Given that depression is common in the black community in Birmingham,[3] it is hardly reassuring that this diagnosis is not felt to be relevant in the hospital. The political implications of this diagnosis have been queried for over a decade, not least in this journal.[4]

We are grateful to Drs John Merrill and John Owen (30 April, p 1260) for their data on overdose rates among the Afro-Caribbean population aged over 35 years.

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Medical research

SIR,—The report by the House of Lords Select Committee on Science and Technology recommended changes in the medical service increment for teaching.[1] These changes would protect the service requirements of medical schools and thus allay recent concerns.[2,3] Unfortunately, this aspect of the report has been overlooked in the recent summary (16 April, p 1109) and comment.[4,5]

Currently the Department of Health and Social Security distributes the medical service increment for teaching to regions based on the projected number of whole time equivalent clinical medical students in each region two years from the year of allocation. Regions decide how this sum is distributed to districts, and there are variations in how account is taken of teaching outside the main teaching hospitals.[6]

The service increment for teaching sum is overgenerous for its supposed limited purpose—namely, the additional service costs of clinical teaching[7] (as RAWP intended[8]). But the report recognised that it could be used to meet service rather than academic priorities. When teaching districts have to make cuts in services academic requirements will tend to be disregarded. Neither university liaison committees nor university representatives on health authorities can ensure that service increment for teaching money is used for its intended purposes. The report proposed the remedy that medical schools ought to receive it and thus be empowered to decide where they would "buy" the clinical resources that they require.

The report recognised that the current level of the service increment for teaching probably included some element of the costs of research and recommended that this should be made explicit by replacing the service increment for teaching with a new allowance—a service increment for teaching and research. The report considered that there were advantages in this being allocated to medical schools by the proposed National Health Research Authority and being adjusted according to centres of clinical research in medical schools.

The recommended changes would clarify current confusion between funding service and academic needs. The process of resource allocation would be concerned with equity only, and medical schools would be required to specify explicitly the additional resources they need for teaching from districts. Such change could be implemented only on the understanding that the status quo would continue for an interim period, but after that the process could lead to profound changes by—for example, allowing greater flexibility in medical schools' choice of hospitals.

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Inhaling heroin during pregnancy

SIR,—We have read Drs J E M Gregg, D C Davidson, and A M Weindling's paper (12 March, p 754) and the subsequent correspondence between them and Dr Andrew Johns (14 May, p 1399), and wish to challenge Dr Johns's assertion that "the pregnant woman who 'chases' heroin is best served by a prescription of the lowest achievable dose of methadone." This may be correct for the pregnant addict who presents before the final trimester and can thus be detoxified slowly. If she presents late in pregnancy, however, a slow detoxification is not possible, and sudden withdrawal from opiates may lead to premature labour, fetal distress, meconium aspiration, and fetal death.[1-3] In an effort to prevent this it is usual to keep the mother on a small maintenance dose of opiate.

Many babies born to addicts receiving opiates experience a withdrawal syndrome which is more severe and protracted if the mother is taking methadone.[3,4] We suggest that oral diamorphine solution should be prescribed for the patient who presents for the first time in the final trimester.[5] Our experience suggests that this is better than the use of oral methadone. Oral diamorphine may have a greater potential to be abused than oral methadone, but the decrease in the severity of withdrawal in neonates should also be considered when planning the management of the pregnant drug addict.

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Plastic material from syringes causing death

SIR,—Dr A J Cant and colleagues (2 April, p 968) report a disturbing case of mesenteric artery thrombosis in a neonate due to polypropylene particles. The fragments of polypropylene they describe are surprisingly large (50-200 μm long) and do not accord with the sizes of particles found previously from syringes from other manufacturers.[1] I would be interested to know the material from which their umblical catheter and connecting tubing were made before putting all the blame on the syringes. This seems especially relevant since the first acute abdominal event followed immediately after removal of the umbilical artery catheter.

I agree with their general conclusions but suggest that evidence for filtration of infusions into arterial lines is stronger than for intravenous lines. Intra-arterial infusions of cardioplegic solutions have been shown experimentally to produce a marked reduction in coronary arterial flow which is avoided by filtration.[2] The report by Dr Cant and others supports the view that filtration of all intra-arterial infusions is advisable.

