

12.0 Drug-related Deaths and Non-Fatal Overdose

In 2015, the National Records for Scotland (NRS) reported an estimated 706 drug-related deaths (DRD), 93 (15%) more than in 2014, and 370 (110%) more than in 2005 [55]. Rates of DRD are higher in Scotland; in 2013, there were an estimated 9.6 drug-related deaths (DRDs) per 100,000 people in Scotland, compared with 2.1 in England and Wales. Data from the Scottish National Drug-Related Deaths Database indicates that most of these are due to accidental opioid overdose, they occurred while others were present and over two thirds occurred in people who had been in prison, police custody, hospital or drug treatment in the 6 months prior to death [56].

NHS Lothian collects, reports and reviews data on DRD according to national guidance. The definition of a drug-related death used by NHS Lothian is found in Appendix 4. There is a Lothian-wide DRD Reduction Steering Group that includes representatives from the locality case review groups, substance misuse directorate (SMD), and other members of Lothian's Alcohol and Drugs Partnerships. The steering group collates lessons learned from DRD case reviews and oversees a Lothian-wide action plan to address risks.

12.1 Trends and demographics of drug-related deaths

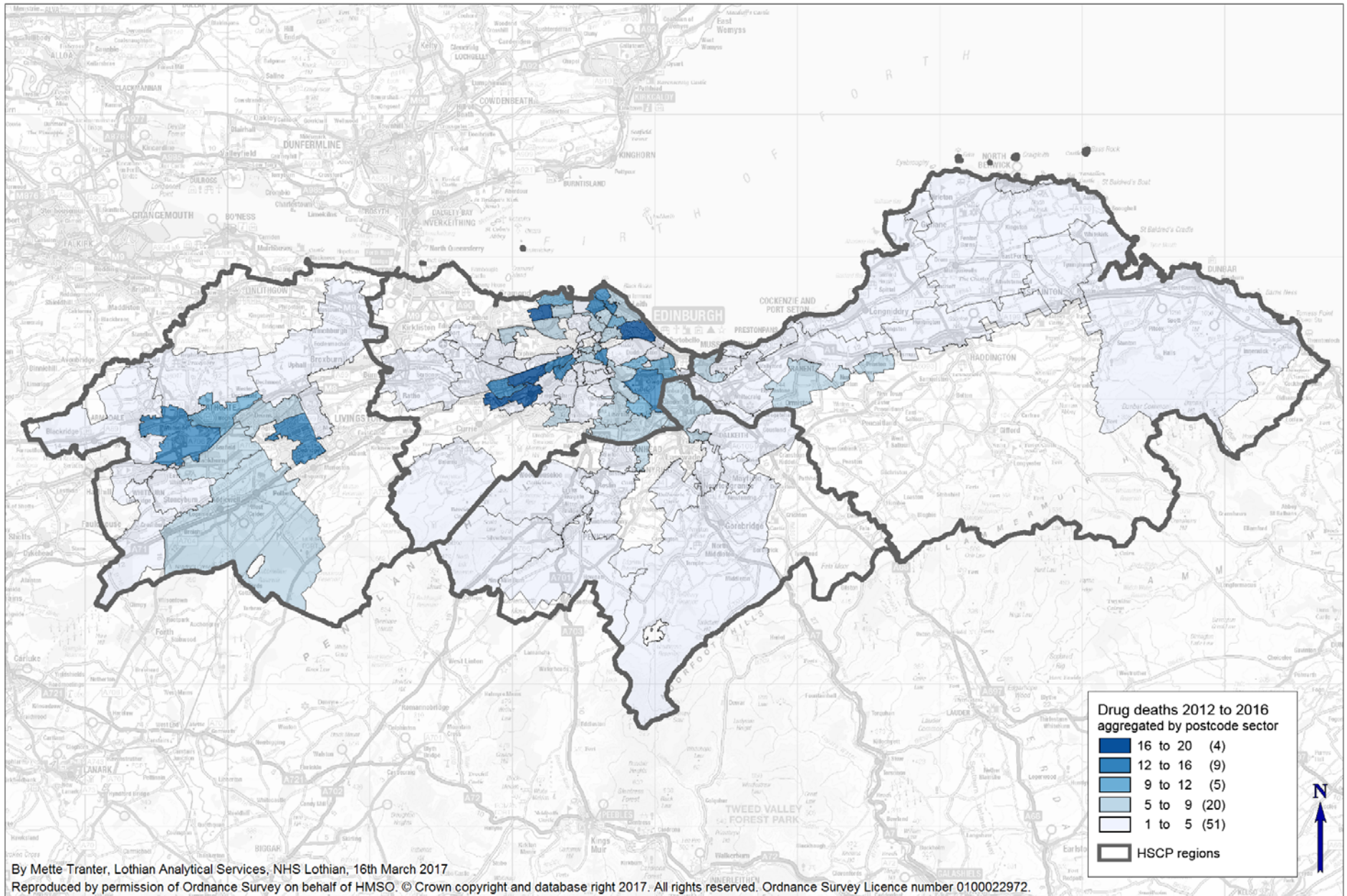
In 2016 there were 134 deaths eligible for case review in Lothian, a 34% increase from 2015. Of these, 96 (72%) occurred in the City of Edinburgh. The postcodes of residence (Table 12.1) reflects the distribution of people who inject drugs in the city of Edinburgh and the map in Figure 12.1 is similar to that for distribution of take home naloxone (THN) and injecting equipment provision (IEP).

