National Confidential Enquiry into Methadone Related Deaths (Scotland) 2000

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General Register Office for Scotland, in particular Mrs Joan Brown.
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General Practitioners who kindly completed the questionnaires.
Executive Summary

This study is set against a background of a continuing decrease in the number of methadone related deaths in Scotland. This decrease is despite an 18% year-on-year increase in the number of methadone prescriptions since 1996. Of the 56 deaths referred to the enquiry, 30 cases had methadone cited on the death certificate.

Main Findings

- There were no accidental deaths of children or deaths of individuals who were obviously unaware that they were taking methadone. There were no deaths of individuals under 16 years of age.
- There was one death of a recreational drug user.
- 45% of deaths referred to the enquiry involved people who were not on a prescription for methadone.
- All but two cases involved established drug users.
- No patients died within one month of commencing a methadone programme.
- Methadone tablets were associated with one death.
- Prescribing of a 28-day supply in one dispensing was associated with one death.
- Of those on a prescription, 60% were on supervised consumption at the time of their death.
- Urinalysis continued to be performed at regular intervals in all cases with the exception of one case in which the patient died prior to a regular monitoring system being implemented.
- In 65% of cases a co-morbid psychiatric condition, usually depression was diagnosed, and in two cases this ended in successful suicide.
- In the current enquiry there was no independent review of the pathology and toxicology aspects of the death.

Summary of Recommendations

GENERAL
Health education has to target new drug-users to emphasise that the use of methadone, outside its medical purpose, is extremely dangerous. All new patients starting on methadone should have an educational session including loss of tolerance and prosecution for diversion. High profile prosecutions of persons supplying illicit methadone will provide reminders and some deterrence.

To enable effective audit and self-evaluation of practice the cause of death, toxicology and Form ME4 should be sent routinely to the patient’s prescriber and General Practitioner.

PRESCRIBING
To ensure good practice, supportive on-going training and updates are required. This should complement the documentation received by all GPs: Drug Misuse and Dependence - Guidelines on Clinical Management (HMSO 1999).

Specialist support should be available for complex prescribing issues such as the prescribing of two opiates or an opiate in conjunction with treatments for difficult psychiatric conditions. On-going specialist management should be available if the GP requires it and the patient is willing to be referred. Protocols for dealing with non-compliance should be developed by all GP practices.
It is important to emphasise that supervised consumption does not protect an individual user from a drug-related death. The cost-benefit of the further extension of supervised consumption should, therefore, be defined. The extension of supervision should also address the patient’s autonomy within the community to take methadone in a private place. Rapidly flexible prescribing regimes need to be in place, particularly during times of crisis, including chemist access seven days per week with supervised dispensing when required. Prior to patients receiving takeaway methadone details of satisfactory storage should be included in the patient’s notes, particularly when children are in the house.

**CO-MORBIDITY**
Co-morbidity requires integrated specialist services including or with psychiatric support. The use of antidepressant drugs dangerous in overdose (e.g. tricyclic) should be stopped in this high-risk group, or at least to have multiple dispensing arrangements.

**SPECIALIST SERVICES**
GPs need the provision of, and access to, specialist addiction services. These services should offer a range of treatment options and patients, GPs and the services themselves should see assessment and treatment as more than just prescribing methadone. Patients should be encouraged to accept referrals to services. Specialist services have a role to play in providing feedback to other prescribers and doctors who manage drug-users.

**EMERGENCY TREATMENT OF METHADONE OVERDOSE**
Doctors and paramedics should be made aware of the limits of naloxone treatment in methadone overdose and this should be emphasised in their continuing professional development. Patients who attend A&E after an overdose should be encouraged to remain in hospital until discharged by a doctor: the dangers of premature self-discharge should be emphasised.

**CONFIDENTIAL ENQUIRY**
The National Confidential Enquiry into Methadone Related Deaths should be extended to cover all drug-related deaths (as defined by the Registrar General for Scotland and the European Monitoring Centre for Drugs and Drug Addiction). This should be carried out on an annual basis. We wish to bring the enquiry into line with the gold standard set by The Confidential Enquiry into Maternal Deaths and the National Clinical Audit into Epileptic Deaths. These state that “pathology assessors are an integral part of the process for both assessment of investigation of death and for reviewing all available facts and assessing factors that have led to death”. Therefore, we recommend that such assessors are incorporated into this enquiry.