The evidence for harmful systemic effects from particles in intravenous infusions is less clear, and perhaps a selective use of filters is appropriate. In intensive care patients the number of particulate contaminants derived from small volumes of intravenous drugs is likely to be at least 15 times greater than from large volume infusion fluids.[3] Particles seem to contribute to the development of infusion phlebitis and 0·2 μm final in-line filtration delays its onset, but only in patients receiving small volumes through their infusion lines.[4] Filtration should be considered for all intra-arterial infusions but only those intravenous infusions to which small volume drugs are added.

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Iron chelating drugs

SIR,—Professor Chaim Hershko's leading article (16 April, p 1081) does not reflect the cautious optimism generated world wide after the articles published in the *BMJ* and the *Lancet*.[1,2] These reported effective chelation of iron in patients with thalassaemia and with iron overloading by using the cheap oral iron chelator 1,2-dimethyl-3-hydroxypyrid-4-one (L1), which is equipotent to subcutaneous desferrioxamine and, as yet, shows no toxicity. It is the first time after 20 years of research and the testing of hundreds of chelators world wide that such a breakthrough has been achieved. Hundreds of inquiries about the provision of L1 have been received from doctors, relatives of patients, and thalassaemia organisations from all over the world.

Professor Hershko's suggestion that the oral effectiveness of new chelators is related to their high lipid solubility is misleading. L1 is highly hydrophilic, whereas lipophilic chelators are known to be toxic.[3] That L1 and similar chelators are equally effective by mouth and parenterally[4-7] contradicts Professor Hershko's statement that the oral route is a third as effective as the parenteral route.

As no other cheap oral chelators have yet reached the developmental stage of effective iron removal in man L1 and the other α-ketohydroxypyridines should be regarded as the most important experimental drugs. The discovery of the α-ketohydroxypyridines and their development to

the present stage—which entailed the design, synthesis, and screening of over 70 chelators in vitro and in vivo and the identification of several other promising 1-substituted-2-alkyl-3-hydroxypyrid-4-one derivatives similar to L1—took nine years.[8] The absence of side effects in over 20 patients and volunteers who received L1 18 months ago, some for up to three months and at doses of up to 8 g (4×2 g) in a day, suggests that the drug has a high degree of safety when therapeutic doses are given long term.

Despite the above results and the recent discovery of a new method of synthesis of L1 and related derivatives, which will make them about 50 times cheaper than desferrioxamine,[3] pharmaceutical companies may become fully interested in orphan drugs such as L1 only after scientists carry out most of the work required for licensing, including both toxicological and clinical trials. The prospect of fully developing L1 and related chelators will also improve if other uses, such as the treatment of aluminium overload, are taken into account. It is highly likely with further positive results from our expanding and continuous clinical trials that L1, and possibly other related oral drugs, will be available for the treatment of patients with thalassaemia within the next few years.

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Outpatients

SIR,—The article by Mr M Duncan and others (30 April, p 1247) makes sorry reading. I have carried out a similar study of the efficiency of the outpatient service in the department of internal medicine in this hospital.

We use three or four consulting rooms, where the patients are seen initially by a junior member of staff. The professor moves from room to room, where he is given a summary of the problem and a plan of management. Thus he sees every patient. This system also provides a useful educational forum and avoids interval time as defined by Mr Duncan and others. In their study this accounted for 25% of the total clinic time.

Since January, basing my calculations on 13 sessions, an average of 25·1 (SD 3·46) patients were seen at each session, of whom 25% were new referrals. Each session lasted 286 (20) minutes, and thus the patient-doctor contact was 11·4 minutes—some 50% longer than in the authors' study. Altogether 327 patients were seen. In not one instance were notes or relevant clinical data missing.

This department, with responsibility for 60 beds, has three full time medical secretaries and one records clerk. The secretaries are paid Frs 5000-6500 monthly and the clerk about Frs 4500-6000 (before tax). In the private sector they might command up to 50% more. I support Mr Duncan and his colleagues in their conclusion that these staff play a vital role in the efficient working of outpatient departments but suggest that useful alterations might be made in the manner in which these sessions are run.

