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