

A6

Drug-related deaths in Scotland, 2002

This section is based on the General Register Office for Scotland's Short Paper published on the 28th August 2003. This paper and those for previous years can be found at www.gro-scotland.gov.uk

In order to be consistent with the other data sources in this publication, ISD have highlighted 5 year trends in drug-related deaths (1998 to 2002) within the following Key Points. The original GROS paper focussed on trends from 1996.

Key Points

Overview of drug-related deaths

- In 2002, there were 382 drug-related deaths. (Table A6.1)
- Most deaths (90%) were to persons aged under 45, with just over a quarter (26%) aged under 25. (Table A6.4)
- Of the 37 cases aged 45 and over, only 18 were known, or suspected, to be drug-dependent. (Table A6.4)
- Men accounted for 84 per cent of the 382 drug-related deaths in 2002. Three-quarters (75%) of the male deaths were of known or suspected drug abusers compared to 62 per cent of the female deaths. (Table A6.4)

5 year trends – 1998 to 2002

- In 2002 there were 50 (15%) more drug-related deaths than in 2001 and 133 (53%) more than in 1998. (Table A6.1)
- Within these totals, the number of deaths of known or suspected habitual drug abusers increased substantially, from 227 in 2001 to 280 in 2002. Since 1998, the number of deaths in this category has risen by 56 per cent. Between 2001 and 2002 there were only minor changes in the numbers of deaths coded to the other categories. From 1998, however, there has been an increase in the number of deaths coded as 'Undetermined'. (Table A6.1).

Drugs recorded

Tables A6.5 and A6.6 give information on the involvement of selected drugs, either alone or, more commonly, in combination with other drugs. Since the tables record individual mentions of particular drugs they involve double counting of some 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. The tables therefore show a combined figure for 'heroin/morphine'. In 2002, the drugs listed were known to be involved in 346 (91%) of the 382 deaths.

- Heroin/morphine was involved in 248 (65%) of the deaths; diazepam was involved in 214 (56%) of the deaths; and methadone was involved in 98 (26%) of the deaths. (Table A6.5)
- There have been significant increases in the involvement of heroin/morphine, and to a slightly lesser extent diazepam, between 1998 and 2002. (Table A6.5)
- Between 1998 and 2000 there was a downward trend in the number of deaths involving methadone, but there has been a substantial increase over the last two years with the total (98) almost back at its 1996 level (100). (Table A6.5)
- Since 1998, there have also been marked increases in the smaller numbers involving cocaine and ecstasy. However, whilst the number of deaths involving cocaine increased from 19 to 31 between 2001 and 2002, the number involving ecstasy remained unchanged at 20. There has also been a continuing decline in the number of deaths involving temazepam. (Table A6.5)

Continued

Key Points *continued***Geographical profile**

- Of the 382 deaths in 2002, 126 (33%) occurred in the Greater Glasgow Health Board area. Grampian with 47 (12%), and Lothian with 39 (10%), had the next highest totals. (Table A6.2)
- However, whilst the Greater Glasgow total showed a large increase (up from 96 in 2001 to 126 in 2002) Grampian's remained virtually unchanged (only one more than the previous year) and Lothian's fell (from 54 to 39). Of the other areas there were sizeable increases in Forth Valley (up from 9 to 24) and Lanarkshire (up from 24 to 37). (Table A6.2)
- There are some geographical differences in the reported involvement of certain drugs. For example, heroin/morphine was mentioned in a much larger proportion of the deaths in Greater Glasgow (96 out of 126) and Grampian (32 out of 47) than in Lothian (14 out of 39). A similar picture emerges for diazepam, which was involved in 84 out of 126 of the deaths in Greater Glasgow and 22 of the 47 deaths in Grampian compared to only 9 out of 39 in Lothian. However the pattern is reversed for methadone – only 33 out of 126 deaths in Greater Glasgow and 11 out of 47 in Grampian compared to 22 out of 39 in Lothian. (Table A6.6)

Care should be taken when assessing the trends shown in Tables A6.1 and A6.2 because of the relatively small numbers involved, particularly for some health board areas, and the possibility that more complete information has been reported in recent years.