The information currently supplied to the project and the questionnaire sent to the General Practitioner failed to identify adequately which, if any, specialist services were being accessed by the patient. The questionnaire has been amended to take this into account and a more detailed analysis of care provided by the specialist services is proposed for 2002.

Our attempts to access General Practitioner records directly were unsuccessful in 2000. The Regional Registration Manager Practitioner Services in Glasgow, Aberdeen and Edinburgh stated that they were not in a position to release records directly to us. In those cases in which records were not available to the General Practitioner, it was inevitably difficult to complete the form and provide the information required. This was possibly a large factor in the 8 uncompleted returns and on some others on which the GP stated that they were completing it from memory. We intend to approach Directors of Public Health and the agency again to request co-operation.
Introduction

Since 1992 notifications of problem drug use by agencies to the Information & Statistics Division (ISD) Scotland have increased on average by 14% year on year. At the same time drug related deaths have increased on average by 13% year on year (Fig. 1).

However, within these figures was a worrying change in methadone related deaths, which peaked in 1996 (Fig. 2). Since 1996 the number of methadone related deaths has declined despite the increase in notification of problem drug users and an increase in methadone being prescribed by 18% year on year since 1996.

Of further concern was variable methadone death rates per head of the population by Health Board. This is illustrated by Fig. 3, which includes all Health Boards with more than 5 methadone related deaths in 2000. This shows that in 1996 Lothian had a markedly higher methadone related death rate than other Health Boards, and this has since fallen to levels found in other Health Boards. Overall the trend tends to be down in all Health Boards.
However, this needs to be compared with the number of non-methadone drug deaths since 1996 for the same Health Boards (Fig. 4). This shows that Lothian is less remarkable when compared to other areas. The number and type of problem drug users in each Health Board area are different and regional figures should be interpreted in the context of local patterns and trends.
The death rate per 100,000 population is only one measure of drug related mortality within a region. Figure 5 illustrates the difference in the overall drug-related and methadone-related death rates by the quantity of methadone prescribed in Health Boards having more than 5 methadone deaths in 2000. Greater Glasgow, which has the highest methadone prescribing rate has one of the lowest rates of methadone-related deaths per kilogram methadone prescribed. This has been attributed to the high levels of supervised consumption within Glasgow. Tayside in terms of all drug-related deaths has the lowest death rate per 1,000 kgs of prescribed methadone suggesting that the methadone program in this area might be having the greatest impact on drug-related deaths. There is, however, a complex relationship between the availability of services, prescribed and illicit methadone on one hand and drug and methadone related deaths on the other. Thus it is not possible to demonstrate causal relationships on the basis of the available data.

The pilot Glasgow CEMRD in 1996 drew attention through the audit process to 5 problems identified with clinical care, and 6 problems identified with organisational care. These were (number of cases in brackets):-

**Clinical Care**
- Not examining for injecting or not performing urinalysis for drugs of abuse (10)
- Chloral hydrate associated deaths (6)
- Too low a dose of methadone (4)
- Too high a dose of methadone (3)
- Premature discharge from hospital after overdose on methadone (2)

**Organisational Care**
1. Poor communication between medical staff (15)
2. Consumption of methadone which was not being prescribed (13)
3. Unsupervised methadone possibly being taken more frequently than daily (6)
4. Methadone prescribing being interrupted by imprisonment (5)
5. Resuscitation protocols for ambulance crews which limited the use of naloxone (3)
6. Doubts over the identity of a patient who was receiving methadone (1)

The current NCEMRD tries to follow-up on these findings and extend the audit process to an annual review with feedback to clinicians and managers working with methadone in particular and opiate drug dependence in general.
Method

The General Registrar of Scotland (GROS) notified deaths associated with methadone to the project co-ordinator. Drug-related deaths, within which methadone-related deaths occur are defined by the GROS and are consistent with the definitions proposed by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). 4

