Drug-related Deaths 2014 Edinburgh and Lothians

Edinburgh And Lothians Drug-related
Death Case Review Group









Contents

Foreword		3
Who we are		4
Definition of a drug-relate	ed death	5
Reviewing drug-related d	eaths: approach taken in Lothian, 2014	7
	Notification	7
	Method	7
	Data collection	8
	Contributing to the bigger picture	9
Key data:	The national picture	10
	Edinburgh and Lothians	11
	The social picture	18
	Drugs misuse	20
Key themes:	The ageing population	25
	Poly-drug misuse	26
	Alcohol misuse	26
	The prevalence of mental and physical illness	27
	Access and Engagement (drug treatment)	29
	Prescribing issues	30
	Non-fatal overdose	31
	Take home naloxone	32
	New psychoactive substances	33
A new approach to review	ving drug-related deaths in Lothian	37
References		38
Signposts		39
Acknowledgements		39
Contact us		42

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Executive summary

The Edinburgh and Lothians Drug-related Death Case Review Group reviewed 99 cases of drug-related death (DRD) which occurred in 2014. This is a 20% increase on the previous year's total (79). It is the highest Lothian annual total on record.

Over two thirds of all drug-related deaths in Lothian occurred in the city of Edinburgh.

Most were white, single Scottish men who had a known history of substance misuse (to services and/ or the Police). The majority of deaths (75) occurred among those with a long term history of substance misuse (greater than 5 years). 61% were known to be intravenous drug users (60 cases). The median age at death was 41 years.

In just over half of cases (57), the deceased had been in contact with a drug treatment service at the time of death. Most of those were in treatment with their GP under the National Enhanced Service (NES) (34). In 25 cases (one quarter of the case total) the now-deceased had contact with NHS Lothian's Substance Misuse Directorate (SMD) at some point in the year prior to death. 14 were in current active treatment with SMD at time of death.

Two thirds of the cohort had diagnosed mental health problems, depression being the most commonly reported condition. In 71 cases the deceased had physical health problems prior to death, respiratory conditions being the most common.

In the majority of cases (58), more than one substance was implicated in the final cause of death. Methadone was implicated in the final cause of death in 57 deaths. However, it was known to have been prescribed to the now deceased prior to death in only 30 cases. The number of cases of heroin/ morphine related death continues to rise (46 cases in 2014, compared to 29 cases in 2013 and 18 in 2012). Other substances frequently implicated in death: diazepam (21), dihydrocodeine (14). New psychoactive substances were implicated alongside controlled drugs in 9 cases. Long standing problematic misuse of alcohol was reported in 69 cases.

In 41 cases the deceased was known to have attempted suicide at some point during their lifetime. Attempted suicide occurred in 12 cases in the six months prior to death. In 37 cases it was reported that the deceased had engaged in deliberate self harm at some point during their lifetime, of which 10 cases occurred in the six months prior to death.

In two thirds of all cases the now deceased had a documented history of non-fatal overdose (66 cases). The average number of episodes of nonfatal overdose during the lifetime of persons who died of drug-related death in Lothian in 2014 is 3.

Opiate/opioid overdose occurred in the presence of others in 50 drug-related deaths in Lothian during 2014 (this is half of all cases). Had it been used, take home naloxone could have prevented death in many of these cases.

Foreword

This report is a summary of the information available regarding drug-related death in Edinburgh and Lothians in 2014. They were men and women with their own life histories, families and friends. Each death is a sad event affecting many people: friends, family and staff in helping agencies.

The Edinburgh and Lothians Drug-related Deaths Case Review Group reviewed 99 cases of drug-related death which occurred in 2014. With the caveat that changes in any data from year to year may not indicate a trend it is interesting to note:

- the continued rise of intravenous usage and heroin implicated deaths;
- the high prevalence of long standing problematic misuse of alcohol;
- the small number of deaths caused by the toxic effects of new psychoactive substances; and
- the occurrence of repeated episodes of non-fatal overdose.

The key focus of our review work is to learn from the deaths in order to identify ways of preventing future cases.

In addition to presenting the picture of drug-related deaths in Lothian in 2014 this report also outlines recent changes to the system of case review intended to facilitate local multiagency involvement in review and learning. In addition we have set up a Lothian-wide DRD reduction steering group to support partnership approaches to addressing the risks associated with drug-related death.

Once again I would like to thank all those who contributed to the review process, members of the Edinburgh and Lothians Drug-related Deaths Case Review Group in particular, and especially Peter Fairbrother who continues to coordinate the review of cases of drug-related death in Lothian.

Jim Sherval

Consultant in Public Health and Deputy Director, Directorate of Public Health and Health Policy NHS Lothian, and Chair, Edinburgh and Lothians Drug-related Deaths Case Review Group

Who we are

The Edinburgh and Lothians Drug-related Deaths Case Review Group

Drug-related deaths in Lothian in 2014 were reviewed by the Edinburgh and Lothians Drug-related Deaths Case Review Group. This is a multiagency group comprising representatives from the police, health and social services, with support from the Procurator Fiscal, Scottish Fatalities Investigation Unit (East). During 2014 the group met monthly to review cases of drug-related death. This report is the product of the case review work.

Edinburgh & Lothian Drug-related Deaths Case Review Group composition, 2014:

Chair: Jim Sherval

Consultant in Public Health and Deputy Director, Dept. of Public Health and Health Policy, NHS Lothian

Martin Bonnar

Manager, Midlothian and East Lothian Drugs and Alcohol Partnership

Dr Ralph Bouhaidar

Consultant Forensic Pathologist, Forensic Pathology, NHS Lothian

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Policy Officer, West Lothian Alcohol and Drug Partnership

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Drug-related Deaths Review Coordinator, Public Heath, NHS Lothian

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Andrew O'Donnell

Trainer & Naloxone Lead, NHS Lothian Harm Reduction Team

Lvle Shaw

Detective Inspector, Craigmillar Criminal Investigation Department, Edinburgh, Police Scotland

Dr Muriel Simmonte

GP with Special Interest, East Lothian Substance Misuse Service

David Williams

Commissioning Manager, Edinburgh Alcohol and Drugs Partnership

Definition of a drug-related death

The definition of a drug-related death (DRD) used in this report derives from the <u>UK Drugs Strategy (1)</u>. It is the definition adopted by the National Records of Scotland (NRS). **However, there is divergence from the definition in one important area:** in 2014 the group did not review deaths involving controlled drugs prescribed to individuals in cases where there had been no previous history of substance misuse. This divergence accounts, in part, for the difference in the case review group's annual total of DRDs in Lothian and the corresponding statistics published by the NRS.

Drug-related death: 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':
- (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 and biological substances (X60—X64);
- (iii) assault by drugs, medicaments and biological substances (X85); and
- (iv) event of undetermined intent, poisoning (Y10-Y14).

Exclusion Criteria:

- (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;
- (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.
- (f) Edinburgh and Lothians Drug-related Deaths Case Review Group exclusion: intentional or accidental overdose involving only controlled drugs prescribed to the individual in cases were there had been no previous history of substance misuse.

