General practitioner centred scheme for treatment of opiate dependent drug injectors in Glasgow

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Injecting opiate drugs is now common in the United Kingdom, particularly in deprived urban areas.[1] The judicious use of oral methadone may enable many opiate dependent drug injectors to reduce or cease injecting, with consequent improvements in health and social stability.[2] Key elements of effective methadone treatment include ensuring oral ingestion of an appropriate daily dose and addressing patients' other health and social problems.[3]

Successive reports to government have emphasised the key role of general practitioners in treating drug injectors.[4-6] However, few have received training in managing such patients, and consequently many experience difficulty in treating them.[7 8] Coping strategies range from refusing to register any drug injectors to prescribing various substitute drugs for unsupervised use, with the consequent dangers of overdose or diversion of the drugs to the black market.[9] Although some practices provide effective care,[10 11] little has been published on how this can be achieved across a larger population.[12]

In most countries methadone must be given under supervision at specialist addiction centres.[2] Although this has the advantage of ensuring a consistent approach within each clinic population, specialist services may be inaccessible to many and may lack the capacity to meet need when the prevalence of drug injecting is high. Unusually, in the United Kingdom both hospital doctors and general practitioners are allowed to prescribe methadone for dispensing by community pharmacists, thus enabling the treatment of injectors to be decentralised. However, a recently published survey of community pharmacies in England and Wales found that methadone is frequently dispensed in large amounts for unsupervised use.[13] The opportunities for abuse or diversion are clear. In a recent survey of drug related deaths in Manchester a large proportion seemed to be associated with methadone.[14]

Greenwood reported that many general practitioners in Edinburgh have been encouraged to participate in a shared care scheme with a specialist service.[15] We describe innovative arrangements enabling general practitioners and pharmacists in Glasgow to play a central part in managing opiate dependent drug injectors.

Summary points

- Judicious use of methadone can improve the health and social wellbeing of opiate dependent drug injectors
- A coordinated scheme in Glasgow has enabled many more general practitioners to treat drug injectors effectively—in the first two years of the scheme methadone prescribing increased by 173
- The additional clinical work may justify special payments to general practitioners
- A specialist medical referral service to which only general practitioners can refer patients and additional support from nurses or drug workers from community based agencies are essential adjuncts
- Community pharmacists have a key role in supervising the self administration of methadone by patients in pharmacies—to date, 60% have participated in Glasgow

Establishing the scheme

In 1991 there were about 8500 drug injectors in the area covered by the Greater Glasgow Health Board (population 915 000).[16] Although this number may now have fallen, the characteristics of drug injectors have remained the same. Most are aged between 20 and 35 and live in areas of socioeconomic deprivation; around two thirds of them are men. Over 80% inject heroin at least daily, and they often use other drugs, some of which are injected and some taken by mouth. The most popular are temazepam, dihydrocodeine, diazepam, buprenorphine, and amphetamine.[17] Around 1% of drug injectors die annually from overdose.[18] Although only 1% have HIV infection, at least 70% have hepatitis C, and there are numerous other serious health and social consequences.[19]

Our unpublished survey of general practitioners carried out in 1992 showed that three quarters of the 221 practices in the area had patients who were known

to be injecting drugs. Many respondents described difficulties in managing drug injectors, for whom they often prescribed psychoactive drugs, most commonly dihydrocodeine, temazepam, diazepam, and buprenorphine. Only a handful of respondents prescribed methadone at that time. Respondents also often asked for access to a specialist medical service, more information on existing services, and opportunities for training. Several psychiatrists in the area accepted referrals of drug injectors, although their main focus was the treatment of alcohol misuse. As psychiatric services were poorly resourced and inconsistent in approach, they could not provide the support that general practitioners sought.

In 1992 a small group of general practitioners in Glasgow who were prescribing methadone to their patients began meeting informally. Several had started separate clinics for drug injectors under a national health promotion scheme.[11] Although they found this approach helpful, it was time consuming and required a degree of clinical commitment that they thought went beyond the range of services contractually agreed between general practitioners and health authorities. They argued that such an approach would not be adopted by other practices unless the additional work was rewarded.

