took an over-simplistic approach but made it easy for doctors to be firm and, in their own minds, fair.[1] Current guidelines encourage a sympathetic or flexible response by doctors[2,3] but could create opportunities for the manipulative drug user.

In addition to those clearly addicted to opiates we now observe many users of prescribed drugs who have never used heroin or other traditional addictive drugs. Benzodiazepine use is the single most important problem of inappropriate drug use and the cottage industry in resold drugs includes those prescribed to all ages of patients; some older patients supplement their income by selling their sedative or hypnotic medication. We regularly see patients who are taking high doses of illegally obtained benzodiazepines and this clearly has implications for the preventive strategy of prescribing substitute opiates to drug users.

The high prevalence of HIV infection in Scotland and the increase in agencies and pressure groups advocating prescribed substitutes have increased the pressure on general practitioners, other doctors and parents to respond to the perceived needs of the drug users. In an attempt to understand the needs and expectations of parents of drug users we interviewed 20 people (18 mothers and two fathers) with one or more drug using sons (15) and/or daughters (seven). Seven of the drug users still lived at home although the mean length of time drugs had been used while living at home was only 2.5 years. Parents reported a wide variety of symptoms associated with drug use including weight loss (15 children, 68%), jaundice (11, 50%), malaise (seven, 32%) and abscesses (four, 18%). Ten parents thought that their child was HIV antibody positive but in reality 15 were known to be infected.

Three main fears faced the parents — 64% (14/22) were worried that their child would contract HIV, 55% (12/22) worried that he or she might die and 45% (10/22) were principally concerned about relapse to drug injecting. For the future five (23%) thought that their child would ultimately recover, seven (32%) thought that they would get the acquired immune deficiency syndrome (AIDS) and 12 (55%) thought that they would die (some parents gave more than one response). When asked about current policies on AIDS and risk reduction for drug users 12 of the 20 parents (60%) agreed with the provision of sterile equipment but only two (10%) with substitute drug prescribing. Overall 36% of the 22 patients were judged to be coping well with the problems associated with drug use and AIDS related problems. However, 36% and 45% of patients were thought to be coping poorly with drug related problems and AIDS related problems, respectively.

The involvement of the primary care team with the families of drug users and of patients with AIDS is increasing and more resources, principally time, are required to support affected individuals and their parents. New insights and research into the complexities of drug use in a community are now required and the facile belief that treatment of drug misuse is confined to the provision of substitute drugs should be revised.

The well publicized financial problems of the Lothian health board conceal the critical problems for those areas such as dealing with drug misuse which are always at the bottom of the agenda for funding. The Edinburgh short-stay residential unit is still 'on ice' after seven years of committee work and debate. Prior to the Edinburgh AIDS epidemic it was clear that drug problems were increasing but it seems that lessons have not been learnt. AIDS is being treated but the causal problem, drug use, is not. Moreover the pattern of drug use in Edinburgh has changed with few new seroconversions resulting from sharing of injecting equipment,[4,5] even though drug use seems to be increasing. Thus the pattern of HIV transmission appears to be shifting to heterosexual spread. Service providers will have to reconsider which groups to target in an attempt to prevent the spread of HIV infection.

Involving drug users in treatment at any cost is not an adequate philosophy when the treatment consists of prescribing substitute drugs only. Treatment should be more than this and prescribing alone does not necessarily prevent the injection of drugs or HIV transmission.[6] We have an increasing number of patients who inject drugs, and who sometimes share equipment but who remain seronegative. The irony of a long-term drug user becoming HIV positive following sexual contact with an HIV positive partner epitomizes the complexity of the drug using/sexual risk picture. Our response must be an attempt to cover all angles: prescribing, support and education. In addition, much more help needs to be given to those agencies who are attempting to manage the increasing numbers of drug users.

General practitioners and others face an immense challenge in trying to help sophisticated drug users. Deception[7] can waste time, create divisions between professionals and disillusionment in individuals. A single strategy of substitute prescribing for all those who inject or misuse drugs is only tinkering with a problem that requires altogether more radical strategies. There is clearly a place for prescribing substitute opiates but it is not possible on a large scale without adequate backup from other agencies. Done badly it simply exacerbates the problem.

