



Drug Related Deaths in Highland

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1. Introduction

Preventing and reducing drug-related deaths is a national policy priority, with the Road to Recovery drugs strategy¹ and Partnership for Action on Drugs in Scotland (PADS) group setting out the strategic direction for tackling rising numbers of drug-related deaths (DRD) in Scotland.

Monitoring of drug-related deaths registered in Scotland is undertaken from information produced by the National Records of Scotland (NRS). Each year the NRS publish key statistics on drug-related deaths registered in Scotland, with the latest report presenting data for 2016.² Information is available for each local authority area on the overall trend, age at death, underlying cause of death and the type of drugs implicated in, or which potentially contributing to, the death.

The purpose of this report is to summarise the main results of deaths for Highland Council residents to inform the work of Highland Alcohol and Drugs Partnership (HADP). HADP is committed to reducing and preventing drug-related deaths in the Highland area, which is reflected in priority actions set out in the latest Highland Alcohol and Drugs Strategy for 2017-2020.³

2. Key Points

- 19 drug-related deaths were registered in Highland in 2016, a decrease of 5 deaths from 24 in 2015;
- Females accounted for 7 deaths (37 per cent) and males 12 deaths (63 per cent) in Highland in 2016;
- The annual average number of deaths for the five-year period 2012-2016 is 18, an increase of 9 (100 per cent) on the 2002-2006 average of 9 deaths;
- Highland has a drug-related death rate of 0.08 per 1,000 population, lower than the national average of 0.12 per 1,000 population;
- The drug-related death rate of 13.8 per 1,000 problem drug users in Highland is significantly higher than the national rate of 9.8 per 1,000;
- Almost two thirds of drug-related deaths (65 per cent) in the last five years occurred in people aged 35 years and over, reflecting the national profile of deaths in older people who use drugs;

- The most common underlying cause of death in 2016 was accidental poisoning (9 deaths, 47 per cent), with 8 deaths (42 per cent) classified as undetermined intent and 2 deaths (11 per cent) intentional self-poisoning;
- In 2016 opiates or opioids including heroin and/or morphine, methadone and buprenorphine were implicated in the majority of cases (14 deaths, 74 per cent). Benzodiazepines were implicated in 6 deaths (32 per cent);
- Local drug trends for Highland show an increase in opiate or opioid deaths for drugs other than heroin, morphine and methadone;
- There were 286 drug-related deaths involving New Psychoactive Substances (NPS) in Scotland in 2016, an increase compared to 74 deaths in 2015. Two deaths reported NPS to be the only substances contributing to the death. No Highland information is available.

3. Drug-related deaths data

The National Records of Scotland (NRS) produce an annual publication that provides official statistics of drug-related deaths which were registered in Scotland. The report uses an established definition of 'drug-related deaths' based upon the cause of death identified on death registrations and information supplied by forensic pathologists (see Appendix 1). For Highland these data report upon deaths registered during 2016 of either Highland Council area residents or persons of no fixed abode who died in Highland. Full details of the definitions and methods are available in the national report and NRS website.^{2,4}