Proposals for a clinic scheme centred on general practice were thus drawn up by a working group comprising general practitioners with experience in managing drug misuse, an elected representative of all local general practitioners, a health authority manager, and a consultant in public health medicine.[20] The main criteria for participation are shown in the box. The group agreed that eligible patients had to be dependent on opiates with a current or recent history of injecting. The health authority accepted that the requirements of the scheme went beyond the range of normal contracted general medical services and that therefore additional payment was appropriate: a notional clinic session of 10 patient attendances would be paid at the midpoint of the hospital practitioner scale. A maximum average of three attendances per patient per month could be claimed. Thus, a general practitioner with the maximum number of 20 patients could claim up to 60 attendances (six sessions) a month, for which about £380 ($610) would be paid. Brief details of all attendances would be recorded on clinic log sheets, to be submitted quarterly for computerisation, analysis, and payment.

A review body was set up to supervise the scheme, with membership consisting of three practising general practitioners, the director of the Glasgow Drug Problem Service, the health board's medical prescribing adviser, and a consultant in public health medicine. The review body considers the suitability of all applications, reviews the performance of each practice, and determines any future changes in policy.

Criteria for participation in the scheme

- Participating general practitioners are each allowed between five and 20 patients in the scheme
- Patients should be seen during dedicated clinics to provide adequate time and reduce conflict with other practice work
- The scheme's guidelines for assessing and treating patients should be followed
- Oral methadone 1 mg/ml is the only allowable opiate substitute
- Daily methadone self administration under the supervision of a nominated community pharmacist should be arranged whenever possible
- Patients with coexisting benzodiazepine dependence should be prescribed reducing doses of diazepam or nitrazepam; prescription of temazepam, a drug that induces dependence and has a high street value, is not permitted
- All patients should receive regular additional counselling and support from a drug counsellor or an appropriately trained nurse
- General practitioners should attend at least two drug misuse training seminars a year
- Brief details of each patient's attendance should be recorded; his or her health and social circumstances should be recorded at entry and every six months

Joining the scheme

General practitioners wishing to join the scheme are asked to complete a short questionnaire stating the number of patients they wish to treat within the scheme; their proposed arrangements for medical consultation and counselling; whether they can arrange for methadone administration to be supervised locally; and whether participation in the scheme has the agreement of the other partners in the practice. Applications are considered at quarterly meetings of the review body. When necessary, further information is sought by telephone, correspondence, or a visit to the practice. If their application is approved general practitioners sign a formal letter of agreement committing them to the conditions of the scheme. They are then issued with an introductory pack covering the administrative arrangements; guidance on organising a practice drug misuse clinic; a protocol for assessing drug injecting patients and making clinical decisions; detailed advice on prescribing methadone and on stabilising and monitoring treatment; and a sample written agreement for signing by both patient and doctor.

Specialist support

All general practitioners in Glasgow can refer patients to the Glasgow Drug Problem Service. This was established in January 1994 to promote better management of drug injectors by general practitioners through a system of shared care. Its design was partly modelled on the successful community drug problem service in Edinburgh.[21] The Glasgow service is led by a former general practitioner with extensive experience in managing drug misusers. It is staffed by four teams of two or three specialist nurses working with doctors, most of whom are local general practitioners employed at clinical assistant grade for several sessions a week. Each team covers about a quarter of the area covered by the health board. The service accepts referrals from general practitioners alone and gives priority to opiate dependent drug injectors. Patients are seen at weekly clinics held in 11 health centres sited in parts of the city where drug injecting is prevalent. After assessment of the patient the service will usually initiate treatment only if the general practitioner agrees to

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participate in ongoing care thereafter. A written contract is agreed with the patient. If and when his or her condition is stabilised responsibility for ongoing care is returned to the general practitioner, with the service available for further advice or help.