Reviewing drug-related deaths: approach taken in Lothian, 2014

Why review drug-related deaths?

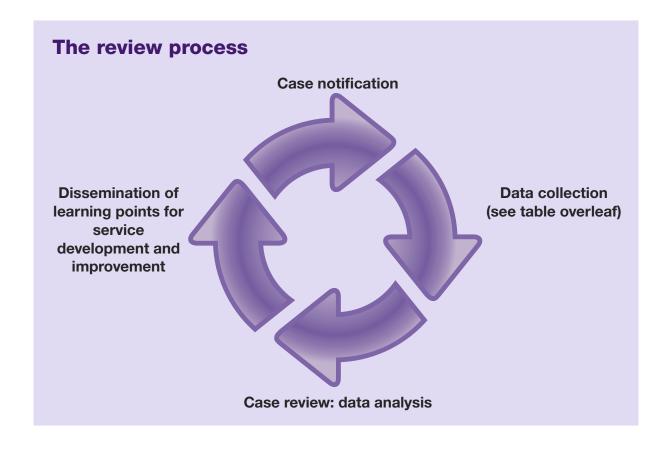
- To learn from them in order to find ways of preventing them
- To measure the impact of existing interventions
- To inform the development of future harm minimization strategies

Notification

The DRD Review Coordinator is notified of suspected cases by the Police and by the Forensic Medicine Unit at the University of Edinburgh. Work commences on data collection (outlined below). Once the final cause of death is confirmed and it is determined that the case meets the definition of a drug-related death, it is presented for review at the meeting of the Edinburgh and Lothians DRD Case Review Group.

Method

A critical incident review approach is taken to identify what can be learnt from each case, particularly in relation to treatment and services.



Data collection

Data collection for case review is undertaken with the additional purpose of collecting data for submission to the National Database of Drug-related Deaths. Data is collected from the following sources: police, NHS services (primary, secondary and community services), local authority social services, pathology and toxicology services, criminal justice, and data on service engagement from third sector drug treatment agencies. Data collection is extensive in order to provide insight into the deceased's life history and the circumstances surrounding death.

Drug-related deaths: data collection for case review

Source(s):
Sudden death report (Police Scotland).
Sudden death report (Police Scotland). NHS patient records (primary and secondary care, community services). Local authority social services case notes. Data held by third sector drug treatment organisations.
NHS patient records (primary and secondary care, community services). Local authority social services case notes. Service data held by third sector organisations.
NHS patient records (primary and secondary care, community services).
NHS patient records (primary and secondary care, community services).
Sudden death report (Police Scotland). NHS prison healthcare service data.
Sudden death report (Police Scotland).
Final report (Pathology) and toxicology report.
Qualitative data supplied by health and social services practitioners.

Contributing to the bigger picture

The work of the Edinburgh and Lothians DRD Case Review Group contributes to the following national initiatives:

National Records of Scotland data

National drug-related deaths statistics are produced annually by National Records of Scotland (NRS, formerly the General Register Office of Scotland). The statistics provide information on the number of drug-related deaths broken down by age, gender and geographical area as well as toxicology information on the drugs implicated in the death. Lothian case data is shared with the NRS to support the production and accuracy of the official statistics.

National Forum on Drug-related Deaths

The National Forum on Drug-Related Deaths was established in 2005 in order to look at trends and to disseminate good practice in how to reduce the number of drug-related deaths in Scotland. The Forum is independent of the Scottish Government and has representation from experts from medical, social, community, prison, police, legal and non-statutory agencies.

The main aims of the National Forum on Drug-related Deaths:

- To make recommendations to Scottish Government Ministers, Alcohol and Drug Partnerships and other joint planning groups, as appropriate, on action and policy changes relating to the reduction of drug-related deaths;
- To consider any new research findings from the national and international medical literature and consider policy issues as expressed by other expert groups;
- To identify areas where examples of good practice are recognised and disseminated to others;
- To report annually to Scottish Government Ministers with recommendations for further actions as required.

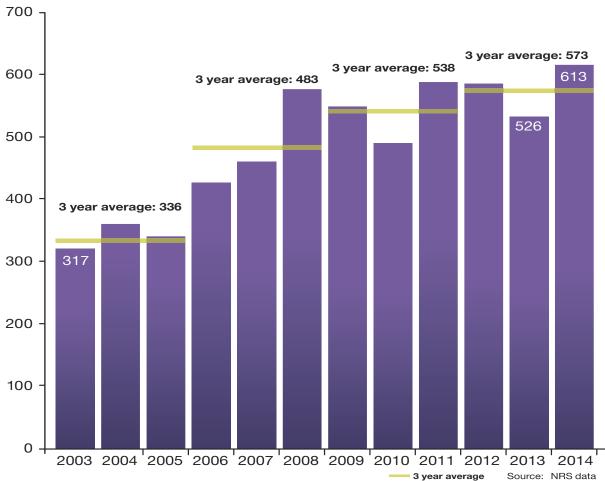
The National Forum is supported by four sub-groups which focus on specific issues. The National Forum's Data Collection Sub-group was established to help oversee and support the implementation of the National Drug-related Deaths Database which is led by NHS Scotland's Information Services Division (ISD). The purpose of the database is to collect data relating to the health and social circumstances of each death in order to inform policy and practice. It contains the following types of data: socio-demographic details of each case; drug using history; medical history; the circumstances surrounding death; the pathological and toxicological cause of death and prior contact with health, care and criminal justice services. The Review Group's Coordinator is a member of the data collection subgroup and annually submits data on Lothian cases to the database.

Key data

The national picture

613 drug-related deaths in 2014 were recorded by the <u>National Records of Scotland (NRS)</u> (2). This is the largest number on record. Males accounted for 74 per cent of the drug-related deaths in 2014. There were 213 drug-related deaths of people aged 35-44 (35 per cent of all drug-related deaths) and 157 drug-related deaths of 25-34 year olds (26 per cent). The median age at death was 40 years. The highest proportion of cases occurred in the Greater Glasgow & Clyde NHS Board area (31%), followed by the Lothian NHS Board area (17%).

Opiates or opioids (including heroin/morphine and methadone) were implicated in 535 deaths in Scotland in 2014: the highest ever number. There was a significant increase in heroin-related deaths (309 cases, 50% of the total in 2014, compared to 221 cases, 42% of the total, in 2013). Methadone was implicated in, or potentially contributed to, 214 deaths (35% of the national total). New psychoactive substances (NPS) were implicated in, or potentially contributed to the cause of death in 62 cases. NPS were present but were not considered to have contributed to death in a further 53 cases. Most DRDs in Scotland were due to polydrug toxicity.