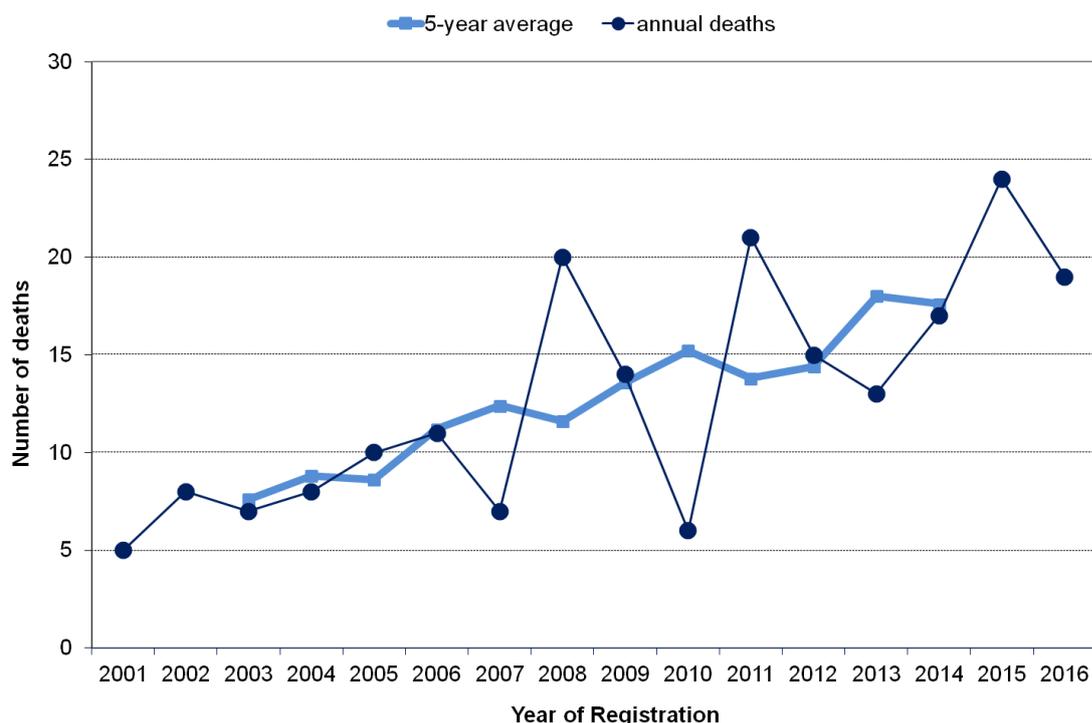
4. Highland Numbers

There were 19 drug-related deaths in Highland registered in 2016, a decrease of 5 deaths compared to 24 in 2015. By comparison the number of drug-related deaths increased in Scotland from 706 in 2015 to 867 in 2016, the highest number recorded in a single year since the series of figures began in 1996.

The numbers of drug-related deaths each year are statistically relatively small in Highland. They are subject to year on year fluctuations which means that it is very important not to view a single year's figure in isolation. A more reliable indication of the longer-term trends is obtained by using 5-year moving annual averages, because these 'smooth out' the effects of annual variation.

Comparing the annual average for the five-year period 2012-2016 (18 deaths) with that for 2002-2006 (9 deaths) shows that the number of drug-related deaths has doubled over the time period. The thick solid line in Figure 1 shows that the overall trend in drug related mortality in Highland is increasing but at a slower rate than peaks from individual years suggest.

Figure 1. Number of drug-related deaths for Highland Council area, annual value and 5 year annual moving averages; 2001 to 2016



Source: National Records of Scotland

5. Comparison with Scotland

The number of drug-related deaths in Highland can be compared with those nationally by expressing the average number of deaths as a rate per 1,000 population. Using the average annual number of deaths for 2012-16, Highland has a death rate of 0.08 per 1,000 population. This is below the national average of 0.12 per 1,000 population and in the lower third of all council areas in Scotland.

Table 1: Drug-related deaths, rate per 1,000 population and rate relative to the estimated number of problem drug users

	Average annual deaths 2002-2006	Average annual deaths 2012-2016	2012-2016 rate per 1,000 population	2011-2015 rate per 1,000 problem drug users
Highland	9	18	0.08	13.8
Scotland	362	659	0.12	9.8

Source: National Records of Scotland

Revised 2012/13 estimates of problem drug users aged 15 to 64 as published by ISD

