

Drug-related deaths in Scotland, 1999

GWL Jackson BSc MA
Statistician, General Register Office for Scotland

Dr S K Cole MD FRCOG FFCM FRCP(Ed.)
Consultant Medical Adviser to the Registrar General for Scotland

Introduction

In its enquiry in 1993 into drug abuse in Scotland, the House of Commons Select Committee on Scottish Affairs expressed concern about the quality of available information on deaths resulting from drug abuse. In response to the Select Committee's concern, an improved system for collecting information on drug-related deaths in Scotland was introduced in 1994. A paper¹ published in June 1995 by the Registrar General for Scotland described this revised system. The paper outlined the definitions used and presented data for 1992, 1993 and 1994. The figures for 1994, which were collected using the revised system, provided a base-line against which future trends could be assessed. Further short papers have been published in each subsequent year. This paper gives figures for 1999.

The system introduced in 1994 uses a specially designed questionnaire, completed by forensic pathologists, for all deaths involving drugs or persons known or suspected to be drug-dependent. Additionally, GROS follow up all cases of deaths of young people where the information on the death certificate is vague or suggests that there might be a background of drug abuse. (A copy of the questionnaire currently used is on page 137).

The definition of a 'drug-related death' is not straightforward. A useful discussion on the definitional problems may be found in an article in the Office for National Statistics publication *Population Trends*². More recently, a report³ by the Advisory Council on the Misuse of Drugs (ACMD) considered current systems used in the United Kingdom to collect and analyse data on drug-related deaths. In its report the ACMD recommended that 'a short life technical working group should be brought together to reach agreement on a consistent coding framework to be used in future across England, Wales, Scotland and Northern Ireland'. GROS are represented on this group and it is likely that future papers in this series will take account of the working group's recommendations. However, GROS will ensure that an appropriate time series can be produced for any new definitional approach and that comparisons with the current approach are possible.

As in previous years the analyses presented in this paper cover the following categories, coded according to the International Classification of Diseases (Ninth Revision):

- Drug dependence (304), excluding solvent abuse (ICD9 304.6);
- Accidental poisoning by drugs, medicaments and biologicals (ICD9 E850 - E858); and
- Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted (ICD9 E980).

All known suicides have been excluded, as have road traffic and other accidents which occurred under the influence of drugs and deaths from AIDS where the risk factor was believed to be the sharing of needles. The categories selected will include deaths from occasional or experimental misuse of drugs and accidental overdoses of prescribed medicine as well as some unrecognised suicides.

To aid interpretation of the figures, Tables 101-103 categorise deaths according to whether drug dependence was known (or strongly suspected) or not known and, for the latter category, sub-groups based on the types of drug(s) involved. The second column (headed 'Opiates etc.') covers deaths involving a strong opiate (e.g. heroin, morphine, methadone) or an illegal drug (e.g. cocaine, ecstasy, LSD). The third and fourth columns include deaths from two or more drugs or a single drug respectively, excluding those covered by the second column. In effect the probability of drug-dependence decreases from the left to the right of the tables.

Summary of results for 1999

Recent trends (Table 101)

The broad total of drug-related deaths, as defined above, increased by 23 per cent from 276 in 1998 to 340 in 1999. Within this total the number of deaths of known or suspected drug addicts rose from 179 to 227, and the number of deaths of persons not known or suspected to be drug addicts rose from 97 to 113. Because of the relatively small numbers involved, and the possibility that more complete information is being reported, care should be taken when assessing the trends shown in this table. However, it is believed that the marked increase in the total for 1999 represents a significant real change.

Health board areas (Table 102)

Of the 340 deaths covered by this analysis, 112 occurred in Greater Glasgow Health Board area. Grampian, with 42, and Lothian, with 38, had the next highest totals. In Greater Glasgow the number of deaths of those known or suspected to be drug-dependent rose from 71 in 1998 to 90 in 1999; Grampian, up from 14 to 26, also showed a sizeable increase. For other health board areas, the changes were less marked.