Supervised self administration of methadone

The self administration of methadone by patients in a community pharmacy, under the direct supervision of a pharmacist, was first agreed between a few general practitioners and their local community pharmacists. Although the pharmacists were under no contractual obligation to do this, they recognised that supervision was an effective means of avoiding overdose or illicit diversion of the drug and was an appropriate professional activity with substantial benefits for patients. This approach was supported by the area pharmaceutical committee, the representative body for contracting pharmacists in greater Glasgow. Written guidance was developed to encourage pharmacists to join the scheme, monitor the health of the patients being supervised, and provide feedback to the prescriber. Early in 1994 a questionnaire sent to community pharmacists showed that 45% of all community pharmacies in the city either were already supervising the administration of methadone or were prepared to do so.[22] Consequently, both the Glasgow Drug Problem Service and the scheme's review body determined that supervised self administration by the dispensing community pharmacist should be arranged whenever possible.

As supervision became more widespread, pharmacists in areas where drug injecting was prevalent found their workload increasing considerably. In April 1995 the health authority therefore began paying a small annual fee to community pharmacists who agreed to provide supervision, report every month on all methadone dispensing, undertake training, and participate in audit. The fee is paid on a sliding scale according to the number of days a week that supervision is provided and the number of supervisions a month. The annual fee ranged from £200 for a five day service and up to 250 supervisions per month to £1400 for a seven day service and over 500 supervisions per month. These fees are currently being renegotiated to reflect better the work entailed.

Table 1 Performance of general practitioner clinic scheme during its first two years

	1994-5*	1995-6*
No of general practitioners (practices) in scheme by end of financial year	54 (36)	75 (42)
No of patients attending during year	1244	1613
Average age (years)	29	29
No (%) of women	34	36
No of attendances	18 125	24 756
Average daily dose of methadone (mg)	54	54
No (%) of daily methadone prescriptions†:		
Dispensed	90	97
Requiring supervised self administration	65	91

*Financial year, 1 April to 31 March.
†In most cases Sunday's dose was taken home on Saturday.

Counselling and social support

The importance of effective non-medical support in realising the potential benefits of treatment with methadone is strongly supported by published comparisons of methadone programmes.[3 23] Issues such as family and personal relationships, child care, housing, income support, and criminal justice can be addressed as drug misuse reduces or stabilises. The Glasgow scheme therefore agreed that provision of regular counselling and social support should be a condition of participation in the scheme.

Information systems and analysis

Information about each new patient is submitted to the Scottish drug misuse database on a standard form. The following data are recorded at each attendance: patient's initials, date of birth, and sex; date of attendance; person seeing the patient; methadone dose and whether it is dispensed daily and under supervision; other drugs prescribed; and whether urine was tested. Every six months participating general practitioners are also asked to complete for each patient the opiate treatment index, a multidimensional questionnaire for assessing patients who are dependent on opiates.[24] Completed attendance sheets and questionnaires are processed at the HIV and Addictions Resource Centre. Similar data are recorded at the Glasgow Drug Problem Service. Data on methadone prescriptions are provided by the Pharmacy Practice Division, Department of Health, Scottish Office. All data were analysed using SPSS/PC for Windows, apart from prescribing patterns, which were analysed using Dataease 5.

Results during first two years of scheme

General practitioners

A total of 39 general practitioners in 22 practices contracted to participate in the scheme from its opening on 1 May 1994. By April 1996 this had risen to 75 general practitioners, representing 42 of the 221 practices (19%) in the health board area. Their practices were mainly situated in localities where drug injecting is known to be prevalent. A few participating doctors initially continued to prescribe temazepam or dihydrocodeine to some patients. With few exceptions, these and other departures from the guidelines were addressed after discussion with the review body. One doctor was required to leave the scheme because of practice persistently incompatible with the scheme.

The first two years' experience are summarised in table 1. The number of patients treated in the scheme, the number of attendances, and the proportion of patients receiving daily dispensed and supervised methadone all increased over the two years. The overall mean daily dose of methadone prescribed was 54 mg while the mean dose prescribed by each practice ranged from 31 mg to 78 mg (median 50 mg, interquartile range 45 mg to 57 mg). Three types of methadone prescribing regimens were defined on the basis of the last five recorded doses for each patient during the first year of the scheme. Maintenance, reducing, and increasing regimens were respectively when the last recorded dose departed from the mean of the preceding four doses by less than 10%, when it