For the purposes of this Enquiry, a methadone related death was one in which methadone was mentioned in connection with the death, irrespective of the cause or manner of death. In some cases methadone was cited, explicitly, as a primary or contributory cause of death, in others, it was mentioned on the Medical Enquiry Form (GROS form ME4) but not on the death certificate. The form ME4 is completed by the pathologist who certified death or other person involved with the investigation of death. It is acknowledged that this definition is an inclusive one and that there are some borderline cases which would not be considered “methadone-related” by other criteria (e.g. methadone cited on the death certificate as a primary cause of death). The enquiry is concerned with the clinical care of persons who died whilst having access to methadone, whether prescribed or illicitly, and it is important, therefore, not to exclude cases solely on the basis that death was not caused solely or primarily by an acute methadone overdose. Whether or not a “methadone-related death” was referred to the Enquiry via the GROS is, therefore, contingent on how other agencies have interpreted the circumstances of death.

A short questionnaire was sent to the deceased’s General Practitioner. Returns were anonymised and sent to two assessors, one a General Practitioner with extensive experience of drug users, the other a psychiatrist working within a specialised drug service. The assessors were asked to comment on the clinical care of the patient and, particularly, whether any failings in the system could be identified.

Appendix 1 illustrates the key agencies involved in the Enquiry.
Results

General

Fifty-six deaths associated with methadone and occurring during 2000 were reported by the Registrar General for Scotland and the University departments of Forensic Medicine at Glasgow and Edinburgh.

Methadone was cited on 30 (54%) of all death certificates relating to cases referred to the Enquiry. In 11 (37%) cases, methadone was the only drug (not including alcohol) cited on the death certificate. A combination of drugs was present in 19 (63%) deaths. Evidence of poly-drug use is important because it can indicate non-compliance with the patient’s prescription.

Table 1 analyses the data by age and sex. Male fatalities were significantly older than females (p=0.03).

<table>
<thead>
<tr>
<th>N</th>
<th>Mean age</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>44</td>
<td>31.4</td>
<td>7.72</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>26.6</td>
<td>7.33</td>
</tr>
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</table>

Table 1. Age and Sex of Deaths associated with Methadone

General Practitioners were identified in 52 (93%) cases and questionnaires were sent to all these doctors. The other four cases comprised three persons who were reported not to be registered with a General Practitioner and one who was visiting from England. Thirty-nine (75%) responses were received, after follow-up requests when necessary, although in 8 of these the form had not been completed. Percentages are therefore based on the known 31 cases unless otherwise indicated.

General Practitioner Data

Figure 5 shows the length of time the patient had been registered with the medical practice. This information was available in 29 cases. Health Boards had assigned 4 patients, although in only one case had this been a recent change (two months prior to death). Twenty (69%) patients had been registered with the same practice for at least three years.
One patient died on the day he had last seen his GP. The patient was receiving methadone in tablet form and was not supervised. The cause of death, however, was attributed to the combined effects of methadone, diazepam and dihydrocodeine. Approximately half the sample had seen their GP in the week prior to death (Fig. 6).

![Figure 6. Interval between patient’s last appointment and death](image)

Eighteen drug users (58%) were being prescribed methadone by their GP at the time of death. Eight patients were on regimes of reducing doses and eight were “stable”. The mean daily dose was 44 mg. (all scripts were based on a strength of 1 mg / 1 ml). Daily doses ranged from 18 mg. to 70 mg. Supervised self-administration was specified for 10 (56%) patients. However, almost invariably this requirement was such that the closure of pharmacies on public holidays and/or Sundays meant that the patient could takeaway an extra day’s supply. There was, however, no direct evidence that the days of increased possession (e.g. Saturday) were associated with more deaths. The number of “takeaway” days in other patients ranged from one to 28. In the latter case, the patient was apparently able to collect 1120 mg. of methadone from the pharmacy. One GP reported that a patient, who resided in a small community, refused to accept a regime of supervised consumption because of the perceived stigma attached.

Seventeen patients received methadone mixture, whereas one was prescribed tablets.