Age groups (Table 103)

As in previous years the majority of deaths were of persons aged under 45, with almost two-thirds (65 per cent) aged between 25 and 44, and over a quarter (27 per cent) aged under 25. Of the 27 cases aged 45 and over, only 6 were known or suspected to be drug-dependent.

Types of drug (Table 104)

Table 104 gives a breakdown by health board area of selected drugs involved in the deaths either alone or, more commonly, in combination with other drugs. Since the table records individual mentions of particular drugs it involves double counting of some deaths. The drugs listed in the table were mentioned in 237 of the 340 deaths. It is believed that for the overwhelming majority of cases where morphine has been identified in post-mortem toxicological tests, its presence is a result of heroin use. We have therefore chosen to show a combined figure for 'heroin/morphine'. The table shows that heroin/morphine was involved in 163 (48 per cent) of the deaths analysed in this report. Diazepam was involved in 135 (40 per cent) of the deaths and methadone was involved in 62 (18 per cent). A wide range of drug combinations was recorded. Of particular note was the fact that diazepam was also mentioned in over half (84) of the 163 deaths involving heroin/morphine.

The table shows a marked geographical difference in the reported involvement of certain drugs in the deaths concerned. Methadone was involved in half of the 38 deaths in Lothian but in only one-sixth of the 112 deaths in Greater Glasgow. Conversely, heroin/morphine was mentioned in 69 of the 112 deaths in Greater Glasgow but in only 7 of the 38 deaths in Lothian. Of the benzodiazepines, diazepam was involved in many deaths throughout Scotland but temazepam was involved mainly in Greater Glasgow.

The presence of alcohol was mentioned for 96 of the 340 deaths covered by this analysis. The blood-alcohol level was not given for all cases but, where mentioned, it was often at a relatively low level.

References

- 1 Arrundale J and Cole S K. *Collection of information on drug-related deaths by the General Register Office for Scotland*. GROS, 1995.
- 2 Christopherson O, Rooney C and Kelly S. *Drug-related mortality: methods and trends*. Population Trends 93, ONS, 1998
- 3 The Advisory Council on the Misuse of Drugs. *Reducing drug-related deaths*. Home Office, 2000.

General Register Office for Scotland

Crown Office

Confidential form to be completed in all deaths involving drugs, solvents or poisons

This information is essential for the correct coding and monitoring of drug-related deaths.

If you have any queries about the form or its completion, please contact Graham Jackson, telephone 0131 314 4229.

Please complete the form and return it, in the pre-paid addressed envelope provided, to:

Vital Events Branch
General Register Office for Scotland
Ladywell House
Ladywell Road
Edinburgh EH12 7TF

Name of deceased

Date of birth

Date of death

Place of death

Usual residence

Questions (please tick)

1 Was alcohol involved in this death? Yes No Not Known
If "Yes" what was the blood/alcohol level in mg/100ml?

2 If any other drugs or solvents were involved in this death, please specify the **principal** drug or solvent found in a fatal dose
[If NONE go to Question 9]

3 Please specify any other drugs or solvents involved in this death.

4 Was the deceased a known or suspected habitual drug or solvent abuser? Yes No Not Known
[If YES go to Question 7]

5 Was the deceased a novice or experimenting drug or solvent abuser? Yes No Not Known
[If YES go to Question 7]

6 Was there any evidence from the police report or autopsy of a long-standing drug or solvent-abusing history?

Yes No Not Known N/A

7 Do you believe this overdose to have been: accidental
suicidal
homicidal
or unknown/uncertain?

8 Were the drugs prescribed to the deceased? Yes No Not Known N/A

9 Any other comments or information which may help in coding this death?

101 | Drug-related deaths : 1994 - 1999

	Persons known or suspected to be drug-dependent	Persons not known or not suspected to be drug dependent				Total
		Opiates etc. ¹	Two or more drugs ²	One drug ³	Drug not stated	
1994	139	34	7	55	12	247
1995	155	14	9	53	20	251
1996	172	15	9	38	33	267
1997	142	32	18	45	26	263
1998	179	30	7	37	23	276
1999	227	30	7	45	31	340

1 Key Opiates (e.g. morphine, heroin, methadone, pethidine) and illegal drugs (e.g. cocaine, ecstasy, LSD).

2 Two or more drugs in therapeutic use (excluding 'Opiates etc.').

3 Single drug in therapeutic use (excluding 'Opiates etc.').

Source : General Register Office for Scotland.