Background information

This chapter gives information about drug-related deaths in Scotland over the period 1996 – 2002 using the definition for baseline figures introduced in 2001. This definition was agreed by a working party set up following the publication, by the Advisory Council on the Misuse of Drugs (ACMD), of a report¹ on 'Reducing drug-related deaths'. The Office for National Statistics has also prepared data on drug-related deaths in England and Wales using this new definition.

The paragraph below gives some background on the collection of information on drug-related deaths in Scotland. Annex A gives background on the definition of drug-related deaths used.

Data sources

Drug-related deaths are identified using details from death registrations supplemented by information from a specially designed questionnaire, completed by forensic pathologists, for all deaths involving drugs or persons known or suspected to be drug-dependent. Additionally, GROS follows up all cases of deaths of 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 given in Annex B. A paper² published in June 1995 by GROS described this enhancement to the data collection system.

References

1. The Advisory Council on the Misuse of Drugs. Reducing drug-related deaths. Home Office, 2000.
2. Arrundale J and Cole S K. Collection of information on drug-related deaths by the General Register Office for Scotland. GROS, 1995.
3. Christophersen O, Rooney C and Kelly S. Drug-related mortality: methods and trends. Population Trends 93, ONS, 1998.
4. Occasional Paper No. 5, Drug-related deaths in Scotland in 2000. GROS, 2001 (<http://www.gro-scotland.gov.uk/grosweb/grosweb.nsf/pages/00ddeaths>)

A 6.1 | Drug-related deaths; cause of death : 1996 - 2002

	Scotland	Cause of death category (ICD10 codes)				
		Drug abuse (F11-F16, F19)	Accidental poisoning (X40-X44)	Intentional self-poisoning (X60-X64)	Assault by drugs, etc. (Y85)	Undetermined (Y10-Y14)
1996	244	175	10	41	-	18
1997	224	142	14	42	-	26
1998	249	179	16	32	-	22
1999	291	227	12	19	1	32
2000	292	220	11	34	-	27
2001	332	227	19	34	-	52
2002	382	280	17	30	-	55

Source : General Register Office for Scotland (GRO Scotland).