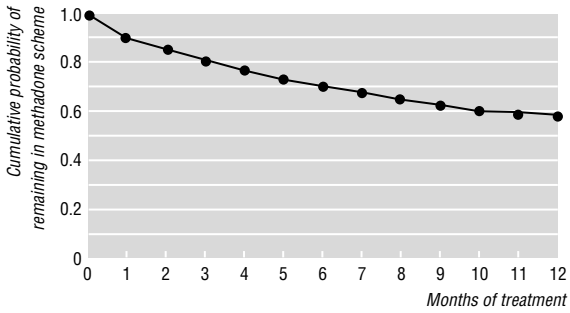

Fig 1 Kaplan-Meier curve showing probability of patients remaining in methadone scheme over 12 months

was more than 10% below the mean, and when it was more than 10% above the mean. A methadone regimen was calculable for 930 patients: 651 (70%) were receiving a maintenance regimen (mean dose 57 mg), 177 (19%) a reducing regimen (mean dose 40 mg), and 102 (11%) an increasing regimen (mean dose 47 mg).

A Kaplan-Meier survival curve was constructed with attendance data for the first year. This showed that there was a 60% probability that patients would remain in the scheme for 12 months (fig 1).

Glasgow Drug Problem Service

Between January 1994 and 31 March 1996, 1971 patients were referred to the service by general practitioners in Glasgow. At least one referral was made by 152 of the 221 (69%) practices in the area, including all but two of the practices that joined the scheme. The number of patients attending the service per quarter varied between 408 and 535. Around 65% of all patients attending the service were prescribed methadone.

Community pharmacists

By April 1996, 59% (125/212) of the community pharmacies in the health board area had agreed to supervise self administration of methadone on their premises. One hundred and four (83%) of the participating pharmacists provided the service six days weekly, seven (6%) five days weekly, and 14 (11%) seven days weekly. About 25% supervised fewer than five patients a day, 50% supervised 5-20 patients, and 25% over 20 patients. Four pharmacies supervised more than 40 patients a day.

Each pharmacy is encouraged to set an upper limit on the number of patients it supervises. Pharmacies with larger numbers have developed various ways of managing them. These include arranging for patients to attend at quieter times of the day or so that they attend evenly throughout the day. Several have installed a special booth where supervision can be carried out in greater privacy. The total number of supervised daily doses rose from around 300 000 in the first year to 400 000 in the second. By September 1996 this accounted for about 79% of all the methadone they dispensed. An area pharmacy specialist for drug misuse was appointed in February 1996, with responsibilities including the coordination and facilitation of community pharmacists concerned with methadone dispensing and supervision.

Figure 2 shows that the total number of methadone prescriptions dispensed by community pharmacists to patients of general practitioners or the Glasgow Drug Problem Service rose by 173% from the start of 1994 to the middle of 1996. During the first half of 1996, 68% of 31 357 methadone prescriptions in Glasgow were issued by doctors in the scheme or the Glasgow Drug Problem Service. Of these, 91% of prescriptions from general practitioners in the scheme and 99% of Glasgow Drug Problem Service prescriptions were for supervised self administration. Data on the dispensing arrangements of other general practitioners are not available.

Counselling and social support

In Glasgow 15 community drug projects offer counselling and support to drug misusers and their families. All are now supporting patients being prescribed methadone by general practitioners in the scheme. However, both the number of patients receiving support and the amount and nature of support that can be provided varies greatly from locality to locality and practice to practice. Some practices hold weekly drug clinics where patients are seen by either the general practitioner or the counsellor, or both, depending on the circumstances. In others the support is provided by a practice nurse or health visitor. Support ranges from intense, structured counselling to informal advice. A few practices within the scheme have been unable to provide additional counselling and support for their patients. Written guidance for drug workers has been issued by Glasgow City Council's social work department and agreed with participating projects. This sets out the aims of counselling and support, the methods used, and the division of responsibilities.

