



## **Drug-related deaths in the UK: January-December 2012**

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Substance Abuse Deaths  
(NPSAD)**

**International Centre for  
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**St George's,  
University of London, UK**

National Programme on Substance Abuse Deaths  
(NPSAD)

Drug-related deaths reported by Coroners in England, Wales,  
Northern Ireland, Guernsey, Jersey and the Isle of Man; Police  
forces in Scotland; & the Northern Ireland Statistics and  
Research Agency

Annual Report 2013 on deaths between  
January-December 2012

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## Preface

This surveillance report presents information on drug-related deaths, both of addicts and non-addicts, that occurred during 2012 and for which Coronial inquests and similar formal investigations have been completed and information submitted. Its main purpose is to provide an analytical summary of data received, and through consistent surveillance to detect and identify emerging patterns and issues in respect of drug-related deaths. In this way, it contributes to the reduction and prevention of drug-related deaths in the UK due to the misuse of both licit and illicit drugs.

The Programme could not achieve its goals and objectives without the invaluable voluntary collaboration and co-operation of Coroners and their staff across England, Wales, Northern Ireland, Guernsey, Jersey, and the Isle of Man. Scottish drug-related deaths data are provided by the Scottish Crime and Drug Enforcement Agency. Additional data is provided by the Northern Ireland Statistics and Research Agency on drug-related poisonings from the General Mortality Register. The contributions from all these sources are important as it enables the Programme to maintain a UK-wide reporting and surveillance system. We thank them all for their active participation and support.

The findings show a decrease in the number of reported deaths in 2012 submitted to NPSAD by Coroners from England, Wales, Northern Ireland and the Islands when compared to the number reported in last year's report. Death notifications recorded by the Scottish Police also decreased. Part of the fall in Coroners' notifications may be attributed to a lower notification rate, and changes within the Coronial system.

As in previous years, the statistics in this report are intended to inform authorities at the local, regional and national levels, as well as health and other professionals about the serious consequences of drug abuse, especially polydrug use.

The report also provides a number of indications of changes in patterns of drug-related deaths over time, and highlights emerging issues so that appropriate action can be considered.

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## Acknowledgements

We are grateful to the Coroners of England, Wales, Northern Ireland, Guernsey, Jersey, and the Isle of Man, and their deputies, assistant-deputies and staff, for providing the information in this report. In some areas, the Coroners do not have the resources to provide information but have kindly permitted others that collate such information to pass this on to us on their behalf; we thank those individuals who have contributed information in this way. Thanks are also due to those Coroners that have allowed Programme staff to visit them and extract data from their records. We are also indebted to the Scottish Crime and Drug Enforcement Agency and the Northern Ireland Statistics and Research Agency for the provision of data relating to their respective countries.

We would like to give special thanks to Dr Stefania Chiappini (supported by the Gemelli General Hospital, Rome) and Carla Gimeno Clemente (supported by the Leonardo da Vinci programme) for their contribution to this report.

## Key findings for the UK and Islands

A total of 1,613 notifications of drug-related deaths occurring in 2012 in the UK and Islands were submitted to the Programme prior to the publication of this Annual Report, whilst over 100 more deaths in the UK for 2012 have been reported since analysis began. The data presented here were provided by 87 of the 111 Coroners' jurisdictions in England & Wales; an overall response rate of 78.4%, giving very high coverage for an entirely voluntary reporting system, and for this we thank the Coroners for their support.

The highest rates of drug-related deaths per 100,000 population aged 16 and over in 2012 were in the following DAAT areas: Liverpool (12.57); Blackburn with Darwen (11.45); Hammersmith and Fulham (11.34); Sunderland (10.55); and Manchester (8.79).

The principal demographic characteristics of the decedents have remained consistent with previous reports, with the majority of cases male (72.2%); under the age of 45 years (67.5%); and where ethnicity was known, White (97.3%).

Accidental poisoning remained the primary underlying cause of death in cases reported to NPSAD, accounting for 67.9% of deaths, followed by poisoning of undetermined intent (11.2%) and intentional self-poisoning (11.0%). Across all age groups, accidental poisoning remained the most frequent underlying cause of death, whilst a greater proportion of older females died of intentional self-poisoning than males. This pattern has remained consistent across the years.

Heroin/morphine remained the principal substance implicated in death in the UK and Islands for 2012; however the proportion of deaths in which the drug was implicated rose from its lowest level in 2011 to 36.4% in 2012. This increase of 4.5% from last year contrasts with the steady decline that was seen between 2009 (52.5%) and 2011 (31.9%) for deaths involving this drug. Another change in the drug-related death trends witnessed in recent years was seen in the proportion of cases involving methadone: deaths in 2012 involving this substance fell to 27.6%, which is in contrast to the steady rise seen from 2008 to 2011 (from 22.4% to 30.8%). Deaths involving hypnotics/sedatives, such as benzodiazepines, continued the consistent rise seen in previous years from 21.8% in 2008 to 30.3% in 2012.