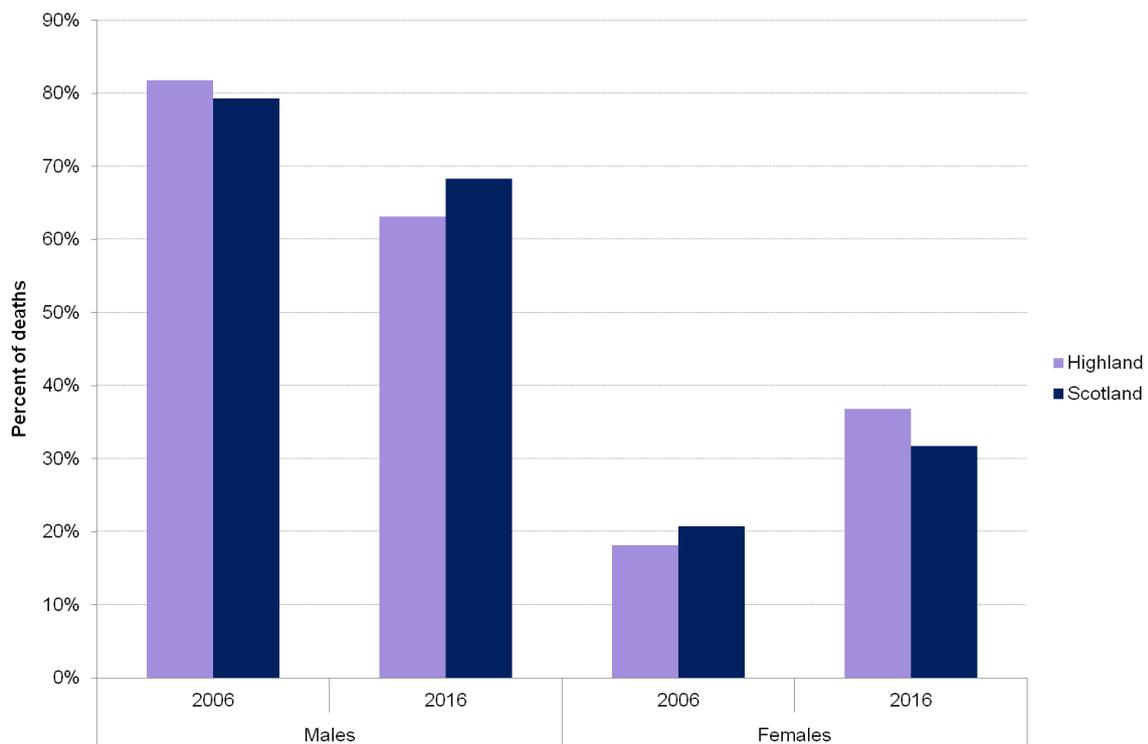
Further indication of drug-related death rates can be made relative to estimates of the number of people age 15-64 that are of increased risk due to problem drug use. Problem drug use in this context is defined as the illicit use of opiates and/or benzodiazepines. It includes illicit and prescribed methadone use but excludes

recreational and occasional drug use. Using the average annual number of deaths for 2011-15, Highland has a death rate of 13.8 per 1,000 problem drug users, which is statistically significantly higher than the rate of 9.8 per 1,000 for Scotland as a whole. Planning is underway to update the estimates of problem drug users for 2015-2016, which will allow these rates to be updated.

6. Gender

The latest report includes data on the number of drug-related deaths by gender for all local authorities. In Highland females accounted for 7 deaths (37 per cent) and males 12 deaths (63 per cent) in 2016. The proportion of female deaths in Highland has increased from 18 per cent in 2006, as shown in Figure 2. This is a similar pattern to that observed for Scotland, though the exact gender balance varies from year to year.

Figure 2. Percentage of drug-related deaths by gender, Highland and Scotland; 2006 and 2016



Source: National Records of Scotland

7. Age at Death

Between 2012 and 2016 there were 8 drug-related deaths of people aged 15-24 (9 per cent of all drug-related deaths), 23 in the 25-34 year age group (26 per cent), 22 in the 35-44 age group (25 per cent), 23 in the 45-54 year age group (26 per cent) and 12 deaths of people aged 55 and over (13 per cent). Table 2 shows that age-specific death rates for all age groups in Highland are equal to or lower than the national position. For example, Highland drug-related mortality in the 35-44 age

group is half that of the overall Scotland rate: 0.16 per 1,000 population compared to 0.35 per 1,000 population.

