indicate that continuous use of bronchodilators for four years in patients with asthma or chronic bronchitis that is not dependent on steroids does not increase the fall in lung function, as was observed earlier in patients with moderate asthma or chronic bronchitis during two years of continuous monotherapy with bronchodilators.

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Drug users in prison

EDITOR,—Michael Ross and colleagues make an impassioned plea for better provision of care for drug users in prisons.¹ Dependent drug users presenting to the prison service should have access to appropriate treatment, and, as the Advisory Council on the Misuse of Drugs recently pointed

out, there should be continuity of treatment between the community and prison.² There has been considerable pressure to ensure that the delivery of methadone detoxification to opiate users presenting to prison is adequate, and guidelines have been drawn up, with the cooperation of key people involved in drug treatment services, to promote this. Opiate users should be given sufficient methadone during drug withdrawal to reduce the likelihood of them injecting and using contaminated equipment.

Ross and colleagues insist that the existing seven day withdrawal regimen is unethical. Colleagues and I run an inpatient unit where we provide a 10 day withdrawal regimen for all our opiate dependent patients, and we can see no grounds for arguing that reducing this to seven days is unethical or fails to replicate the physiological rates of withdrawal.^{3,4} In my view such withdrawal regimens should be spread evenly throughout the prison system. According to the most recent report of the director of health care for prisoners, a survey of prison treatment establishments found that only a fifth of respondents were providing methadone detoxification for opiate withdrawal. All prison medical officers should provide approved treatments for drug withdrawal; more individualised treatment approaches can evolve in the wake of the widespread provision of a basic minimum of treatment.⁵

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Asthma and having siblings

EDITOR,—We recently completed a study examining risk factors for the development of asthma in 708 children aged 8-13 in New Zealand and found a similar effect for wheezing in the past year to that found by Erika von Mutius and colleagues,¹ with a declining frequency of wheezing with increasing numbers of older siblings.² From a questionnaire given to a parent or guardian we examined reported wheezing in the past year in relation to both older and younger children in the household.

The prevalence of symptoms declined with increasing numbers of old siblings and, to a less extent, with increasing numbers of young siblings (table). We observed a similar trend for symptoms

of hay fever and eczema in the past 12 months, although these trends were not significant.

The hypothesis that this trend might be due to the down regulation of IgE or an altered pattern of release of cytokines because of early exposure to bacterial or viral infections through having older siblings is intriguing, although other maternal and socioeconomic factors might explain the findings. Interestingly, in a study of infants Burr *et al* found the reverse of this trend, with increased reporting of wheeze, nasal discharge, and prolonged colds in the first year of life with increasing number of siblings³; this presumably confirms the increased risk of exposure to viral and bacterial infections in early infancy with increasing numbers of siblings.

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Pneumocystis pneumonia

EDITOR,—Simon P Matusiewicz and colleagues questioned whether reactivation or reinfection was responsible for pneumocystis pneumonia.¹ They used an immunofluorescence assay to examine 220 samples of bronchoalveolar lavage fluid and bronchial washings, but only five samples were found to be positive for *Pneumocystis carinii*. Although the authors quoted work suggesting that immunofluorescence assay was as sensitive as techniques that use the polymerase chain reaction, this is contrary to our experience.

The last 18 samples of bronchoalveolar lavage fluid from 11 patients were examined by a nested polymerase chain reaction and immunofluorescence assay. The results were instructive: the polymerase chain reaction confirmed the results of the immunofluorescence assay in 13; three equivocal results of the immunofluorescence assay were confirmed as positive by the polymerase chain reaction, and the patients responded to treatment; and two samples that yielded negative results in the immunofluorescence assay were positive with the polymerase chain reaction, and again the patients responded to treatment. In patients without pneumocystis pneumonia the concentration of *P carinii* would be low, so it is critical that a sensitive method is used. We believe that it would be informative for the authors to test with the polymerase chain reaction the 215 samples that yielded negative results in the immunofluorescence assay.

All five positive results in the authors' study occurred in patients with small cell lung cancer, and the authors thought that the infection was subclinical. Another fundamental question is how laboratory tests can help clinicians decide on the importance of a positive result. This can be confusing as *P carinii* may be detected when the pneumonia is due to another cause.² We believe

that in these cases serological testing for *P carinii* may be of benefit.^{3,4} We have found that serological testing is particularly useful in patients who do not have AIDS⁵; as these patients have fewer cysts and trophozoites the result is more helpful.

We agree that immunocompromised patients should be monitored prospectively, but we would also perform serological tests. For doctors to deal adequately with pneumocystis pneumonia in immunocompromised patients further studies are required to address fundamental questions on the importance of this infection.

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Discrimination against people with HIV infection and AIDS

EDITOR,—Renée Danziger's paper on discrimination against people with HIV infection and AIDS in Poland, in particular by health staff,¹ stimulated us to update our study on this in Italy. Between May 1991 and May this year, by means of a coded questionnaire distributed to all consenting patients attending the division of medical oncology and AIDS of the Centro di Riferimento Oncologico, Aviano, Italy, we interviewed 212 patients about whether they had been discriminated against by health care workers. One hundred and sixty two patients were men (the median age 30 (range 20-65)).

Two hundred and nine of those interviewed were HIV positive; 140 were injecting drug users, which accords with Italian epidemiological findings with regard to HIV infection. Seventy six reported 88 episodes of discrimination by health care workers (dentists and doctors in almost all cases) in public and private Italian institutions. In three cases nurses were involved. Thirteen patients reported more than one episode of discrimination. Dentists were the category of health care workers most commonly mentioned, with 44 episodes of discrimination, while no infectious disease specialist was mentioned. The nature of the reported episodes differed, but in 60 cases the patients had been denied the health care service requested.

One hundred and seventy six patients spontaneously reported to health care workers that they were HIV positive while 36 did not; 14 did not do so because they had previously suffered discrimination while 10 had never reported their seropositive status and had never suffered discrimination, and 12 patients did not give a reason for not reporting their status. Twenty two continued to report their status despite having been discriminated against previously. Sometimes those who did not report their HIV status reported instead that they were suffering from hepatitis, to allow health care workers to take more precautions.

This study shows that there is a high rate of discrimination by Italian health staff against

Prevalence of reported wheezing in past year among 708 children aged 8-13 related to number of older and younger children in household

No of siblings	% (No) with wheeze		Odds ratio (95% confidence interval)*	
	With older siblings	With younger siblings	With older siblings	With younger siblings
0	24.8 (96)	25.9 (67)	1	1
1	18.8 (45)	19.7 (46)	0.7 (0.5 to 1.1)	0.7 (0.5 to 1.1)
2	13.6 (9)	14.4 (20)	0.5 (0.2 to 1.0)	0.5 (0.3 to 0.9)
≥3	6.7 (1)	24.6 (15)	0.2 (0 to 1.6)	0.9 (0.5 to 1.9)

*Unadjusted odds ratios.

P value for trend: older siblings, $P < 0.01$; younger siblings, $P = 0.09$.