The period for which patients had been on methadone prescriptions, where these data were available (N=16), is shown by figure 7. The mean duration of methadone treatment was approximately 28 months (range 3 – 108 months). No patients died within one month of commencing a methadone programme. Ten (63%) patients had been receiving prescribed methadone for at least one year.

![Figure 7. Duration of Patient's Methadone Maintenance Treatment](image)
Urinalysis prior to prescribing is recommended by the current guidelines. Urine analysis was carried out prior to the commencement of the GP prescription in 12 (75%) cases. In the case of two patients, known to be prescribed methadone by the GP, these data were missing. However, in the four cases in which this was not carried out by the GP, two had recently had such an analysis either at a specialist drug service or hospital. Urinalysis continued to be carried out at regular intervals in all cases with the exception of one case in which the patient died prior to a regular monitoring system being implemented.

Of the 18 patients known to be receiving a methadone prescription, 8 did not have the drug mentioned on the death certificate. In 6 of these cases methadone was detected by post mortem toxicology and cited on Form ME4. In two patients no methadone was detected. One was on unsupervised consumption at a low dose of 28 mg methadone and dispensed twice weekly with a co-morbid alcohol dependence. The extent to which this implies non-compliance with the prescription cannot be deduced from the available data: it is not possible to conclude that the patient was selling her methadone. The other patient was on supervised consumption, but was admitted to hospital and at the time of death (some time later) no methadone was detected. Although methadone was not the direct medical cause of death of these patients, the cases nevertheless raise important issues concerning the management of patients prescribed methadone, particularly the treatment of co-morbidity.

Of the 13 patients not being prescribed methadone by the GP at the time of death, 10 were stated by the GP to be known drug users. Some of these patients were known to be taking methadone. Therefore, of the 31 GP completed replies, twenty-eight patients (90%) were known to their GP practice to be drug users. Of these, 16 (57%) were known to be (or to have recently been) IV drug users. Nineteen patients (68%) exhibited objective evidence of being drug-dependent.

The three patients who were not prescribed methadone and who were not known to their GP as drug users were as follows:

- A clear suicidal overdose using methadone prescribed to a relative.
- A male recreational drug user who consumed a cocktail of drugs including methadone from an unknown source. The cause of death in this case was not ascertained.
- A patient having a history of injecting drug use who, at the time of death, was prescribed dihydrocodeine and diazepam, although the GP stated that she was not aware of the patient being a current drug user. It was clear on post mortem that he was a current injecting drug user although he appeared not to be taking the dihydrocodeine.

Dihydrocodeine was known to be prescribed in four cases: three of whom were not prescribed methadone by the GP. It was identified at post mortem toxicology in two of these cases and either cited on the death certificate or Form ME4 in a further 6. One patient was prescribed methadone and dihydrocodeine.

Co-morbidity was reported in 20 (65%) patients. In 14 (70%) of these, depressive illness had been diagnosed. Six patients were prescribed an SSRI (or related) and three were prescribed a tricyclic antidepressant. In one case the GP reported that amitriptyline had been prescribed as a hypnotic. Two patients received antipsychotic medication.

In two cases there was sufficient evidence to conclude that the manner of death was suicide. However, it is accepted that many drug users deliberately overdose in order to maximize the perceived benefits from the drug although they have no intention to die as a result.
There were no cases in which a person (e.g. a child) died after having consumed methadone mistakenly.

**Assessment of Information from General Practitioners**

Figure 8 shows the assessment of information received from GPs. Specialist assessors reported more cases in which areas for improvements to the quality of care and services could be identified.

![Bar chart showing comparison between specialist and general practitioner assessments](chart.png)

*Figure 8. General Practitioner and Specialist Assessment of GP Data*

The areas highlighted by the assessors for particular concern are summarised in Table 2.

**Assessment of Additional Information**

Out of 56 methadone related deaths reported to the enquiry, 39 GP questionnaires were returned (8 of which had no information). To assess the representative nature of the returned data, information from other sources was available in 15 cases. This is summarised in Table 3.