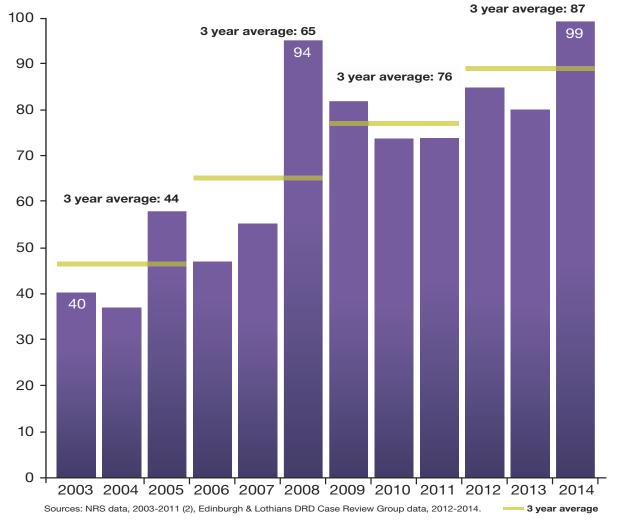
Edinburgh and Lothians

Annual total

99 drug-related deaths in Lothian which occurred in 2014 were case reviewed.

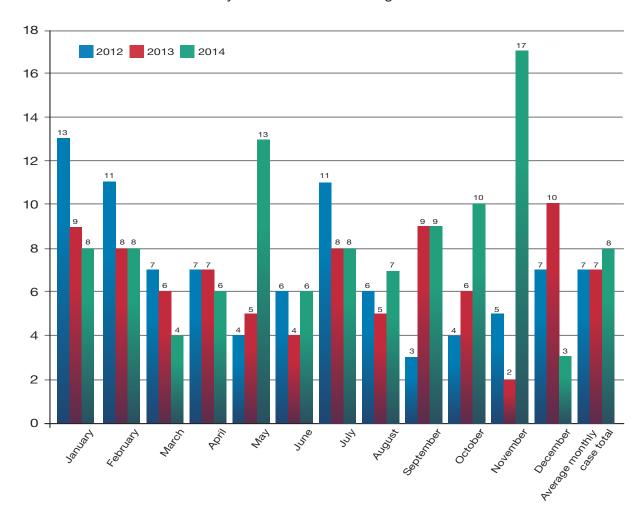
This is a 20% increase on the previous year's total (79) and continues the long term upward trend.

The rolling three year average for 2012-2014 is almost double that of the 2003-2005 period.



Cases by month

There is no discernable monthly/ seasonal trend in drug-related deaths in Lothian.



Cases by area

Over two thirds of all drug-related deaths in Lothian occurred in the city of Edinburgh. The total number of drug-related deaths in Edinburgh in 2014 is the highest on record. Two thirds of deaths occurred in ten postcode areas.

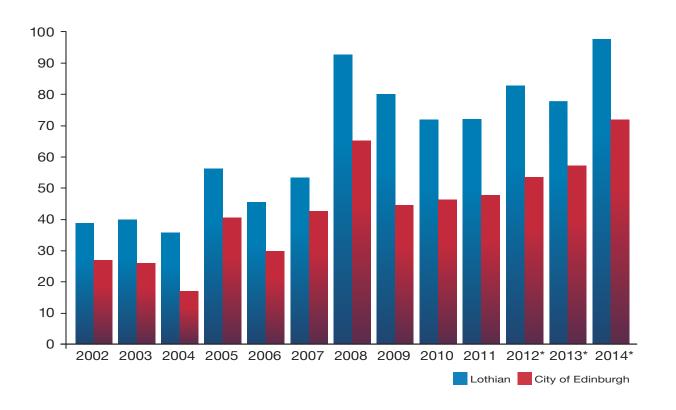
Leith recorded a large increase in the number of cases in 2014 compared to 2013.

Council (where death occurred)	Cases 2014	(2013)
City of Edinburgh Council	73	(58)
East Lothian Council	12	(08)
West Lothian	12	(05)
Midlothian	02	(80)
TOTAL	99	(79)
Locality (where death occurred)	Case	s 2014
Edinburgh, North East		21
Edinburgh, South East		20
Edinburgh, South West		20
Midlothian & East Lothian		14
West Lothian		12
Edinburgh, North West		07
Deaths in Edinburgh, but no fixed abode or resided elsewhere in Lot	hian	05
TOTAL		99
Postcode (where area total is 5 or more)	Cases 2014	(2013)
EH6 (Leith)	15	(05)
EH11 (Sighthill)	11	(13)
EH16 (Liberton)	10	(<5)
EH14 (Balerno)	07	(<5)
EH7 (Restalrig-Craigentinny)	07	(06)
No fixed abode	06	(10)
EH10 (Morningside-Hillend)	05	(<5)
EH21 (Musselburgh)	05	(<5)
EH4	05	(<5)
EH5	05	(<5)

City of Edinburgh

	2002^{\dagger}	2003 [†]	2004^{\dagger}	2005^{\dagger}	2006†	2007†	2008^{\dagger}	2009†	2010^{\dagger}	2011†	2012*	2013*	2014*
Lothian	39	40	36	57	46	54	94	81	73	73	84	79	99
City of Edinburgh	27	26	17	41	30	43	66	45	47	48	54	58	73
Scotland	382	317	356	336	421	455	574	545	485	584	581	526	613

[†]Statistics from the National Records of Scotland (NRS). *Lothian case review totals



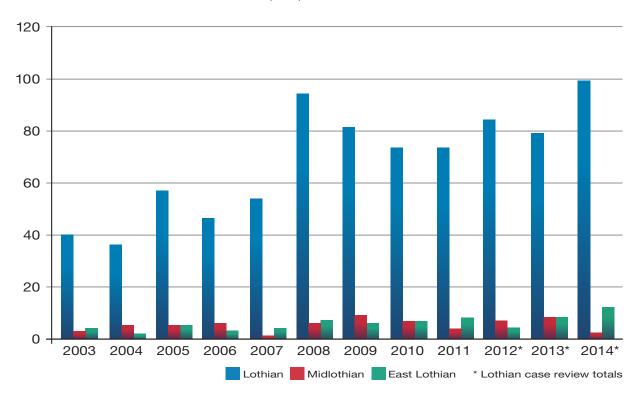
Statistics from the National Records of Scotland (NRS).

	2012	2013	2014	
Lothian	90	90	105	
Edinburgh	57	64	71	

Midlothian & East Lothian

	2003†	2004^{\dagger}	2005^{\dagger}	2006^{\dagger}	2007†	2008†	2009 [†]	2010 [†]	2011†	2012*	2013*	2014*	Average
Lothian	40	36	57	46	54	94	81	73	73	84	79	99	
Midlothian	3	5	5	6	1	6	9	7	4	7	8	2	5
East Lothian	4	2	5	3	4	7	6	7	8	4	8	12	6
Scotland	317	356	336	421	455	574	545	485	584	581	526	613	

[†]Statistics from the National Records of Scotland (NRS). *Lothian case review totals



Statistics from the National Records of Scotland (NRS).