102 | Drug-related deaths : 1999

health board of residence

	Persons known or suspected to be drug-dependent	Persons not known or not suspected to be drug dependent				Total
		Opiates etc. ¹	Two or more drugs ²	One drug ³	Drug not stated	
Scotland	227	30	7	45	31	340
Argyll & Clyde	25	-	1	2	1	29
Ayrshire & Arran	9	2	1	8	9	29
Borders	-	-	-	-	-	-
Dumfries & Galloway	4	1	-	1	3	9
Fife	8	1	-	1	1	11
Forth Valley	7	1	2	2	7	19
Grampian	26	7	1	6	2	42
Greater Glasgow	90	5	-	12	5	112
Highland	1	4	-	3	-	8
Lanarkshire	16	4	1	4	2	27
Lothian	28	5	-	4	1	38
Orkney	-	-	-	1	-	1
Shetland	-	-	-	-	-	-
Tayside	12	-	1	1	-	14
Western Isles	1	-	-	-	-	1

1 Key Opiates (e.g. morphine, heroin, methadone, pethidine) and illegal drugs (e.g. cocaine, ecstasy, LSD).

2 Two or more drugs in therapeutic use (excluding 'Opiates etc.').

3 Single drug in therapeutic use (excluding 'Opiates etc.').

Source : General Register Office for Scotland.

103 | Drug-related deaths : 1999

age group

	Persons known or suspected to be drug-dependent	Persons not known or not suspected to be drug dependent				Total
		Opiates etc. ¹	Two or more drugs ²	One drug ³	Drug not stated	
All ages	227	30	7	45	31	340
Under 25	74	9	2	3	5	93
25 - 44	147	20	4	30	19	220
45 and over	6	1	1	12	7	27

1 Key Opiates (e.g. morphine, heroin, methadone, pethidine) and illegal drugs (e.g. cocaine, ecstasy, LSD).

2 Two or more drugs in therapeutic use (excluding 'Opiates etc.').

3 Single drug in therapeutic use (excluding 'Opiates etc.').

Source : General Register Office for Scotland.

104 | Number of deaths involving selected drugs¹ : 1999

health board of residence

	Heroin / Morphine	Diazepam	Methadone	Temazepam	Ecstasy	Cocaine
Scotland	163	135	62	52	11	7
Argyll & Clyde	20	17	1	7	-	-
Ayrshire & Arran	7	7	4	1	-	-
Borders	-	-	-	-	-	-
Dumfries & Galloway	5	2	-	1	-	-
Fife	6	-	1	-	1	-
Forth Valley	4	-	-	-	-	-
Grampian	25	14	7	5	4	1
Greater Glasgow	69	58	19	33	3	2
Highland	3	2	1	-	-	-
Lanarkshire	16	6	3	2	1	1
Lothian	7	19	19	3	1	2
Orkney	-	-	-	-	-	-
Shetland	-	-	-	-	-	-
Tayside	1	9	7	-	1	-
Western Isles	-	1	-	-	-	1

¹ Individual deaths often involved more than one of these drugs. The numbers given are mentions of the drug and should not be added to give total deaths.

Source : General Register Office for Scotland.

Notes on table headings

Table heading	Persons known or suspected to be drug-dependent	Persons not known or suspected to be drug-dependent	
ICD-9 codes	304	E850-E858 (accidental) & E980 (undetermined)	
Drugs included	All except solvents (ICD9 3046)	Opiates etc.	Key opiates (e.g. morphine, heroin, methadone, pethidine) and illegal drugs (e.g. cocaine, ecstasy, LSD)
		Two or more drugs	Two or more drugs in therapeutic use (excluding "opiates etc.")
		One drug	Single drug in therapeutic use (excluding "opiates etc.")