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References

1. Department of Health and Social Security. *Guidelines of good clinical practice in the treatment of drug misuse. Report of the medical working group on drug dependence.* London: DHSS, 1984.
2. Department of Health. *AIDS and drug misuse part 2. Report by the Advisory Council on the Misuse of Drugs.* London: HMSO, 1989.
3. Strang J, Ghodse H, Johns A. Responding flexibly but not gullibly to drug addiction. *Br Med J* 1987; **295:** 1364.
4. Skidmore CA, Robertson JR, Robertson AA, Elton RA. After the epidemic: follow up study of HIV seroprevalence and changing patterns of drug use. *Br Med J* 1990; **300:** 219-223.
5. Skidmore CA, Robertson JR, Roberts JJK. Changes in HIV risk-taking behaviour in intravenous drug users: a second follow-up. *Br J Addict* 1989; **84:** 695-696.
6. Strang J, Johns A, Gossop M. Social and drug-taking behaviour of maintained opiate addicts. *Br J Addict* 1990; **85:** 771-774.
7. Naish JM. Problems of deception in medical practice. *Lancet* 1979; **2:** 139-142.

Use of defibrillators in general practice

Sir,

The current interest in the role of the general practitioner in the immediate care of patients with acute myocardial infarction led us to review our experience of a defibrillator during the first 22 months of its use.

The policy in our practice of 4500 patients is for the on-call doctor to have a defibrillator available at all times. In seven cases of collapse the doctor was able to reach the patient sufficiently quickly to attempt resuscitation. The four surviving patients all went into ventricular fibrillation following a myocardial infarction and all had early cardiopulmonary resuscitation, in two cases by the doctor and in the other two by members of the public. This combination of factors was lacking in the three fatalities.

It is interesting to note the role of cardiopulmonary resuscitation by

bystanders, which was probably instrumental in the survival of two of our patients. Eisenberg and colleagues found that the time taken to initiate cardiopulmonary resuscitation was one of the most important variables in predicting survival from a cardiac arrest and that cardiopulmonary resuscitation by a bystander can significantly reduce this time.[1-4] Unfortunately it appears that many programmes of mass lay education fail to give the trainees sufficient confidence in their abilities, and their skills are not used frequently enough to be maintained.[5,6]

As the majority of cardiac fatalities take place long before the patient reaches hospital, arguments for general practitioners to have easy access to defibrillators are compelling, as demonstrated by our experience and by larger trials.[7] The advantages of early thrombolysis, with its concomitant risk of ventricular arrythmias, provide added reasons for access to defibrillators. The chief problems are: the cost of the equipment (£4000–£6000), though some of this can often be met by local charities, sometimes with help from the British Heart Foundation; organizing an on-call system which allows the doctor to respond quickly; and obtaining and maintaining the necessary skills. None of these problems are insurmountable to a competent practice of the 1990s.

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References

1. Cummins RO, Eisenburg BS, Hallstrom AP, Litwin PE. Survival of out-of-hospital cardiac arrest with initiation of cardiopulmonary resuscitation. *Am J Emerg Med* 1985; **3:** 114-119.
2. Eisenburg BS, Bergner L, Hallstrom A. Out-of-hospital cardiac arrest: improved survival with paramedic services. *Lancet* 1980; **1:** 812-815.
3. Eisenburg MS, Hadas E, Nuri I, Applebaum D. Sudden cardiac arrest in Israel. *Am J Emerg Med* 1988; **6:** 319-323.
4. Guzy PM, Pearce ML, Greenfield S. The survival benefit of bystander cardiopulmonary resuscitation in a paramedic served metropolitan area. *Am J Public Health* 1983; **73:** 766-768.
5. Hart HN, Slooff R. Medical aspects of lay resuscitation in Rotterdam. *Eur Heart J* 1988; **9:** 859-865.
6. Murphy RJ, Luepker RV, Jacobs DR, Gillan RF. Citizen cardiopulmonary resuscitation training and use in a metropolitan area: the Minnesota heart survey. *Am J Public Health* 1984; **74:** 513-515.
7. Pai GR, Haites NE, Rawles JM. One thousand heart attacks in Grampian; the place of cardiopulmonary resuscitation in general practice. *Br Med J* 1987; **294:** 352-354.