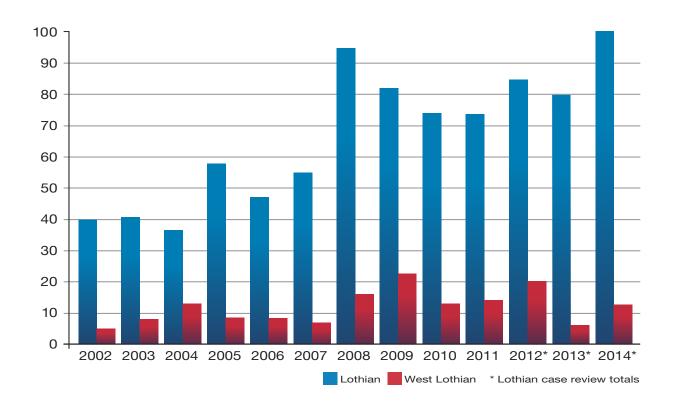
	2012	2013	2014
Lothian	90	90	105
Midlothian	8	8	7
East Lothian	6	8	11

West Lothian

2002[†] 2003[†] 2004[†] 2005[†] 2006[†] 2007[†] 2008[†] 2009[†] 2010[†] 2011[†] 2012* 2013* 2014* Average (mean)

Lothian	39	40	36	57	46	54	94	81	73	73	84	79	99	
West Lothian	4	7	12	7	7	6	15	21	12	13	19	5	12	11
Scotland	382	317	356	336	421	455	574	545	485	584	581	526	613	

[†]Statistics from the National Records of Scotland (NRS). *Lothian case review totals



Statistics from the National Records of Scotland (NRS).

	2012	2013	2014	
Lothian	90	90	105	
West Lothian	19	10	16	

Prevalence

Drug-related deaths as a percentage of the population at risk in Lothian (i.e. the estimated total of drug users) remains low.

Year	Estimated number of individuals with problem drug misuse in Lothian 3,4,5	Number of drug-related deaths in Lothian	Drug-related deaths as a percentage of the population at risk (i.e. the estimated total of drug users)
2003	8,146	40	0.5%
2009/10	8,200	81 (for the year 2009)	1.0%
2012/13	9,800	84 (for the year 2012)	0.9%

Clearly the whole population of Lothian is not at risk of dying from a drug-related death.

To put the Lothian total in context it is important to compare it to the relevant population at risk. In this case the closest population is the estimated numbers of people with a drugs misuse problem. The prevalence of problematic drug use in Scotland is estimated at three yearly intervals. The above table indicates that drug-related deaths as a percentage of the population at risk in Lothian is low and has remained stable in recent years.

The social picture

In the majority of cases the deceased were white, single, unemployed Scottish men who lived alone. Most deaths occurred in areas of social deprivation (as determined in the Scottish Index of Multiple Deprivation). In 41% of cases the deceased had been in prison at some point in their lives. In just over half the cases (53) there were other people present at the scene of the death.

Sex	Cases 2014
Male	70
Female	29
Total	99
Deaths by Scottish Index of Multiple Deprivation (SIMD 2012)	Cases 2014
Quintile1 (Most deprived)	32
Quintile 2	19
Quintile 3	19
Quintile 4	17
Quintile 5	06
No fixed abode	06
TOTAL	99
Ethnicity	Cases 2014
White: Scottish	85
White: Other British	07
Other	07
TOTAL	99
Employment status	Cases 2014
Unemployed	38
Unknown	32
In receipt of disability benefits	17
Employed or in education/ training	11
Other	01
TOTAL	99
Relationship status	Cases 2014
Single (inc. widowed/ divorced/ separated)	58
In relationship	27
Unknown	14
TOTAL	99

Own home Relatives' home	ases 2014
Relatives' home	74
	09
No fixed abode inc. sleeping rough	05
Hostel	04
Supported Accommodation	02
Homeless accommodation	02
Unknown	02
Friends' home	01
TOTAL	99
Living alone	59
With partner	18
With relatives	10
Other	07
Unknown	05
TOTAL	99
Scene of death Ca	ases 2014
Person(s) present at scene of death:	53
Person died in the company of others	34
Person died in a room next to other people	19
Died alone	45
Unknown	01
TOTAL	99
Children	ases 2014
Number of cases with children under 16	26
(44	4 children)
Number of cases with children under 16 who lived with the now deceased	2 children)
(12	ases 2014
(12	ases 2014 41
Crime Ca	

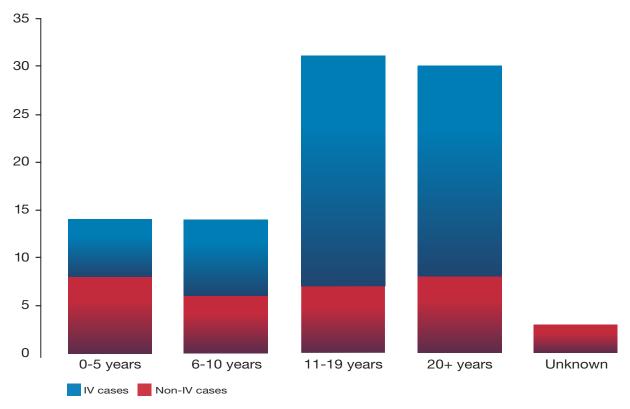
Drugs misuse

Known misuse

In most cases the deceased was a known drug user (to services and/ or the Police). In 60 cases the deceased was known to have been an intravenous drug user (45 cases were known to be intravenous drug users in 2013). People with a history of long term substance misuse greater than 5 years accounted for the majority of deaths.

Drugs misuse	Cases 2014
Total number of known drug users (and as a % of all cases)	92 (93%)
Total number of known intravenous drug users	
(and as a % of known drug users)	60 (61%)

Drug-related deaths in Lothian 2014 involving known intravenous (IV) drug users and non-IV drug users.



	0-5 years	6-10 years	11-19 years	20+ years	Unknown	TOTAL
IV cases	06	80	24	22	0	60
Non-IV cases	80	06	07	08	03	32
TOTAL	14	14	31	30	03	92

Illicit substances

Heroin is the illicit substance most frequently reported to have been used at some point during the six months prior to death (as it was in 2013).

Illicit drugs reported to have been used at some point during to death by the deceased, as specified in the electronic case social services.*	records	-
Heroin	47	(41)
Cannabis	41	(26)
Diazepam (non-prescribed)	33	(28)
Methadone (non-prescribed)	17	(16)
New Psychoactive Substances	15	(07)
Others**	12	
Amphetamines	10	(03)
Cocaine	08	(10)
Temazepam (non-prescribed)	06	(04)
Dihydrocodeine	06	(07)
Crack Cocaine	05	(-)
Gabapentin	05	(04)
Methamphetamine	02	(-)

^{*} In most cases, more than one substance was reported to have been used in the six months prior to death.

^{**}The illicit use of the following substances were mentioned in the notes of one case each: amitriptyline (non-prescribed), codeine, dimenthyltryptamine (DMT), Ecstasy / MDMA, gammahydroxybutrate (GHB), ketamine, LSD, methadrone, oxycontin, phenobarbital, pregabalin, tramadol.