The distribution of sex (M:F = 4) and mean ages (M, 28.8; F, 25.3) of the group with no returns is similar to the whole data set (M:F = 3.7; M, 31.4; F, 26.6)

From the comparison it can be seen that the data are not dissimilar and that, therefore, extrapolation can be made from the GP returns to the whole data set.
Feedback

*General Practitioners not kept informed*

There are limited opportunities for GPs to self-evaluate care provision because the medico-legal authorities responsible for investigating death do not always provide adequate feedback to the doctor. Current feedback policy should be reviewed in collaboration with Forensic Medicine departments and the Crown Office.

Prescribing Practice

*Prescribing tri-cyclic antidepressants*
*Prescribing two opiates*
*Prescribing alternatives to methadone*

The use of tri-cyclic antidepressants in this patient group should be reviewed. Other antidepressants that are less dangerous in overdose are available. The role of other prescribed opiates such as dihydrocodeine is also important.

Co-morbidity

*Patients with alcohol dependence problems*
*Patients with depression*
*Patients with other psychiatric conditions*

Drug dependent patients with other diagnoses (especially alcohol dependence and / or psychiatric conditions) require referral and access to a range of different specialised care services. The availability of these services should be mapped in order to identify lack of adequate provision.

Specialised Services

*Availability of services*
*Referral to services by GPs*
*Uptake of services by patients*

GPs must be aware of and be able to refer to specialist services when they have difficult patients. One GP felt that care options are limited because drug users are “dumped” onto primary care services.

Socio-economic and other factors

*High-risk vulnerable group*
*Access to range of social services*

Patients in this series almost invariably exhibited a range of socio-economic problems, out-with the remit of primary care services. The extent of these problems should be highlighted and appropriate political solutions identified.

Table 2. Factors involved with sub-standard care as identified by GP and Specialist Assessors.

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<tr>
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<th>Detail</th>
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<td></td>
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Table 3. Comparison of GP data set against those in which no GP data were given.

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<tr>
<th></th>
<th>GP Returns Data N (%)</th>
<th>Data from other sources N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Known to GP to be a drug user</td>
<td>27 (90%)</td>
<td>14 (93%)</td>
</tr>
<tr>
<td>Prescribed methadone at time of death</td>
<td>18 (58%)</td>
<td>7 (47%)</td>
</tr>
<tr>
<td>Supervised self administration</td>
<td>10 (56%)</td>
<td>5 (72%)</td>
</tr>
<tr>
<td>Mean Daily Dose</td>
<td>44 mg</td>
<td>46 mg</td>
</tr>
<tr>
<td>Methadone on death certificate</td>
<td>25 (61%)</td>
<td>5 (33%)</td>
</tr>
<tr>
<td>Psychiatric Co-morbidity (including alcohol)</td>
<td>20 (65%)</td>
<td>6 (40%)</td>
</tr>
</tbody>
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Table 3. Comparison of GP data set against those in which no GP data were given.
Discussion

Illicit drug use by its very nature is an extremely risky activity. The substances used are not subject to quality control and the methods of administration are inherently dangerous. The desire to reach the euphoric state is achieved only by near lethal doses and the drug user is continually pushing at this boundary. It is inevitable, therefore, that some drug users will die. Treatment services will never prevent all deaths. Their aim is to minimize the numbers dying and to improve the quality of life of patients. The number of deaths prevented by treatment is unknown.

This survey has highlighted several positive features of primary care of drug users in 2000. No GP reported the death of a patient who had commenced a methadone prescription less than one month prior to death. This is known to be a particularly dangerous period.6 This suggests that the initial titration, assessment and monitoring procedures are effective. Furthermore, there was no evidence to indicate that deaths result from a lack of continuity in primary care provision. No patient was reported to have died in the period immediately after changing practice, either voluntarily or having been assigned to a new practice by a Health Board. It is also encouraging that there were no deaths in anyone aged under 16 years.