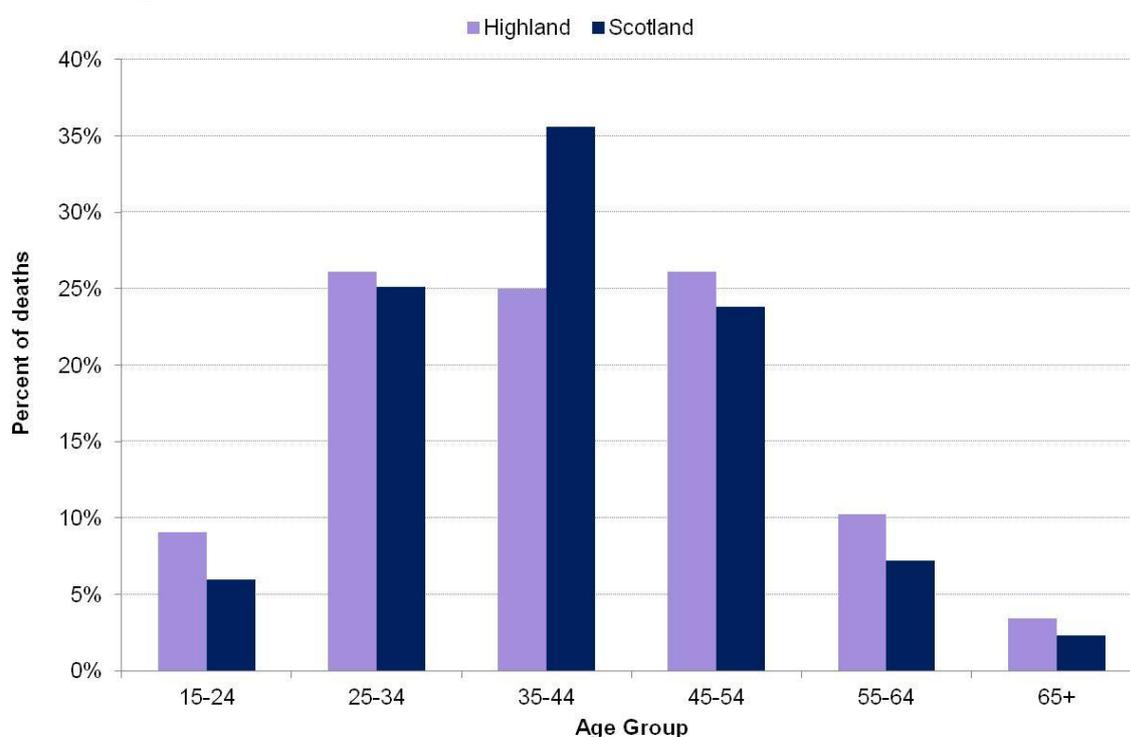
Table 2: Age specific drug-related deaths and rates per 1,000 population, annual averages for 2012 to 2016

Age Group	Highland			Scotland		
	Deaths	Percent	rate per 1,000	Deaths	Percent	rate per 1,000
15-24	8	9%	0.06	196	6%	0.06
25-34	23	26%	0.18	828	25%	0.24
35-44	22	25%	0.16	1172	36%	0.35
45-54	23	26%	0.13	784	24%	0.20
55-64	9	10%	0.05	237	7%	0.07
65+	3	3%	0.01	77	2%	0.02
All ages	88	100%	0.08	3295	100%	0.12

Source: National Records of Scotland

The proportion of drug-related deaths by age group for Highland compared to Scotland is illustrated in Figure 3. Almost two thirds (65 per cent) of drug-related deaths in the last five years occurred in people aged 35 years and over, reflecting the national profile of deaths in older people who use drugs. There are slightly more deaths for people aged 45 years and over (40 per cent) compared to those nationally (33 per cent), though this is not a statistically significant difference.

Figure 3: Proportion of drug-related deaths by age group, Highland and Scotland; 5-year average 2012-2016



Source: National Records of Scotland

8. Underlying cause of death

The underlying cause of death is reported by a standard set of diagnostic groupings based upon International Classification of Diseases Tenth Revision (ICD-10) codes as shown in Table 3. The majority of deaths in Highland are attributed to accidental poisoning, which are accidental overdoses where a drug listed under the Misuse of Drugs Act (1971) was found to be present in the body at the time of death.