Implicated substances

Final cause of death is determined by pathologists. Substances implicated in drug-related death are those thought to have caused death, based on interpretation of the toxicological data in relation to the deceased. The table below lists controlled and non-controlled drugs considered to have been implicated in death. In cases where the final cause of death was reported as multidrug toxicity the constituent implicated substances, as noted in the Pathology commentary in the final report, are counted.

Opiates/ opioids were implicated in almost all cases. Methadone remains the substance implicated in most drug-related deaths in Lothian (57 cases). However, the number of cases of heroin/ morphine related death continues to rise (46 cases). Ethylphenidate was implicated alongside controlled drugs in 6 cases. Gabapentin or pregabalin were implicated in 12 cases (in 2013 these substances were implicated in 6 cases). In addition, alcohol was implicated in the final cause of death in 24 cases, around a guarter of the total.

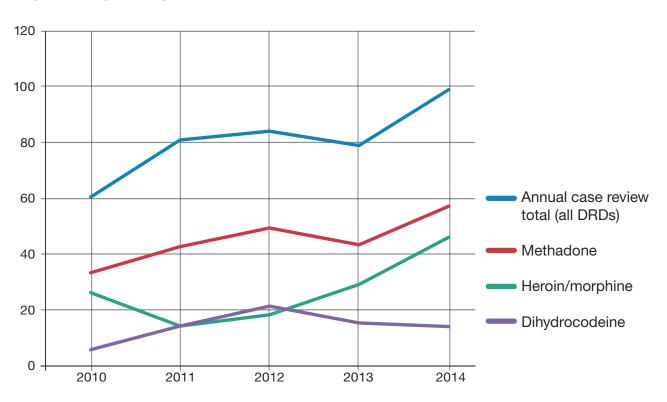
A death caused by the toxic effects of a new psychoactive substance (NPS) without the implication of an accompanying controlled drug in the cause of death is not recorded as a drug-related death and for the purposes of this report is not counted as such. However, the table of implicated substances (right) provides data on deaths considered to have been caused by the toxic effects of NPS in cases where no controlled drugs were implicated in death (as an adjunct to the DRD dataset).

Substance implicated in final cause of death	Specified in reported final cause of death	Implicated in cases of multi-drug toxicity	Case total 2014	Deaths due to the toxic effects of NPS substance(s) in cases where no controlled drugs implicated in death - not DRD	2013	2012
Methadone	44	13	57	n/a	43	49
Heroin/ morphine	38	8	46	n/a	29	18
Alcohol	23	01	24	n/a	25	15
Diazepam	07	14	21	n/a	27	32
Dihydrocodeine	11	03	14	n/a	15	21
Amitriptyline	06	03	09	n/a	07	02
Gabapentin	04	03	07	n/a	04	07
Ethylphenidate (inc. possible implication)	00	06	06	n/a	01	0
Tramadol	05	01	06	n/a	03	03
Pregabalin	03	02	05	n/a	02	0
Cocaine	03	02	05	n/a	08	02
Amphetamine	02	03	05	n/a	04	08
Temazepam	01	03	04	n/a	0	0
Citalopram	01	03	04	n/a	0	0
Etizolam	01	02	03	01	02	0
Mirtazapine	02	01	03	n/a	04	03
Buprenorphine	02	0	02	n/a	0	0
Ecstasy (MDMA)	02	0	02	n/a	0	0
Codeine	01	01	02	n/a	01	0
Fluoxetine	01	01	02	n/a	02	0
Ketamine	01	0	01	n/a	0	01
Mephedrone	01	0	01	n/a	0	0
Hydrocodone	01	0	01	n/a	0	0
Pentobaritone	01	0	01	n/a	0	0
Fentanyl	01	0	01	n/a	01	0
Propranolol	01	0	01	n/a	0	0
Pentobarbital	01	0	01	n/a	0	0
Methiopropamine (MPA)	0	01	01	01	02	0
Venlafaxine	0	01	01	n/a	0	0
Oxazepam	0	01	01	n/a	0	0
Flubromazepam	0	01	01	0	0	0
Phenazepam	0	01	01	0	06	05
Zopiclone	0	01	01	n/a	01	0
Promethazine	0	01	01	n/a	0	0
Benzylpiperazine (BZP)	0	01	01	0	02	0
Methylethcathinone (MEC)	0	01	01	0	0	0
Methoxphenidine (MXP)	0	0	0	01	0	0

Not a controlled drug

NPS

Implicated opiates/opioids in DRDs, Lothian





Key themes

The ageing population

National data has indicated that the age profile of those whose death is attributed to drug abuse is rising, with the median age at death increasing from 28 years in 1996 to 40 years in 2014 (2). The median age at death in Lothian in 2014 is 41 years. There has been a progressive increase in the mean and median age for drug-related deaths in Lothian from 2008-2014.

Average (mean) age of drug-related deaths in Lothian, 2008-2014				
Year of death	Average (mean) age	Male	Female	
2008	32 (YOB*: 1977)	32	31	
2009	34 (YOB: 1975)	33	40	
2010	36 (YOB: 1974)	36	35	
2011	37 (YOB: 1974)	37	38	
2012	38 (YOB: 1974)	38	37	
2013	42 (YOB: 1972)	42	42	
2014	40 (YOB: 1974)	40	40	
*YOB: year of birth.				

Average (median) age of drug-related deaths in Lothian, 2008-2014				
Year of death	Average (median) age	Male	Female	
2008	31 (YOB*: 1977)	31	28	
2009	36 (YOB: 1973)	32	38	
2010	34 (YOB: 1976)	34	34	
2011	37 (YOB: 1974)	35	38	
2012	38 (YOB: 1974)	38	41	
2013	43 (YOB: 1971)	43	44	
2014	41 (YOB: 1973)	41	41	
*YOB: year of birth.				

One implication of the observation of a rising median age is that the risk in drug-related deaths is due at least in part to a 'cohort effect'. Put crudely, there is a population of people who started to use drugs 20+ years ago who are now reaching an age where they are more vulnerable to the effects of overdose as their health has been increasingly compromised by their lifestyle and life circumstances. It may be that people who started using drugs more recently did so in an era when harm reduction services and drug treatment was more widely available and therefore they have benefited from a protective effect. However, it is unlikely that just one factor explains the rise in average age of a drug related death.

Poly-drug misuse

More than one substance was implicated in the majority of deaths.

Number of substances (excluding alcohol) implicated in final	
cause of death	Cases 2014
One	41
Two	25
Three	17
Four or more	16
TOTAL	99

Substances implicated in final cause of death in cases where only one substance was identified (excluding alcohol) Cases 2014		
Methadone	18	
Heroin/ morphine	17	
Dihydrocodeine	03	
Amphetamine	01	
Pentobarbital	01	
Tramadol	01	
TOTAL	41	

Alcohol misuse

Long standing problematic misuse of alcohol was prevalent in the majority of cases. Alcohol alongside controlled drugs was implicated in 24 cases.