Training

Evening seminars are held four times a year for general practitioners in the scheme and any other interested doctors. Each evening combines lecture presentations with small groups and plenary discussions. The practi-

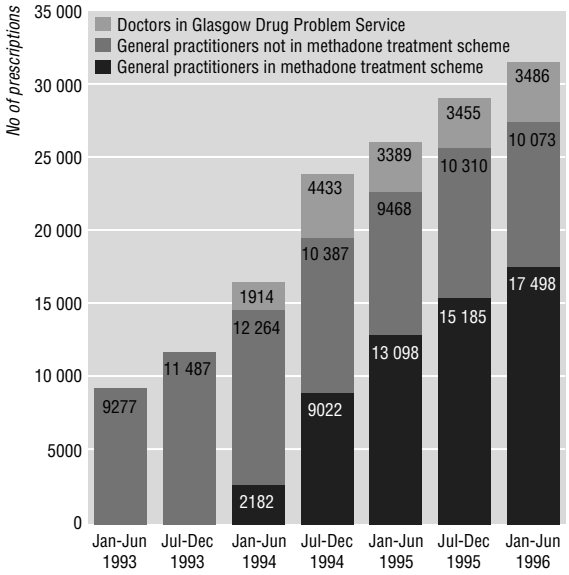

Fig 2 Primary care prescriptions for methadone in area of Greater Glasgow Health Board, 1993-6

calities of running clinics and using methadone feature regularly. Other issues addressed include benzodiazepine misuse; infections related to injecting drugs; drug related deaths; pregnancy and drug misuse; mental health issues; and the role of psychiatrists in treating drug misuse. There have been successful joint meetings with community pharmacists, drug counsellors, and psychiatrists. A training course for practice nurses and health visitors attached to general practitioners in the scheme has also been held. A distance learning package for community pharmacists, largely based on the Glasgow experience, was launched in June 1996.

Costs

During the financial year 1995-6, £1 722 000 was spent on methadone prescribing by general practitioners and the Glasgow Drug Problem Service in the area covered by Greater Glasgow Health Board. This comprised methadone mixture (£482 000, 28%); fees for dispensing controlled drugs (£1 050 000, 61%); fees for general practitioners on the scheme (£138 000, 8%); and pharmacists' fees for supervision (£52 000, 3%). Staffing and other non-pharmacy costs of the Glasgow Drug Problem Service amounted to an additional £574 000. We estimate an average of around 2000 patients were being prescribed methadone in Glasgow at any one time during 1995-6. The average additional cost per patient to the health service was thus about £1150 ($1840) a year or £3.15 ($5) a day. However, this does not take account of the full cost of general practitioners', pharmacists', and counsellors' time, which has not been measured.

Discussion

To our knowledge, this is the first published report of arrangements enabling general practitioners across a large area to contract to provide coordinated evidence based treatment for opiate dependent drug injectors. The central element of treatment is the prescription of an appropriate daily oral dose of methadone. The scheme offers a framework within which general practitioners and their staff, community pharmacists, and drug counsellors can cooperate to ensure that methadone is used safely and patients are given the opportunity to improve their physical, emotional, and social wellbeing.

The scheme is based on an approach that had already proved workable.[11] The principle was established that its requirements went beyond the scope of general medical services and that participating general practitioners should therefore receive additional payment. Engaging general practitioners in a formal contract has been crucial in ensuring a high degree of compliance with the conditions of the scheme.

Specialist advice, guidelines, and training

Three factors have been important in building a greater sense of confidence among general practitioners, most of whom had had no previous training in the management of drug injectors. Firstly, a medically led specialist service, the Glasgow Drug Problem Service, to which all general practitioners in the city can refer drug injecting patients, was established. Restricting referrals to general practitioners alone has ensured that the continuing responsibility of the general practitioner for the ongoing shared care of the patient is clear from the outset. Because the clinics of the Glasgow Drug Problem Service are held in local health centres most patients can be assessed and treated close to where they live. Furthermore, direct discussion with the referring general practitioner is facilitated and primary care staff can see that such clinics can be run smoothly alongside services for other patients.

Secondly, the scheme provides general practitioners with detailed guidance on the clinical management of patients and the use of methadone, as well as advice on problems such as coexisting benzodiazepine dependence.