Table 12.1: Drug-related deaths eligible for case review by council area in NHS Lothian, 2016

	Cases eligible for local case review, 2016
City of Edinburgh (total)	96
North East	29
South East	26
North West	21
South West	20
West Lothian	20
East Lothian	10
Midlothian	8
Lothian (total)	134

All cases meet the national definition.

Figure 12.1: Map of drug-related deaths from 2012-2016 in Lothian based on postcode of residence

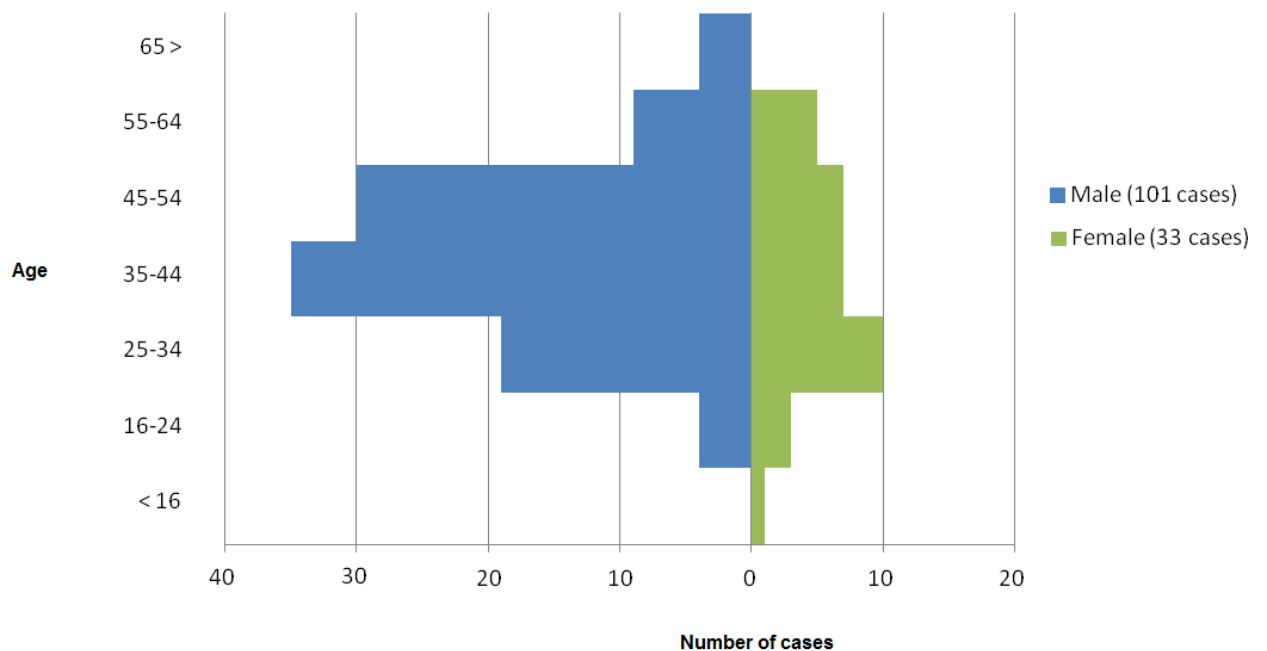


Analysis of Lothian case review data over successive years has identified that the population most at risk are single, white Scottish men with a known history of long term substance misuse [57]. National data has indicated that the age profile of those whose death is drug-related is rising, with the median age at death increasing from 28 years in 1996 to 42 years in 2015 [56]. The average age at death in Lothian has risen from 32 years in 2008 to 42 years in 2016. The average age at time of death is seven years younger for women than men. Females accounted for 25% of DRDs in Lothian in 2016, which is a smaller proportion than previous years (32% in 2015 and 29% in 2014). Although numbers of DRD are clustered around the late thirties and early forties, the wide age range for both males and females indicates that appropriate measures to reduce risk of DRD should be implemented across the whole injecting population.

Table 12.2: Drug-related deaths in Lothian, 2016, by age

	All	Male	Female
Mean	42	44	37
Median	42	43	35
Range (youngest-oldest)	15-70	17-70	15-63

Figure 12.2: Drug-related deaths in Lothian, 2016, by age & gender



12.3 Social isolation/ limited social networks

In the majority of cases of DRD in Lothian in 2016 the deceased lived alone prior to death (81 cases, 60%). In a little under half of all cases the deceased died alone (63 case, 47%). In most of these cases where the deceased died alone they also lived alone (54 cases, 40%).

12.4 Death following release from police custody

In Lothian in 2016 the deceased died within six months of being released from police custody in 35 cases (26%). Two died within two weeks of release from police custody, four within four weeks and 17 within 12 weeks. There were only eight cases last year in Lothian where the deceased died within six months of prison liberation.

12.5 Substance use