The reduction in the number of methadone deaths continued in 2000. This was particularly noticeable in Lothian which no longer has the highest rate of methadone deaths by population. The introduction of a system of supervised consumption in Lothian was certainly a contributing factor along with probable changes in drug use behaviour due to the high profile of methadone deaths in the press. Similarly, the low methadone death rate by methadone prescription in Glasgow has been attributed to the high level of supervised consumption. However, the current enquiry is a clinical audit and not a research project. If the intended outcome is to compare one system or one region with another then a systems audit would be required.

The feedback from General Practitioners contained clinically sensitive and patient identifiable information which cannot be included in the report. However, the following section summarises this feedback and makes recommendations specific to the points raised. One general point arising is that General Practitioners need more support in coping with drug users. In addition to the provision of specialist services – particularly those capable of managing patients with significant co-morbidity – it is imperative that GPs are given adequate feedback with which to evaluate and audit their own practice. Furthermore, it is emphasised that there should be clear referral pathways for GPs, both to specialist services and social work. The extent to which voluntary sector social-care organisations exclude drug users as a matter of policy should be made clear. Drug users should be made aware of what social support agencies are available to them in times of crises.

It is important to place the findings of this audit in the wider context of health care for drug users at the primary care level. There are three factors influencing the quality of care a drug user receives. Firstly, how the General Practitioner manages the patient within the primary care environment, including prescribing practice and appropriate referral to specialist services. Secondly, treatment is also affected by the type and availability of specialist services in the local area. Finally, the influence of socio-economic factors such as family support, housing and employment opportunities should not be underestimated. In terms of improving the quality of care, the differences between these factors are important. Services for drug users may be improved by expert feedback to individual doctors: this is the function of the enquiry. However, the provision of, and access to, specialist services and the wider social issues can only be addressed within a more general political and resource-sensitive context.

Deaths were referred to the Enquiry if methadone was cited either on the death certificate or the Registrar General’s Medical Enquiry form ME4. This is an inclusive definition which includes all
drug related deaths in which methadone was mentioned, irrespective of the manner of death or the ICD10 coding. The European Monitoring Centre for Drugs and Drug Addiction\(^4\) aims to provide a universal definition which would enable accurate pan-European comparisons to be made and the Enquiry will endeavour to conform to any such definition. The authors of this report consider that it is important to retain a broad definition: any attempt at restricting it would miss potentially important information concerning, especially, suicide and the management and treatment of psychiatric co-morbidity amongst the drug using population. However, it is important to note that in 26 (46\%) cases, methadone was not cited as a cause of death on the death certificate by the certifying doctor. The interpretation of post mortem toxicology and the certification of death is a matter for the doctor who, when death was certified, had access to all the facts. A review of death certification was not within the remit of this enquiry. However, we wish to bring the enquiry into line with the gold standard set by The Confidential Enquiry into Maternal Deaths and the National Clinical Audit into Epileptic Deaths. These state that “pathology assessors are an integral part of the process for both assessment of investigation of death and for reviewing all available facts and assessing factors that have led to death”. Therefore, we recommend that such assessors are incorporated into this enquiry.

In England and Wales the report *Drug-related Deaths as reported by Coroners in England and Wales*\(^5\) collates statistical information from Coroners on a voluntary basis. In Scotland, this information is published primarily by the Registrar General.\(^8\) The Confidential Enquiry, however, brings together a number of data sources and emphasises the feedback from the patient’s General Practitioner. The information obtained from the doctor who was involved directly in the care of the patient enables this Report to highlight aspects of management and treatment which would not otherwise be available. By identifying service issues from case histories and feeding this information back to doctors, it is intended to improve the quality of primary and specialist care available to drug-users.

The current Enquiry included deaths associated with methadone. However, the data indicate that the majority of drug-related deaths do not involve methadone. The Advisory Council on the Misuse of Drugs report, *Reducing Drug Related Deaths*, states:

> “we strongly recommend that the necessary consultations to help set up a new overall system for collection of high quality data on drug-related deaths are quickly got under way, the needed resources to support the establishment of the system then duly found. The country’s response to the problem set by deaths due to drug misuse will be grossly handicapped until the recommendations made here are met.”\(^7\)

In order meet this challenge the National Confidential Enquiry into Methadone Related Deaths, Scotland, is in an ideal situation, due to its personnel, experience and infrastructure to extend its remit to include all drug-related deaths and to report on an annual basis.
Case Feedback with Recommendations

Case vignettes have not been included as these contain clinically sensitive information.