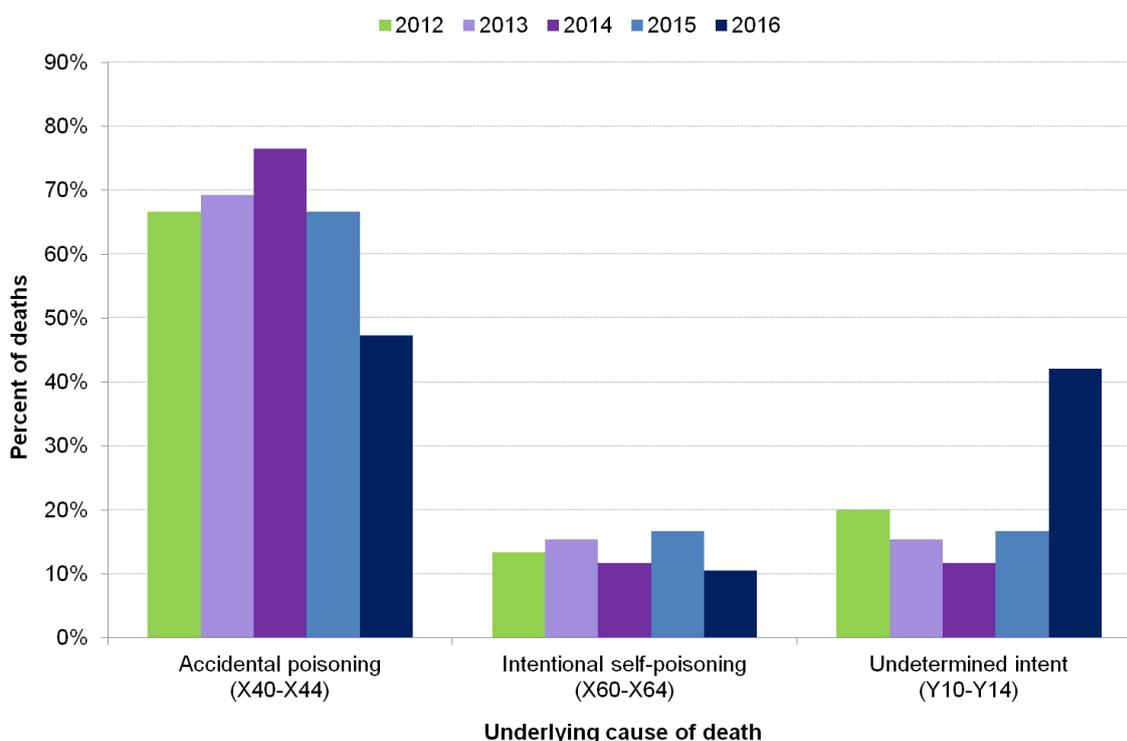
In 2016, the number and proportion of deaths classified as ‘undetermined intent’ increased, as shown in Figure 4. These are deaths where there is insufficient information available to make a distinction between accident, self-harm or assault. In 2016 there were 8 deaths (42 per cent) in this category compared to 58 (7 per cent) nationally. The majority of these cases were not notified to the Highland DRD Review Group and this may be worthy of further investigation.

Table 3: Number of Drug-related deaths by underlying cause of death, Highland, 2012 to 2016

	2012	2013	2014	2015	2016
All drug-related deaths	15	13	17	24	19
Accidental poisoning (X40-X44)	10	9	13	16	9
Intentional self-poisoning (X60-X64)	2	2	2	4	2
Undetermined intent (Y10-Y14)	3	2	2	4	8

Source: National Records of Scotland

Figure 4: Drug-related deaths by underlying cause of death, Highland and Scotland, 2016



Source: National Records of Scotland

9. Drugs reported in deaths

The type of drug either implicated in, or potentially contributing to, drug-related deaths in Highland between 2012 and 2016 is shown in Table 3. In 2016 opiate or opioid containing drugs were mentioned in the majority of cases (14 deaths, 74 per cent). The data for Highland show an increase in opiate or opioid deaths for drugs other than heroin/morphine and methadone. Whilst some caution must be made in interpreting figures for a single year they do provide important intelligence for local drug trends.

Table 4: Number of Drug-related deaths by selected drugs reported, Highland, 2012 to 2016

	2012	2013	2014	2015	2016
All drug-related deaths	15	13	17	24	19
Any opiate or opioid	..	..	16	19	14
- Heroin and/or morphine	5	6	11	7	4
- Methadone	3	3	2	8	3
- Heroin / morphine, Methadone or Buprenorphine	..	..	13	13	7
- Codeine or a codeine-containing compound	..	..	3	0	0
- Dihydrocodeine or d.h.c-containing compound	..	..	1	4	2
Benzodiazepines	8	7	4	10	6
- Diazepam	2	5	3	5	4
Cocaine	0	0	0	2	2
Ecstasy-type	0	0	0	1	1
Amphetamines	0	0	0	0	0
Alcohol	3	5	3	1	2