Thirdly, a quarterly series of evening seminars has been established. General practitioners participating in the scheme are required to attend at least two annually, but the seminars are also open to all other general practitioners. This enables general practitioners to increase their knowledge and meet colleagues with similar patients. We see ongoing training as an essential element of the scheme.[25]

Supervising and supporting patients

The two other key partners in the scheme are community pharmacists and drug counsellors. Nearly two thirds of the community pharmacists in Glasgow have recognised the importance of ensuring that the correct daily dose of methadone is taken by patients. As a result, not only are almost all prescriptions for methadone from doctors in the scheme now dispensed daily but, in over 91% of cases, supervised self administration of methadone by the pharmacist is arranged. This is in sharp contrast to the results of a recent survey of community pharmacies in England and Wales, which found that daily dispensing of methadone occurred in only a third of cases and that supervised self administration was rare.[13] We believe that supervised self administration in pharmacies greatly reduces the opportunity for misuse and diversion to the black market while enabling patients to obtain their methadone close to where they live. This arrangement also ensures that there is daily contact between the patient and a trained health professional and conveys a powerful message that patients being properly treated for drug addiction can receive their drug treatment in the community pharmacy. There have been very few complaints from either patients or other customers.

The scheme places great importance on providing additional counselling and support. Whereas methadone may successfully reduce injecting and chaotic drug use, unless help is offered in dealing with coexisting psychological, social, and legal problems the patient may feel unable to cope. Counsellors are able to address these complex and time consuming issues in joint clinics, leaving doctors free to concentrate on clinical management. Many doctors in the scheme have commented on how much this relieves the pressure and sense of isolation they previously felt when treating drug injecting patients alone.

Unresolved problems

Survival analysis showed that 60% of patients in the scheme would continue to take methadone for at least a year. The reasons for stopping are many, including

relapse to chaotic drug use and exclusion due to unacceptable behaviour on the one hand and the successful achievement of abstinence on the other. Studies are in progress to assess the outcome of treating patients within the scheme. Factors affecting outcome may include the dose of methadone prescribed and whether a maintenance or reducing regimen is used.[26] Both factors vary considerably between practices.

Many problems remain, only some of which may be within the power of the health service to address. Many drug injectors in the city either are not registered with a general practitioner or are unable to find one who is prepared to prescribe methadone. We are thus trying to encourage more general practitioners to join the scheme, particularly those who already prescribe methadone. In some parts of the city community pharmacists are working to full capacity and counselling services are likewise overstretched. Major problems are frequently encountered when patients are imprisoned and methadone is discontinued.[27] During the past two years heroin smoking, previously rare in Glasgow, has become much more common; the grounds for prescribing methadone for non-injectors are less certain and currently under debate. The management of coexisting benzodiazepine dependence remains troublesome. Despite these continuing challenges, the scheme has been enthusiastically adopted by a growing number of general practitioners in Glasgow. They see it as a huge improvement on the previously chaotic state that continues to exist in many other parts of the United Kingdom.

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Before the internet

Medical advice for the world

A medical consulting room literally at the disposal of the world is an idea which is to be put into practice by the Italian "Direzione Generale di Sanita." The proposal was recently put to Signor Mussolini, and the Duce immediately gave a warm assent, with the result that a unique medical institution will open in the near future.

The consulting room is to be situated in the studios of the Rome broadcasting station, although quite independent of the broadcasting organisation. There will be regular day and night medical attendants, the best doctors in Italy being available at all times. Urgent medical enquires by wireless from all parts of the world will be speedily considered and the answers transmitted over the ether.

Signor Mussolini, in giving his support to the movement, said that in cases of sickness it was the duty of every human being, no matter what nationality, to give all the assistance that lay in his or her power. Therefore, the new consulting room would be available to all.

Frequently there are cases which can be dealt with successfully only by a specialist: sometimes only one or two men in the world may be qualified to cope with a particular disease.

Interesting apparatus developed by Professor Pende, of Genoa, will be used for registering heart beats and the action of the lungs of patients at great distances from the receiving station.

The permanent wavelength of the first wireless medical consulting room in the world will be fixed upon during the next few days. There will be twelve doctors on the staff at the beginning, but later on the Direzione Generale di Sanita hopes that the important medical authorities in all countries will send doctors and specialists to Rome to take a share in this new work for the benefit of all the world.—*Wireless World,* 17 May 1935.

Does anyone know if it ever happened?

Paul Bemrose, *antiques and fine art consultant, Stoke-on-Trent*