General Practitioners frequently reported that they were often unaware of the cause of death of a patient and were not supplied with adequate information about the death

- Feedback to GP (cause of death, toxicological analysis and Form ME4).
- Local services or, if not available, the confidential enquiry should provide access to a de-briefing service for the professionals and carers involved.

Non-compliance by a patient creates a difficult dilemma for the prescriber. Should the prescriber increase the patient’s dose to address what appears to be a need for additional illicit use or, alternatively, is there a duty on the doctor to withhold maintenance treatment until the co-operation of the patient can be ensured? Although clinical judgement cannot be determined in advance, it is important that GPs follow set protocols including referral to a specialist service. Furthermore, when objective evidence of a patient’s non-compliance can be shown to the patient (eg urinalysis), the prescriber is in a good position to renegotiate substitute prescribing within the context of renegotiated goals.

- Protocols for non-compliance.
- Access to specialist services.

Drug users are particularly vulnerable to traumatic life events. However, their lifestyle is often such that they are denied the usual range of support services thus leaving them exposed to greater risk.

- Statutory and non-statutory agencies should be explicit about their exclusion criteria of patients with current histories of drug misuse enabling carers and patients to receive support.

Social and domestic crises often happen at times of particular stress (eg Christmas and other holidays) and services must be available when required.

- Access to pharmacies with 7 days dispensing at time of risk

Drug users must be encouraged to attend specialist services when referred. They can be motivated to take some responsibility for their own care by ensuring that they are treated with dignity.

- Resourcing of local and accessible specialist services should be encouraged.
- Pharmacies should be encouraged to have access to private facilities.
- Continued patient autonomy in the context of harm reduction advice and the exclusion of drug misuse from revisions of the Mental Health Act 1984.

General Practitioners should have access to specialist services in order to refer patients with particularly difficult problems or those who are uncooperative.

- Clear protocols for referral to specialist services to avoid excessive demands on primary care.
- All GPs should have knowledge of and access to such specialist services.
Methadone is a dangerous substance and the very fact of possession *always* increases the risk of overdose, irrespective of the intention of the patient.

- Transitions to more liberal prescribing regimes should be gradual and involve monitoring of compliance with urine testing.
- Prior to, and a condition of, a patient receiving takeaway methadone details of satisfactory storage should be included in the patient’s notes.

Addressing the health care needs of drug users with psychiatric co-morbidity was reported to be particularly problematic.

- Specialist services need to offer a range of options in the management of drug misuse. Referral to specialist services should be for further assessment and patients and referrers should be encouraged to see this as not just specifically for commencement on a methadone program.
- Co-morbid depression in this patient group should be managed with antidepressants with low overdose toxicity unless clinically indicated otherwise and with multiple dispensing.

General Practitioners are unable to provide services for recreational drug users who do not make contact.

- Recreational drug users who obtain diverted methadone from illicit sources are a health education and harm reduction priority.

Deaths were reported in the population of drug users who lost tolerance during periods of abstinence.

- Drug users being released from prison (and others who have abstained from drug use for a prolonged period) should be made aware of the risks associated with the loss of tolerance. Continuity of care from prison to the community and provision of support services could address some of these problems.

When a drug user who has overdosed is found alive, death is often preventable by prompt and appropriate medical treatment.

- Senior doctors with experience of dealing with this patient group should endeavour to negotiate admission following overdose.
- Doctors and drug users should be made aware of the limitations of naloxone treatment, particularly the relatively short duration of action.
- Further debate about issuing takeaway naloxone.
Appendix 1

Drug Related Death

Notification to Procurator Fiscal (PF)

Forensic Medicine Departments

Toxicology Laboratories

Police Investigation: Report to PF

Registrar General

NCEM RD

General Practitioner

Hospital A&E

Hospital Admission

Prison

Specialist Drug Service

GP Assessor

Specialist Assessor

REPORT