A6.2 Drug-related deaths : 1996 - 2002

NHS board, council area of residence and age

Health impact

	1996	1997	1998	1999	2000	2001	2002
Scotland	244	224	249	291	292	332	382
<i>by NHS board</i>							
Argyll & Clyde	18	16	23	30	31	22	31
Ayrshire & Arran	3	6	4	15	20	35	33
Borders	2	1	1	-	1	1	-
Dumfries & Galloway	4	7	4	7	7	8	9
Fife	3	8	13	9	12	11	12
Forth Valley	-	4	2	8	4	9	24
Grampian	29	22	26	38	31	46	47
Greater Glasgow	90	67	93	100	104	96	126
Highland	2	3	1	7	1	5	8
Lanarkshire	11	12	21	23	29	24	37
Lothian	58	48	37	39	37	54	39
Orkney	-	-	-	-	-	-	-
Shetland	-	-	1	-	1	1	1
Tayside	24	30	23	14	14	19	14
Western Isles	-	-	-	1	-	1	1
<i>by council area</i>							
Aberdeen City	24	13	20	22	22	32	34
Aberdeenshire	4	7	6	11	6	14	9
Angus	-	2	4	2	3	1	4
Argyll & Bute	1	-	1	1	3	1	5
Clackmannanshire	-	1	2	-	-	-	7
Dumfries & Galloway	4	7	4	7	7	8	9
Dundee City	18	22	12	12	7	13	6
East Ayrshire	-	1	2	6	3	10	12
East Dunbartonshire	2	3	5	2	4	3	1
East Lothian	4	4	1	2	1	2	6
East Renfrewshire	1	-	3	3	4	3	5
Edinburgh City	44	33	29	25	28	39	27
Eilean Siar	-	-	-	1	-	1	1
Falkirk	-	2	-	5	1	7	8
Fife	3	8	13	9	12	11	12
Glasgow City	83	59	83	91	96	84	111
Highland	2	3	1	7	1	5	8
Inverclyde	8	5	9	12	11	12	8
Midlothian	2	4	4	4	3	5	2
Moray	1	2	-	5	3	-	4
North Ayrshire	2	2	2	5	11	15	14
North Lanarkshire	6	7	12	11	18	12	28
Orkney Islands	-	-	-	-	-	-	-
Perth & Kinross	6	6	7	-	4	5	4
Renfrewshire	6	6	10	11	11	5	9
Scottish Borders	2	1	1	-	1	1	-
Shetland Islands	-	-	1	-	1	1	1
South Ayrshire	1	3	-	4	6	10	7
South Lanarkshire	7	7	11	17	12	16	14
Stirling	-	1	-	3	3	2	9
West Dunbartonshire	5	8	3	5	5	6	13
West Lothian	8	7	3	8	5	8	4
<i>by age</i>							
< 15	-	-	1	-	-	1	-
15 - 19	19	21	23	26	20	23	23
20 - 24	67	55	64	68	53	56	77
25 - 29	47	49	62	76	68	67	91
30 - 34	56	40	41	42	58	73	62
35 - 39	18	22	22	39	42	44	55
40 - 44	14	9	15	23	27	25	37
45 - 49	8	10	7	4	8	22	20
50 - 54	5	4	2	6	8	9	7
55 - 59	3	3	2	3	1	6	6
60 & over	7	11	10	4	7	6	4

Source : General Register Office for Scotland (GRO Scotland).

A6.3 Drug-related deaths; cause of death : 2002

NHS board and council area of residence

	Total	Cause of death category (ICD10 codes)				
		Drug abuse (F11-F16, F19)	Accidental poisoning (X40-X44)	Intentional self-poisoning (X60-X64)	Assault by drugs, etc. (Y85)	Undetermined (Y10-Y14)
Scotland	382	280	17	30	-	55
<i>by NHS board</i>						
Argyll & Clyde	31	30	-	-	-	1
Ayrshire & Arran	33	19	4	3	-	7
Borders	-	-	-	-	-	-
Dumfries & Galloway	9	3	1	2	-	3
Fife	12	8	-	1	-	3
Forth Valley	24	15	1	4	-	4
Grampian	47	37	1	4	-	5
Greater Glasgow	126	102	5	5	-	14
Highland	8	2	-	2	-	4
Lanarkshire	37	24	-	6	-	7
Lothian	39	28	5	3	-	3
Orkney	-	-	-	-	-	-
Shetland	1	1	-	-	-	-
Tayside	14	10	-	-	-	4
Western Isles	1	1	-	-	-	-
<i>by council area</i>						
Aberdeen City	34	29	1	4	-	-
Aberdeenshire	9	7	-	-	-	2
Angus	4	3	-	-	-	1
Argyll & Bute	5	5	-	-	-	-
Clackmannanshire	7	4	1	1	-	1
Dumfries & Galloway	9	3	1	2	-	3
Dundee City	6	4	-	-	-	2
East Ayrshire	12	9	-	1	-	2
East Dunbartonshire	1	1	-	-	-	-
East Lothian	6	5	-	-	-	1
East Renfrewshire	5	5	-	-	-	-
Edinburgh City	27	21	4	2	-	-
Eilean Siar	1	1	-	-	-	-
Falkirk	8	6	-	1	-	1
Fife	12	8	-	1	-	3
Glasgow City	111	90	3	5	-	13
Highland	8	2	-	2	-	4
Inverclyde	8	8	-	-	-	-
Midlothian	2	1	-	-	-	1
Moray	4	1	-	-	-	3
North Ayrshire	14	8	2	-	-	4
North Lanarkshire	28	21	-	3	-	4
Orkney Islands	-	-	-	-	-	-
Perth & Kinross	4	3	-	-	-	1
Renfrewshire	9	8	-	-	-	1
Scottish Borders	-	-	-	-	-	-
Shetland Islands	1	1	-	-	-	-
South Ayrshire	7	2	2	2	-	1
South Lanarkshire	14	7	1	3	-	3
Stirling	9	5	-	2	-	2
West Dunbartonshire	13	11	1	-	-	1
West Lothian	4	1	1	1	-	1