Source: National Records of Scotland

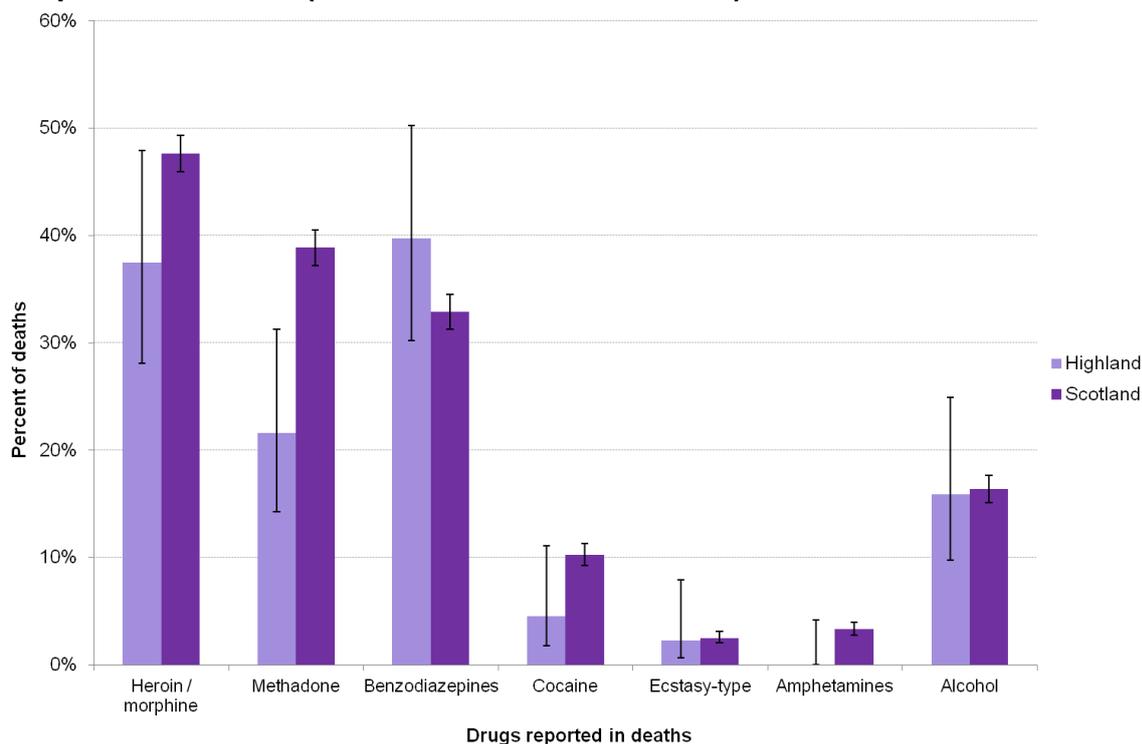
.. Not available for specified period

Notes:

1. More than one drug may be reported per death.
2. The format of the published NRS Table C3: Drug-related deaths by selected drugs reported and Council area changed in 2014. Data for 2012 and 2013 are not available for all categories.

The type of drugs implicated in, or potentially contributing to, drug-related deaths in Highland can be compared with those nationally using the average annual deaths for 2012-16 (Figure 5). This shows that over the five-year period the proportion of deaths involving heroin/morphine and/or benzodiazepines is similar to the national rate. However there have been significantly fewer drug-related deaths in Highland where methadone was implicated, 22 percent compared to 39 per cent for Scotland as a whole.

Figure 5: Drug-related deaths by selected drugs reported, Highland and Scotland, 5-year period 2012-2016 (with 95% confidence intervals)



Source: National Records of Scotland

The number of deaths involving New Psychoactive Substances (NPS) is only reported at a national level. There were 286 drug-related deaths involving New Psychoactive Substances (NPS) in Scotland in 2016, an increase compared to 74 deaths in 2015. Two deaths reported NPS to be the only substances contributing to the death. Further detail is provided in the National Records of Scotland Report, although no Highland information is available.

10. Summary

The latest figures published by the National Records of Scotland show that the number of drug-related deaths increased in Scotland from 706 in 2015 to 867 in 2016, the highest number recorded in a single year since the series of figures began in 1996.

In contrast to many other areas, drug-related deaths in Highland have decreased from 24 in 2015 to 19 in 2016. As the figures tend to fluctuate on an annual basis a more reliable indication of the long term trend is obtained using 5-year annual moving averages. This still shows that drug deaths between 2002-2006 and 2012-2016 have doubled, albeit at a slower rate than the peaks from individual years suggest.