In 2016, as in previous years, the majority of deaths (110 cases, 82%) occurred among those with a long term history of substance misuse (greater than five years). A little over half were known to be intravenous drug users (69 cases, 51%) and in the majority of cases (101 cases, 75%), more than one controlled drug was implicated in the final cause of death.

In 2016 the substances and prescriptions most commonly implicated in death (as identified in toxicology taken at post mortem) were: heroin/ morphine (96 cases, 72%); methadone (66 cases, 49%); diazepam (55 cases, 41%); dihydrocodeine (35 cases, 26%); gabapentin (23 cases, 17%); pregabalin (10 cases, 7%); and buprenorphine (eight cases, 6%). Other substances present include: cocaine (16 cases, 12%); etizolam (10 cases, 7%); MDMA/ Ecstasy (seven cases, 5%); cannabis (24 cases, 18%).

Based on prescription data acquired for case review, the diversion of prescribed drugs remains a problem (Table 12.3). The increase in heroin/ morphine related deaths is particularly significant and has increased from 18 cases in 2012 to 96 cases in 2016 – a 43% increase on the 46 cases reported in 2014 [58]. In Lothian in 2016 long standing misuse of alcohol was reported in 72 cases (54%), and alcohol was present in the post-mortem toxicologies of 65 cases (49%).

Table 12.3: Substances implicated in death

Most common controlled drugs in Lothian DRDs	Substances implicated in death (number of cases)		Known to have been prescribed to the now deceased at time of death (number of cases)	
	2016 (Case total: 134)	2015 (Case total: 97)	2016	2015
Heroin/ morphine	96	55	-	-
Methadone	66	49	45	40
Diazepam	55	29	46	35
Dihydrocodeine	35	22	12	12
Gabapentin	23	20	12	12
<i>Others of note:</i>				
Cocaine	16	22	-	-
Etizolam [NPS]	10	1	-	-
Pregabalin	10	7	6	6
Buprenorphine	8	4	1 (+1 in suboxone)	0 (+2 in suboxone)
MDMA/ Ecstasy	7	3	-	-

12.6 Comorbidities

In 2016, as in previous years, the majority had one or more diagnosed mental health conditions at time of death (80 cases, 60%). The most commonly reported conditions are depression and anxiety (61 cases combined, 46%). In 41 cases (31%) the deceased was known to have attempted suicide at some point during their lifetime. In 34 cases (25%) it was reported that the deceased had engaged in deliberate self harm (excluding non-fatal overdose which is counted separately) at some point during their lifetime. In 2016, as in previous years, the majority had one or more diagnosed physical health condition at time of death (86 cases, 64%). The most commonly reported are respiratory conditions (27 cases, 20%), and hepatitis C (14 cases, 10%).