Problematic alcohol misuse	Cases 2014
Total number of cases with at least one recorded episode of problematic alcohol misuse	69
No known incidence	30
TOTAL	99
Cases were problematic alcohol misuse was recorded as occurring in the period prior to death only	04
Cases were it was recorded that the person had a current and longstanding problem	46
Historical cases > 6 months prior to death, with no known problematic misuse issues recorded prior to death	19
TOTAL	69

The prevalence of mental and physical illness

Mental health

Two thirds of the cohort had diagnosed mental health problems at the time of death. The majority were diagnosed with depression. Diagnosis of two or more psychiatric conditions at time of death was reported in over a third of the cases (67). Treatment with many psychotropic medications carries extra risks for patients on methadone due to potential cardiac side effects. These are known to be summative for each combined medication.

Mental health at time of death		Cases 2014
With diagnosed condition*		67
No known condition(s)		32
TOTAL		99
Most prevalent diagnoses: Depression	56	
Anxiety	42	
Personality Disorder	12	
Schizophrenia	05	
Post Traumatic Stress Disorder	04	
Psychotic Episode	03	
Drug Induced epileptic fits/seizures	03	
Other (where the condition occurred in only 1 case)	06	

Contact with specialist mental health services	
(excl. psychiatric services for addiction)	Cases 2014
Within six months of date of death	20

Suicide and self harm

In 41 cases the deceased was known to have previously attempted suicide at some point during their lifetime. Attempted suicide occurred in 12 cases in the six months prior to death. In 37 cases it was reported that the deceased had engaged in deliberate self harm at some point during their lifetime, of which 10 cases occurred in the six months prior to death.

Physical health

In most cases the deceased had physical health problems prior to death, respiratory related conditions such as COPD and asthma being the most common. Multiple comorbidity was common.

Physical health at time of death	Cases 2014
With diagnosed condition	71
No known condition(s)	28
TOTAL	99
Most prevalent diagnoses: Respiratory related	24
Hepatitis (C & B)	21 (17 & 04)
Liver disease (excluding HBV & HCV)	13
Cardiac related	06
Epilepsy	03
Chronic pain	02
HIV/ AIDS	02
Other (where the condition occurred in only 1 case)	30

We were unable to gather data on smoking prevalence, but from qualitative information it is likely that the deceased in most cases were smokers as are the vast majority of drug users.

Access and Engagement (drug treatment)

In just over half of cases, the deceased had been in contact with a drug treatment service at the time of death, either receiving care from their GP under the National Enhanced Service (NES), or from NHS Lothian's Substance Misuse Directorate (SMD) or a partner agency. The SMD provides treatment for patients whose GP is not contracted to provide the National Enhanced Service for Drugs Misuse (NES) or who at that time have treatment needs outwith the NES.

In 42 cases the now deceased was not in contact with any drug treatment service at the time of death. It is not possible to link the deceased to attendance at needle exchange services, which remain anonymous. There is a substantial evidence base around the effectiveness of opioid replacement therapy in reducing drug related death (6-10). Further work needs to be undertaken to ascertain barriers to treatment, especially access to opioid replacement therapy, within Lothian.

Contact with a drug treatment service at time of death	Cases 2014
In contact with a drug treatment service at time of death	57
No contact with a drug treatment service at time of death	42
TOTAL	99

The drug treatment service which was accessed in the month	0 0014
prior to death	Cases 2014
GP (NES)	34
Substance Misuse Directorate, NHS Lothian	14
A&E	02
Private healthcare provider	02
DTTO	02
Third sector specialist agency	02
Social Work	01
TOTAL	57

In 25 cases (one quarter of the case total) the now-deceased had contact with NHS Lothian's Substance Misuse Directorate at some point in the year prior to death.

In 75 cases (three quarters of the case total) the now deceased saw their GP within the three months prior to death. In half of these cases it was for reasons other than drug treatment.

Prescribing issues

Methadone was involved in just over half of all drug-related deaths in Lothian in 2014, although it was prescribed in little more than 50% of cases where it was implicated in death. Abuse of diazepam remains commonplace: the substance was present in the toxicology after death of 83 cases, but was only prescribed at time of death in 34 cases. Dihydrocodeine was known to have been prescribed in 10 cases, but was present in the toxicology of 30 cases. There has also been an increase in the use of gabapentinoids – gabapentin and pregabalin – which were present in toxicology in 13 and 7 cases respectively.

Methadone	Cases 2014 (201	3 data)
Methadone present in toxicology after death	59	(46)
Methadone implicated in final cause of death	57	(43)
Methadone known to have been prescribed to the individual in month prior to death	the 30	(27)

Diazepam	Cases 2014 (2013	data)
Diazepam present in toxicology after death	83	(63)
Diazepam implicated in final cause of death	21	(27)
Diazepam known to have been prescribed to the individual in the month prior to death	34	(31)

Dihydrocodeine	Cases 2014 (2013 d	ata)
Dihydrocodeine present in toxicology after death	30	(18)
Dihydrocodeine implicated in final cause of death	14	(15)
Dihydrocodeine known to have been prescribed to the individ	lual	
in the month prior to death	10	(13)

Gabapentin	Cases 2014 (2013	data)
Gabapentin present in toxicology after death	13	(07)
Gabapentin implicated in final cause of death	07	(04)
Gabapentin known to have been prescribed to the individual in month prior to death	the 08	(08)

Pregabalin	Cases 2014
Pregabalin present in toxicology after death	07
Pregabalin implicated in final cause of death	05
Pregabalin known to have been prescribed to the individual in the month prior to death	04

Non-fatal overdose

In two thirds of all drug-related deaths in Lothian in 2014 the now deceased had a documented history of non-fatal overdose (66 cases). The average number of episodes of nonfatal overdose during the lifetime of persons who died of drug-related death in Lothian in 2014 is 3.

Substances*	Cases 2014
Other: substances where reference to a specific substance	
occurred in only 1 episode of non-fatal overdose	15
Diazepam	13
Heroin	11
Methadone	08
Alcohol	06
Gabapentin	06
Co-codamol	05
Mirtazapine	05
Paracetamol	05
Amitriptyline	03
dihydrocodeine	03
Pregabalin	03
Temazepam	02
Nitrazepam	02

^{*}Please note that in some cases the now deceased overdosed on more than one substance.

Since May 2015 the Scottish Ambulance Service provide notifications of cases of non-fatal overdose to NHS Lothian so that they may be followed-up by specialist staff at drug treatment hubs, enabling information and support to be provided to the patient.

Take home naloxone

Opiate/ opioid overdose occurred in the presence of others in 50 drug-related deaths in Lothian during 2014 (this is half of all cases). Had it been used, take home naloxone could have prevented death in many of these cases.