Neurological adverse effects of naproxen and misoprostol combination

Sir,

Misoprostol is an analogue of naturally occurring prostaglandin E_1, which promotes peptic ulcer healing rates equivalent to those observed with H_2-receptor antagonists.[1] Misoprostol also appears to prevent the development of gastric ulcers induced by non-steroidal anti-inflammatory drugs. It is claimed by the manufacturer that detailed studies show no clinically important pharmacokinetic or pharmacodynamic interactions with non-steroidal anti-inflammatory drugs.

However, as the following case history illustrates, concurrent administration of such drugs can cause neurological side effects. A 59 year old man developed rheumatoid arthritis in 1974. He had suffered from a gastric ulcer in 1959 but subsequent barium meals had shown no evidence of active ulceration. He was given different analgesics for his rheumatoid arthritis and in 1977 ibuprofen was prescribed. In early 1979 he complained of feeling generally unwell with easy fatigue, dyspeptic symptoms and frequent attacks of epigastric pain. He had also developed bleeding piles. A few months later he was admitted to hospital with severe iron deficiency anaemia and was given three units of blood. Again, a barium meal showed no signs of active ulceration. On discharge his treatment consisted of cimetidine, antacids as required, and naproxen for his arthritic symptoms.

Eleven years later, in May of this year, he attended my surgery complaining of abdominal discomfort, pain and nausea. I then prescribed misoprostol to replace cimetidine continuing the naproxen and adding metoclopramide hydrochloride. A few hours after starting this regimen, he developed ataxic symptoms — in his own words he 'felt like a drunk person — staggering all over and vomiting'. Despite this, he continued taking all the drugs for five days and then stopped the misoprostol (which was new to him) of his own volition. He rapidly improved and for two days he was virtually free of ataxia. On the third day, however, in addition to naproxen, he took one tablet of misoprostol but no metoclopramide. The ataxia rapidly recurred and lasted several hours. He took no more misoprostol on that day but on trying one further tablet on the following day the symptoms recurred. The next day he stopped taking misoprostol altogether and replaced it with cimetidine, continuing with the naproxen and the metoclopramide. He felt much better and has had no recurrence of his ataxic symptoms to date.

Jacquemier and colleagues[2] describe two cases of 'neurosensory adverse effects after phenylbutazone and misoprostol combined treatment'. In both cases, the symptoms appeared soon after misoprostol was started, subsided rapidly on its discontinuation and recurred on rechallenge. The explanation for this syndrome is not clear, but it may well have a pharmacokinetic basis. Pending further studies, patients should be warned to discontinue misoprostol should neurosensory symptoms occur.

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References

1. Winters I. Comparison of enprostil and cimetidine in active duodenal ucler disease. Summary of pooled European studies. *Am J Med* 1986; suppl 2a: 60.
2. Jacuemier JM, Lassoued S, Laroche M, Mazieres B. Neurosensory adverse effects after phenylbutazone and misoprostol combined treatment. *Lancet* 1989; **2:** 1283.

Inflammatory cervical smears

Sir,

I was interested to read the recent paper on the inflammatory cervical smear (June *Journal*, p.238). I collaborated in a similar study in July 1988,[1] and I was startled by the difference between our results and those of Kelly and Black.

We looked at 150 consecutive smears over a three month period, 75 of which proved to be inflammatory. All patients with inflammatory smears were recalled and invited to have a full microbiological assessment which included a high vaginal swab, an intra-cervical swab, testing for chlamydia and screening for gardnerella. We found only 12 positive cultures from 74 women with inflammatory smears and in nine cases the organism was *Candida albicans*. Of the 12 patients found to have a positive culture only five were symptomatic — four were positive for candida and only one of the symptomatic patients was positive for chlamydia. This led us to conclude that routine swabbing of patients with inflammatory smears is both expensive and probably not very productive.

Although I agree with Kelly and Black that the appearance of the cervix did not imply a greater chance of inflammation, I cannot agree that women with inflammatory smears suffer symptoms associated with their putative infection. However, I would agree that women whose smears are reported as severely inflammatory should probably have a high