Source : General Register Office for Scotland (GRO Scotland).

A6.4 Drug-related deaths; cause of death : 2002

age group and gender

	Total	Cause of death category (ICD10 codes)				
		Drug abuse (F11-F16, F19)	Accidental poisoning (X40-X44)	Intentional self-poisoning (X60-X64)	Assault by drugs, etc. (Y85)	Undetermined (Y10-Y14)
Scotland	382	280	17	30	-	55
<i>by age group</i>						
15 - 19	23	17	1	2	-	3
20 - 24	77	59	2	5	-	11
25 - 29	91	67	4	7	-	13
30 - 34	62	45	-	3	-	14
35 - 39	55	48	3	1	-	3
40 - 44	37	26	2	2	-	7
45 - 49	20	12	3	4	-	1
50 - 54	7	5	-	1	-	1
55 - 59	6	1	1	2	-	2
60 & over	4	-	1	3	-	-
<i>by gender</i>						
Males	321	242	12	20	-	47
Females	61	38	5	10	-	8

Source : General Register Office for Scotland (GRO Scotland).

A6.5 Drug-related deaths; selected drugs involved¹ : 1996 - 2002

	Heroin/ morphine ²	Diazepam	Metadone	Cocaine	Ecstasy	Temazepam
1996	84	84	100	3	9	48
1997	74	93	86	5	2	33
1998	121	113	64	4	3	58
1999	167	142	63	12	8	56
2000	196	146	55	4	11	39
2001	216	156	69	19	20	20
2002	248	214	98	31	20	16

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.

2 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. This table therefore shows a combined figure for 'heroin/morphine'.

Source : General Register Office for Scotland (GRO Scotland).

A6.6 Drug-related deaths; selected drugs involved¹ : 2002

NHS board and council area of residence

	Heroin/ morphine ²	Diazepam	Methadone	Cocaine	Ecstasy	Temazepam
Scotland	248	214	98	31	20	16
<i>by NHS Board</i>						
Argyll & Clyde	25	22	8	1	2	3
Ayrshire & Arran	22	22	8	2	2	2
Borders	-	-	-	-	-	-
Dumfries & Galloway	6	4	1	-	-	-
Fife	5	1	4	-	-	-
Forth Valley	16	13	3	-	1	5
Grampian	32	22	11	6	4	1
Greater Glasgow	96	84	33	11	2	2
Highland	4	4	-	1	-	1
Lanarkshire	25	28	6	2	4	2
Lothian	14	9	22	5	5	-
Orkney	-	-	-	-	-	-
Shetland	-	-	-	-	-	-
Tayside	2	4	2	3	-	-
Western Isles	1	1	-	-	-	-
<i>by council area</i>						
Aberdeen City	25	18	11	5	1	-
Aberdeenshire	6	2	-	-	1	1
Angus	1	3	1	1	-	-
Argyll & Bute	3	4	3	-	-	-
Clackmannanshire	4	4	1	-	-	1
Dumfries & Galloway	6	4	1	-	-	-
Dundee City	-	1	1	2	-	-
East Ayrshire	9	11	5	1	-	-
East Dunbartonshire	1	1	-	-	-	-
East Lothian	3	3	3	2	3	-
East Renfrewshire	4	4	2	-	-	-
Edinburgh City	11	5	14	3	2	-
Eilean Siar	1	1	-	-	-	-
Falkirk	6	3	-	-	-	1
Fife	5	1	4	-	-	-
Glasgow City	85	73	25	11	2	1
Highland	4	4	-	1	-	1
Inverclyde	6	6	3	1	-	3
Midlothian	-	-	1	-	-	-
Moray	1	2	-	1	2	-
North Ayrshire	11	9	3	1	2	1
North Lanarkshire	21	22	4	2	3	2
Orkney Islands	-	-	-	-	-	-
Perth & Kinross	1	-	-	-	-	-
Renfrewshire	8	5	-	-	2	-
Scottish Borders	-	-	-	-	-	-
Shetland Islands	-	-	-	-	-	-
South Ayrshire	2	2	-	-	-	1
South Lanarkshire	7	9	5	-	1	1
Stirling	6	6	2	-	1	3
West Dunbartonshire	11	10	5	-	-	-
West Lothian	-	1	4	-	-	-