Supply

From April 2011 to March 2015 there have been 2,5072 naloxone kits supplied to people at risk of opiate overdose as well as to workers and carers in Lothian (excluding both prisons). Of these, on 264 occasions they were used to reverse an opiate overdose. This is only the number we are aware of from service user self reporting. The numbers were approximately 500 per annum for the first 3 years, jumping to 1050 kits supplied last year. The vast majority of kits have gone to people at risk (1315) with workers receiving 209 kits and carers 36. Under the Medicines Act, as amended for naloxone supply, carers who are not at risk require the person at risk to consent to supply.

Workforce development and access to naloxone supply

In order to supply naloxone, recipients require training in signs, symptoms and causes of overdose, basic life support and how to prepare and use the naloxone kit together with advice on some cautions. This has meant an ongoing programme of training for trainers has been rolled out across Lothian and beyond. Currently, there have been over 200 people trained in naloxone brief intervention and/ or supply. Over 50% of staff are within SMD, however there are also 45 nurses out with SMD: in the Access Practice, The Royal Edinburgh, Royal Infirmary and Western General Hospitals, HMP Addiewell and Edinburgh and the NHS Lothian Custody suite staff across other health board areas. There are 59 third sector staff trained who support the programme and who work with medical and nursing staff to maximise the reach of the programme to service users. In addition to this training, there is also a naloxone peer training programme in the prisons and community in Lothian

In Lothian, naloxone is on the prescribing formulary but no GP has yet prescribed or pharmacist supplied. The national take home naloxone programme encourages GP involvement in naloxone provision as the majority of people receiving opiate substitution therapy are prescribed by GPs. In other areas of Scotland it is pharmacists who supply the majority of naloxone under contract, making the reach of naloxone greater than in Lothian. As identified in the statistics contained within this report it is often the GP who is the last professional to have contact with an individual prior to a DRD. Further work is required to ensure that everyone receiving opiate substitution therapy in Lothian is supplied with take home naloxone.

Targets

Based on prevalence of "problem drug users" analysis by ISD in 2010/11 against a cumulative year on year target of 25% coverage for this population of people at risk of overdose, Edinburgh ADP was at 112% as of December 2014. West Lothian was at 134% and MELDAP was at 66%. HMP Edinburgh was at 74% and Addiwell was at 51% of its target.

NHS Lothian board have supplied a total of 2725 kits to people at risk in the community and prisons to December 2014 (ISD). This figure is second highest in Scotland however, when set against prevalence, Lothian ranks average out of Scotland's health boards. This means there is still work to be done.

The statistics below on naloxone usage are a subset of those who died of a drug-related death in Lothian in 2013.

Naloxone usage	Cases 2014
The deceased had been issued with and trained in use of take home naloxone service (community provision)	12
The deceased had received emergency naloxone before death (paramedics or in hospital)	12

New psychoactive substances

New psychoactive substances (NPS) are chemicals that can have mood enhancing properties, but are not controlled by drug laws. They are commonly known as 'legal highs' which can be misleading as it might imply that these substances are safe and legal which is not always true. They can be designed to mimic the effects of illegal drugs such as cannabis, LSD and cocaine; the appearance will vary depending on the drug but most NPS are chemicals produced in a lab and come in powder, pill or herbal form.

The national picture

Deaths caused solely by NPS are not classified as a drug-related death in the official statistics if the substance(s) in question are not controlled under the under the Misuse of Drugs Act (1971). However the National Records of Scotland (NRS) publish data on NPS-related deaths in their annual report on drug-related deaths. The first cases of NPS-related deaths were reported in 2009.

NPS-related deaths in Scotland, 2009-2014						
	2009	2010	2011	2012	2013	2014
Involved	04	12	47	47	113	114
Implicated	03	10	28	32	60	62
Other substances implicated	02	02	26	27	54	53
Source: NRS						

Lothian cases

We receive Police reports of all suspected drug-related deaths in Lothian, including those thought to be NPS-related. We review deaths involving NPS. The data that we collect for case review not only enables us to ascertain the possible involvement of NPS in cause of death, but also provides us with intelligence on NPS usage among people who die of a drug-related death, regardless of the substance(s) implicated in death. In Lothian we adhere to the national definition of a drug-related death which is used by the NRS in the production of the official statistics. Therefore a death caused by the toxic effects of NPS alone (without the presence of an accompanying controlled drug in the cause of death) is not recorded as a drug-related death and for the purposes of this report is not counted as such. However, the table of implicated substances on page 23 provides data on deaths considered to have been caused by the toxic effects of NPS alone (not DRD) as an adjunct to DRD cases.

Cases of drug-related death in Lothian where the deceased was known to have a history of NPS use

The deceased was known to have used NPS (to Police/ services) in 15 of the 99 cases of drug-related deaths in Lothian in 2014. In 13 cases the deaths were due to polydrug toxicity. In the two cases where the death was caused by the toxic effects of one substance alone the substance was a controlled drug.

In terms of cause of death of the 15 known NPS users, NPS was considered to have been possibly implicated alongside controlled drugs in only four cases. The deceased died of controlled drugs alone in the remaining 11 cases. Heroin/ morphine were implicated in the cause of death in only four of the 15 cases where the deceased was a known NPS user. Therefore in most cases of heroin/ morphine-related death in Lothian in 2014 the deceased had no known history of NPS use.

Cases of drug-related death in to have a history of NPS use	Lothian where the deceased was known
2012	4 cases (5% of all cases)
2013	8 cases (10% of all cases)
2014	15 cases (15% of all cases)

Cases of NPS implication in drug-related death in Lothian in 2014.

There are difficulties in ascertaining NPS implication in death – this arises from uncertainty regarding the role played by some NPS given the lack of clinical research. Implication is particularly problematic in cases of polydrug toxicity.

NPS was considered to be possibly implicated alongside controlled drug(s) in nine cases in Lothian last year. In two of the nine cases two NPS substances were considered implicated alongside controlled drugs: etizolam and flubromazepam in one case, and ethylphenidate and methiopropamine (MPA) in one case. In the remaining seven cases only one NPS was considered to be implicated alongside controlled drugs.

Ethylphenidate was considered to have been possibly implicated in six polydrug-related deaths. Etizolam in three polydrug cases. MPA and Flubromazepam in one case each.

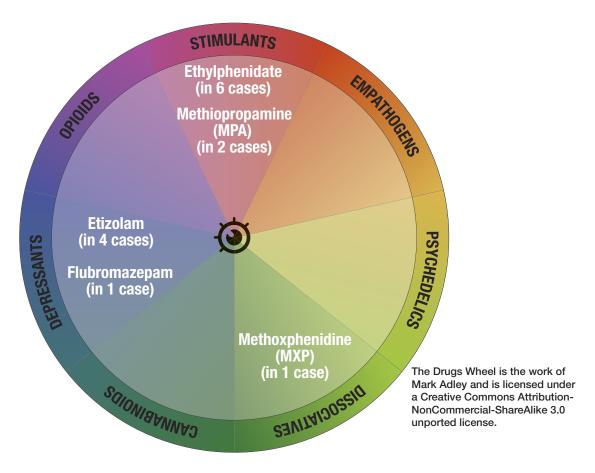
In five cases where an NPS was possibly implicated in death the deceased was not a known NPS user (to Police/ services) prior to death.