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Care of physically handicapped young adults

SIR,—Dr Martin C O Bax and others (23 April, p 1153) are to be congratulated on their study of the needs of handicapped young adults. Support does not necessarily require specific teams as is shown by the following case report.

A 44 year old divorced woman is quadriplegic as a result of multiple sclerosis and depends on others for turning in bed, transfers, washing, dressing, feeding, and all household tasks. Specific help is needed for bladder and bowel functions. Her mental state is normal, and there is no evidence of intellectual or cranial nerve involvement in the disease. She lives with her daughter in an extensively modified council house.

In 1980 she developed a large ischial pressure sore. By 1981 she was needing about 80 hours' care each week by the community nurses (including two calls nightly) and social services. Stress among these professionals was increasingly apparent, and interprofessional problems occurred almost daily.

Case conferences with senior representatives of all the professions concerned confirmed a commitment to maintain the mother and daughter in the community and avoid residential care for the mother and foster care for the daughter. Close liaison between the care attendants and community nurses ensured that the patient was not left alone for more than three hours. This overcame the isolation which had resulted in her making excessive demands on nursing time. A low air loss bed was provided, avoiding the need for readmission to hospital for pressure care over the six years of follow up.

Who does what?

Care attendant
Meals, transfers from chair to bed and back, hair washing, emptying urine bag, help with washing, sewing, mending, writing letters, dressing

Home care worker
Cleaning house, laundry, shopping, and paying bills

Community nursing
Specific nursing care for pressure sores, catheter and bowel care, and bathing

Social worker
Counselling

Disabled living adviser (occupational therapist)
Advice on practical changes in the environment—for example, Possum

Adaptation technician
Minor alterations to home

Domiciliary physiotherapist
Maintenance of level of function, management of spasticity

Hospital
Support for community services when needed

General practitioner
Continuing personal care

It has been estimated that between 1968 and 1986 the health and social services capital costs exceeded £30 000, and the costs for 1986-7 were at least £330 each week.[1]

This woman obtains her community support from the pool of domiciliary workers (see box) and not from a specific team. The willingness of the medical staff to work with the social services management,[2] the production and monitoring of a plan by multiprofessional conferences,[3-5] the presence of a health service equipment budget to support people in the community and the devolvement of many care tasks from the community nurses to social services workers[6] were important features of her care. This patient has provided a model for the development of community care for severely physically handicapped people in Harrow.

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Diagnosing Marfan's syndrome

SIR,—I agree with Dr Maurice Super (14 May, p 1347) that the main reason for diagnosing Marfan's syndrome is to offer screening by echocardiography for the one fatal complication—aortic aneurysm, which can rupture or dissect with an 80% mortality rate. Elective replacement of the aneurysm with a dacron graft has a 5% mortality rate with an 87% survival rate after five years of follow up.[1] This operation is offered when the aortic root diameter reaches 5 or 6 cm, but the family history must be taken into account. We have advised surgery at an aortic root diameter of 4·4 cm in an affected daughter with severe unexplained chest pain whose father had died suddenly of aortic dissection at that precise aortic diameter.

When can you make a diagnosis of Marfan's syndrome? The consensus of opinion seems to be when two of three systems (eye, heart, and skeleton) are classically affected. Preferably there should also be a positive family history. The most common diagnostic errors such as dominantly inherited mitral valve prolapse with marfanoid habitus (in the absence of aortic root dilatation)[2] and joint hypermobility syndrome with marfanoid habitus[3] are thus avoided. Dr Super's suggested scoring of major and minor criteria would make an erroneous diagnosis of Marfan's syndrome in both these instances and in mild, dominantly inherited Ehlers-Danlos syndrome type IV.[4]

If a patient over 20 years of age has a normal echocardiogram the longterm prognosis is excellent, and a letter stating this should help to obtain reasonably priced insurance and mortgages. When the diagnosis is in doubt records should never contain reference to Marfan's syndrome but rather to a marfanoid condition, even though regular surveillance may be continued until the diagnosis is certain. Ocular, skeletal, and major cardiovasular complications should have developed by age 18, and in their absence the family can be counselled that this is not Marfan's syndrome and that the prognosis is good.

The Marfan Association has 450 member families