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.

2 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. This table therefore shows a combined figure for 'heroin/morphine'.

Source : General Register Office for Scotland (GRO Scotland).

Notes on the definition of 'drug-related' deaths

Annex A

1. 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 ³. More recently, a report ¹ 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 was represented on this group and this paper presents information on drug-related deaths using the approach agreed.
2. The new baseline covers the following cause of death categories (the relevant codes from the International Classification of Diseases, Tenth Revision (ICD10), are given in brackets):
 - a) deaths where the underlying cause of death has been coded to the following sub-categories of 'mental and behavioural disorders due to psychoactive substance use':
 - (i) opioids (F11);
 - (ii) cannabinoids (F12);
 - (iii) sedatives or hypnotics (F13);
 - (iv) cocaine (F14);
 - (v) other stimulants, including caffeine (F15);
 - (vi) hallucinogens (F16); and
 - (vii) multiple drug use and use of other psychoactive substances (F19).
 - b) deaths coded to the following categories and where a drug listed under the Misuse of Drugs Act (1971) was known to be present in the body at the time of death:
 - (i) accidental poisoning (X40 –X44);
 - (ii) intentional self-poisoning by drugs, medicaments and biological substances (X60 –X64);
 - (iii) assault by drugs, medicaments and biological substances (X85); and
 - (iv) event of undetermined intent, poisoning (Y10 –Y14).
3. Categories of death excluded:
 - a) deaths coded to mental and behavioural disorders due to the use of alcohol (F10), tobacco (F17) and volatile substances (F18);
 - b) deaths coded to drug abuse which were caused by secondary infections and related complications (for example the 20 or so deaths in 2000 caused by *clostridium novyi* infection);
 - c) deaths from AIDS where the risk factor was believed to be the sharing of needles;
 - d) deaths from road traffic and other accidents which occurred under the influence of drugs; and
 - e) deaths where a drug listed under the Misuse of Drugs Act was present because it was part of a compound analgesic or cold remedy: specific examples are:

Co-proxamol: paracetamol, dextropropoxyphene

Co-dydramol: paracetamol, dihydrocodeine

Co-codamol: *paracetamol, codeine sulphate*

All three of these compound analgesics, but particularly co-proxamol, are commonly used in suicidal overdoses.

Note: As it is believed that dextropropoxyphene is rarely if ever available other than as a constituent of a paracetamol compound, it has been ignored on all occasions (even if there is no mention of a compound analgesic or paracetamol). However, deaths involving codeine or dihydrocodeine without mention of paracetamol have been included in the baseline as these drugs are routinely available on their own and known to be abused in this form.
4. The new definition differs in two significant ways from that used previously by GROS. First, for deaths where habitual drug abuse was not known or suspected, it limits inclusion to those where particular drugs are known to have been involved. Second, it includes deaths from intentional self-harm (suicides). Further information about the differences between the old and the new definitions may be found in GROS Occasional Paper No. 5, Drug-related deaths in Scotland in 2000 ⁴.

Annex B

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

Health impact

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?