12.7 Contact with substance misuse services

In 2016, 75 cases (56%) were *not in contact* with a specialist or primary care addictions service at the time of death. Non-engagement in services was higher in males than females; 60 cases (59%) versus 15 cases (45%).

Of the 59 people who were in treatment for addictions, 36 (61%) were in treatment with their GP under the drug misuse National Enhanced Service (NES), 16 (27%) with SMD, and seven with other services (e.g. Drug Treatment and Testing Order, Regional Infectious Diseases Unit). In 33 cases (25%) the deceased had contact with SMD at some point in the year prior to death. In 47 cases (35%) the deceased was

known to be receiving opioid substitution therapy at time of death; methadone in 45 cases, suboxone and buprenorphine in 1 case each.

Despite the lack of engagement with specialist substance misuse services the majority were in contact with their GP for other health issues prior to death; 90 (67%) were seen by their GP in the month prior to death and 112 (84%) were seen by their GP within a year prior to death.

12.8 Non-fatal overdose

In over half of all cases in Lothian in 2016 the now deceased had a documented history of non-fatal overdose (71 cases, 53%). The average number of episodes of non-fatal overdose, as recorded by GP or A&E, prior to a drug-related death was three.

The Scottish Ambulance Service provides information on cases of suspected opiate overdose to SMD. This information is screened to identify whether the patient is already in treatment. If they are, the patient's practitioner is informed of the overdose. If they're not, case information is referred to third sector agencies who undertake assertive outreach. This initiative was started in May 2015.

In 2016 there were 431 cases of non-fatal overdose attended to by the Scottish Ambulance Service (cases of suspected opiate overdose). Of these 278 (64%) were male, 145 (34%) female and 8 unknown gender. Age is known in 316 cases and 37% were under 35 versus 28% under 35 in cases of DRD.

Table 12.4: Non-fatal overdose (SAS cases), Lothian 2016: by age, for cases with available data.

Age range	Under 16	16 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	Over 75
Case number	1	24	93	95	50	24	14	15

Mean	41 years
Median	38 years
Range	9-94 years

In 45 cases (10%), the individual was engaged with specialist addictions or mental health services at time of non-fatal overdose (although some could be under GP care). Of the remainder, 124 cases (29%) were eligible for referral to third sector agencies for follow-up and in 262 cases (68%) no action was taken. Reasons for no action include: lack of contact details; information received too late for follow up; the person had refused treatment; referral to addictions services was deemed inappropriate (e.g. accidental morphine overdose in a patient prescribed morphine in relation to a cancer

condition and who had no history of substance misuse); the person had died; the person was in prison following overdose; or the person lived out with Lothian.

12.9 Key findings: Drug-related deaths and non-fatal overdose

- In 2016 there were 134 deaths, a 34% increase from 2015. Most (72%) deaths occurred in the City of Edinburgh
- The highest risk group are single, socially isolated, white males with a long term history of poly substance misuse (including alcohol) and an increasing number (72% in 2016) are heroin/morphine related deaths
- Younger women are particularly vulnerable: deaths in women account for 25% of the total but the average age is 37 years (seven years younger than men)
- 59% of males were *not* in contact with substance misuse services at the time of death (compared to 45% of women).
- Drug-related death is a risk following release from police custody; 35 cases (26% of all deaths) occurred within six months, versus eight cases within six month of prison release.
- Co-morbidities include mental health conditions (60%), respiratory conditions (20%) and hepatitis C (10%)
- Non-fatal overdoses are a major risk factor for DRD, many individuals are young (37% of cases of non-fatal overdose were under 35 years), and only 10% of people identified were already engaged with addictions services at the time of overdose.