The demographics of drug-related deaths in Highland are changing. There is an increase in women dying from drugs overdose and almost two thirds (65 deaths in

the last five years were people aged 35 years and over. It is also of particular interest to note that 40 per cent of drug deaths occur in people aged 45 years or more, reflecting the national profile of an aging cohort of people who use drugs.

In common with the rest of Scotland the majority of drug-related deaths in Highland are classified as accidental overdoses, although in 2016 there has been an increase in deaths categorised as undetermined intent. It is recommended that this is investigated further because this should inform local prevention strategies.

The latest data for Highland shows that almost three quarters (74 per cent) of deaths involved opiate or opioid containing drugs. There appears to be an increase in opiate or opioid deaths involving substances other than heroin and/or morphine, methadone or buprenorphine, though some caution must be made in interpreting figures for a single year. Methadone is implicated in significantly fewer deaths than the Scotland level.

Reducing drug-related deaths is a priority for HADP and it is clear from the trends highlighted in this report that more needs to be done. This information should be used to inform local strategies to prevent and reduce drug deaths.

References

1. Scottish Government (2008). *The Road to Recovery: A New Approach to Tackling Scotland's Drug Problem*. [online] Available at: <http://www.gov.scot/Resource/Doc/224480/0060586.pdf>
2. National Records of Scotland (2017). *Drug related deaths in Scotland in 2016* [online]. Available at: <https://www.nrscotland.gov.uk/files//statistics/drug-related-deaths/drd2016/16-drug-rel-deaths.pdf>
3. Highland Alcohol and Drugs Partnership (2017). *Highland Alcohol and Drugs Strategy 2017 – 2020* [online]. Available at: http://www.highland-adp.org.uk/userfiles/file/hadp_publications/HADP-Strategy-2017-2020.pdf
4. National Records of Scotland (2017) *About this publication Drug-related deaths in Scotland*. [online] Available at: <https://www.nrscotland.gov.uk/files//statistics/drug-related-deaths/drd2016/about-this-pub-drugs.pdf>

Appendix 1: International Classification of Diseases Tenth Revision (ICD-10) codes used to determine drug-related deaths (UK Drugs Strategy baseline definition)

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':

F11	opioids
F12	cannaninoids
F13	sedatives or hypnotics
F14	cocaine
F15	other stimulants, including caffeine
F16	hallucinogens
F19	multiple drug use and use of other psychoactive substances

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 (even if the pathologist did not consider the drug to have had any direct contribution to the death):

X40 – X44	accidental poisoning
X60 – X64	intentional self-poisoning by drugs, medicaments and biological substances
X85	assault by drugs, medicaments and biological substances
Y10 – Y14	event of undetermined intent, poisoning

Note:

If a drug's legal status changes, NRS aims to count it on the basis of its classification on the day the person died (as NRS does not know when the drug was taken). For example, mephedrone was banned under the Misuse of Drugs Act with effect from 00.01 on 16 April 2010. Therefore, if mephedrone was the only drug found to be present in the body, a death coded to one of the categories listed under (b) would not be counted in NRS's implementation of the 'baseline' definition if it occurred before 16 April 2010.

Exclusions:

A number of categories of what may be regarded as 'drug-related' deaths are excluded from the definition because the underlying cause of death was not coded to one of the ICD10 codes listed above. Examples of deaths which are not counted for this reason are:

- deaths coded to mental and behavioural disorders due to the use of alcohol (ICD10 code: F10), tobacco (F17) and volatile substances (F18);
- deaths from AIDS where the risk factor was believed to be the sharing of needles;
- deaths coded to drug abuse where the direct cause of death was secondary infections or related complications (e.g. Septicemia)
- deaths where a drug listed under the Misuse of Drugs Act was present as part of a compound analgesic or cold remedy (e.g. co-codamol).
- deaths from drowning, falls, road traffic and other accidents (except the inhalation of gastric contents, or choking on food) which occurred under the influence of drugs; and
- deaths due to assault by a person who was under the influence of drugs, or as a result of being involved in drug-related criminal activities.

Further details:

<http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/drug-related-deaths-in-scotland>