In addition, we recorded cases were individuals died due to the toxic effects of NPS, but where no controlled drugs were implicated in the death (these are not counted as DRDs). MPA was implicated as the sole agent in one case, and methoxphenidine (MXP) and etizolam (together) in a further case.

The data contained in this report relates to deaths caused by the toxic effects of drugs. Of course, this is a subset of deaths of all drug users. In adherence to the national definition we do not report on cases were individuals died of infections related to drug use, or accidents or suicides in cases were the individual was under the influence of drugs at time of death, but where drugs were not implicated in the death itself. Therefore the following types of deaths: deaths by cardiac arrest subsequent to NPS ingestion; deaths resulting from wound infections arising from NPS injecting; drowning, hangings, traffic accidents etc. which occurred under the influence of NPS (or controlled drugs for that matter), are not counted in this report because the death is not attributed to the toxic effects of drugs.

Cases of NPS implication in drug-related death in Lothian		
2012	4 cases (5% of all cases)	
2013	6 cases (8% of all cases)	
2014	9 cases (9% of all cases)	

Death due to NPS toxicity in Lothian 2014



Cases of NPS implication in drug-related death in Lothian in 2014	
Ethylphenidate implicated alongside controlled drugs	5 cases
Ethylphenidate + Methiopropamine (MPA) implicated alongside controlled drug	gs 1 case
Etizolam implicated alongside controlled drugs	2 cases
Etizolam + flubromazepam implicated alongside controlled drugs	1 case
TOTAL (NPS implicated alongside controlled drugs)	9 cases

Cases of NPS implication in death where no controlled drugs were implicated in death	
Methiopropamine (MPA) implicated as sole agent (no controlled drugs implicated in death)	1 case
Methoxphenidine (MXP) and etizolam (no controlled drugs implicated in death)	1 case
Total (NPS only)	2 cases

A new approach to reviewing drug-related deaths

Up until 31 March 2015 cases of drug-related death were reviewed by a Pan-Lothian multiagency group which met monthly. Since then DRD case review is undertaken by six multi-agency locality groups (one in each Edinburgh drug treatment and recovery hub, one in West Lothian and a group for Midlothian and East Lothian). These groups meet regularly to review cases.

The purpose of this new approach of case review is threefold: to ensure that professionals within specialist services are informed of cases in their locality; to involve local practitioners/ managers in case review; and to support the dissemination of learning from DRD case review to local teams and services.

In addition, the Substance Misuse Directorate, NHS Lothian continues to review drugrelated deaths where the deceased was in SMD treatment in the year prior to death.

The Lothian DRD Reduction Steering Group has been set-up to bring together representatives from the locality case review groups with other representatives of Lothian's Alcohol and Drug Partnerships so that learning is shared and used to inform Lothian-wide approaches to addressing the risks associated with drug-related death.

Sharing Localitythe learning based DRD case review **SMD DRD** & developing Lothian-wide groups case review (one in each Edinburgh approaches to SMD review cases Hub, a joint Midlothian and where the deceased addressing East Lothian group, and the was in SMD West Lothian group). treatment in the risk These groups review cases year prior to death. where the deceased was not The Pan-Lothian in SMD treatment in **DRD** reduction the year prior to death. steering group

References

- (1) The Advisory Council on the Misuse of Drugs. Reducing drug-related deaths. Home Office, 2000.
- (2) National Records of Scotland. National statistics: drug-related deaths in Scotland in 2014.
 - www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/drug-related-deaths-in-scotland.
- (3) Hay G, Gannon M, McKeganey N, Hutchinson S, Goldberg D. Estimating the National and Local Prevalence of Problem Drug Misuse in Scotland, 2003. Scottish Centre for Infection and Environmental Health, NHS Scotland.
- (4) Information Services Division, NHS National Services Scotland. Estimating the National and Local Prevalence of Problem Drug Use in Scotland 2009/10. www.drugmisuse.isdscotland.org/publications/local/prevalence2009_10.pdf
- (5) Information Services Division, NHS National Services Scotland. Estimating the National and Local Prevalence of Problem Drug Use in Scotland 2012/13. www.isdscotland.scot.nhs.uk/Health-Topics/Drugs-and-Alcohol-Misuse/Publications/2014-10-28/2014-10-28-Drug-Prevalence-Report.pdf?97355288268
- (6) Cornish R, Macleod J, Strang J, Vickerman P, Hickman M. Risk of death during and after opiate substitution treatment in primary care: prospective observational study in UK. General Practice Research Database. BMJ 2010; 341: c5475.
- (7) Stenbacka M, Leifman A, Romelsjö A. Mortality and cause of death among 1705 illicit drug users: a 37 year follow up. Drug Alcohol Rev 2010; 29: 21–27.
- (8) Fareed A, Casarella J, Amar R, et al. Benefits of retention in methadone maintenance and chronic medical conditions as risk factors for premature death among older heroin addicts. J Psychiatr Pract 2009; 15: 227–234.
- (9) Connock M, Juarez-Garcia A, Jowett S, Frew E, Liu Z, Taylor RJ, Fry-Smith A, Day E, Lintzeris N, Roberts T, Burls A, and Taylor RS. Methadone and buprenorphine for the management of opioid dependence: a systematic review and economic evaluation. Health Technol Assess. 2007 Mar;11(9):1-171, iii-iv.
- (10) National Forum on Drug-related Deaths annual report 2014. National Forum of Drug-related Deaths, 2015.

Signposts

ALCOHOL AND DRUGS PARTNERSHIPS:

Edinburgh Alcohol and Drug Partnership: www.edinburghadp.co.uk

Midlothian and East Lothian Drugs and Alcohol Partnership: www.meldap.co.uk

West Lothian Alcohol and Drug Partnership:

www.westlothianchcp.org.uk/article/4061/West-Lothian-ADP

INFORMATION & STATISTICS:

National Forum on Drug-Related Deaths and Sub-Groups:

www.scotland.gov.uk/Topics/Justice/law/Drugs-Strategy/drugrelateddeaths/NationalForumDRD

National Records Scotland: Drug-related Deaths in Scotland (official statistics):

www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/drug-related/index.html

Scottish Drugs Forum: www.sdf.org.uk/

FOR PEOPLE WITH LIVED EXPERIENCE OF PROBLEM DRUG USE:

Crew: www.crew2000.org.uk
Frank: www.talktofrank.com

Know the Score: www.knowthescore.info

Naloxone: www.naloxone.org.uk

FOR FAMILIES AFFECTED BY DRUGS:

Scottish families affected by alcohol and drugs: www.sfad.org.uk

Simpson House (counselling service): www.simpson-house.org

VOCAL (Family Support – Addictions): www.vocal.org.uk/addictions.html

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