The slight increase in deaths noted in last year's report in which stimulants such as cocaine and ecstasy were implicated has continued into 2012 (accounting for 1.7% and 1.2% respectively, up from 1.2% and 0.7%), whilst deaths involving amphetamines stabilised. Of particular interest is that the number of deaths in which cocaine was implicated was higher in Liverpool than the whole of either the Midlands and East of England, London, or the South of England. Taking into account the population size of these regions compared to Liverpool highlights the importance of this figure.

As in 2011, 2012 saw a substantial number of deaths reported involving Novel Psychoactive Substances (NPS), again dominated by methcathinones such as mephedrone. Deaths involving other drugs of interest such as pregabalin and venlafaxine are discussed along with selected NPS in Chapter 8: Commentary and Emerging Themes.

## Regional key findings

### England – NPSAD definition

A total of 1,147 deaths were reported to the Programme for 2012 (1,424 in 2011). Whilst the demographics and substances implicated in death remained relatively stable, there was a marked increase in the proportion of deaths involving heroin/morphine and a modest decrease in the proportion involving methadone. This is a reversal in the pattern seen in recent years. As seen in 2011, the most common prescribed medications implicated in death were anti-depressants and hypnotics/sedatives.

### England – Drug Strategy definition (“drug misuse”)

A total of 865 deaths were reported for 2012 (1,026 in 2011). After the substantial reduction in the proportion of deaths attributed to heroin/morphine in 2011 compared to 2010 noted in last year’s report (45.8% to 37.9%), the proportion in 2012 rose to pre-2011 levels of 42.8%. Heroin/morphine therefore remained the most frequently implicated substance in those deaths qualifying as “drug misuse” cases. Whilst deaths attributed to accidental poisoning remained at 2011 levels, a 3.5% decrease was seen in deaths attributed to intentional self-poisoning.

### Wales – NPSAD definition

A total of 58 deaths were reported to NPSAD for 2012 (81 in 2011). Similar to what was seen in England, there was a substantial rise of 5.5% in the percentage of deaths attributed to heroin/morphine in Wales for 2012. However, in contrast to England, there was a 3.5% rise in the proportion of deaths in which methadone was implicated. Since 2009 the percentage of Welsh deaths involving methadone has increased by 19.7%. Meanwhile, the proportion of deaths involving other opiates/opioid analgesics more than halved, from 30.4% in 2011 to 15.1% in 2012.

### Northern Ireland – NPSAD definition

The number of NPSAD deaths reported in 2012 was 78 (82 in 2011). As found in recent years, whilst heroin/morphine- and methadone-related deaths were much less prominent, other opiates/opioid analgesics played a much greater role in Northern Ireland (NI) than in the rest of the UK (60.8% in NI compared with 26.8% for the UK as a whole).

### Scotland – NPSAD definition

The number of deaths reported to police in Scotland fell in 2012 to 326 (from 339 in 2010). Consistent with previous years, opiates such as methadone play a larger role in Scottish deaths reported to the Programme than in other regions; this may be due in part to the different definition used by the police in Scotland when recording the deaths. Deaths involving hypnotics/sedatives and anti-depressants also increased between 2011 and 2012.

### The Islands – NPSAD definition

The Programme was notified of two deaths on the Isle of Man and two on Jersey during 2012. No NPSAD deaths were reported for Guernsey.

## Introduction

This fourteenth annual report continues the series of reports published by the National Programme on Substance Abuse Deaths (NPSAD). It covers deaths occurring between January and December 2012 reported to the Programme, as well as presenting information on emerging patterns and issues that need monitoring. The data reported are also used to inform key public agencies, both in the UK and Europe, on particular drugs and their role in deaths.

There is a chapter for each constituent part of the UK (England, Wales, Scotland, Northern Ireland and Guernsey, Jersey and Isle of Man) with a graphical summary on each chapter's cover page of the key findings for each country. Chapter 1 provides a substantive description of the situation regarding drug-related deaths in England during 2012 meeting the NPSAD case definition, including data tables for a detailed breakdown of areas within England. Chapter 2 looks at deaths in England meeting the definition used for the Drug Strategy. Chapters 3 to 6 cover the other parts of the UK and Islands, with Chapter 7 presenting findings for the UK as a whole. A commentary on emerging issues is given in Chapter 8, whilst Chapter 9 highlights other issues involving the cases reported. Further details about the Programme are given in the appendices.

### Definitions used in this report

**An NPSAD case** is defined as a death where any of the following criteria are met at a completed inquest, fatal accident inquiry or similar investigation:

- One or more psychoactive substance directly implicated in death;
- History of dependence or abuse of psychoactive drugs;
- Presence of Controlled Drugs at post mortem; or
- Cases with deaths directly due to drugs but with no inquest.

**A "Drug misuse" case** is defined as a death where:

- The underlying cause of death is drug abuse or drug dependence; or
- The underlying cause is drug poisoning **and** where any of the substances controlled under the Misuse of Drugs Act 1971 are involved.

The cases reported to the Programme by the SCDEA are those which meet the definition used by the Association of Chief Police Officers (Scotland) – "where there is prima facie evidence of a fatal overdose of controlled drugs". Full definitions for drug-related deaths can be found in the appendices.

### Other activities

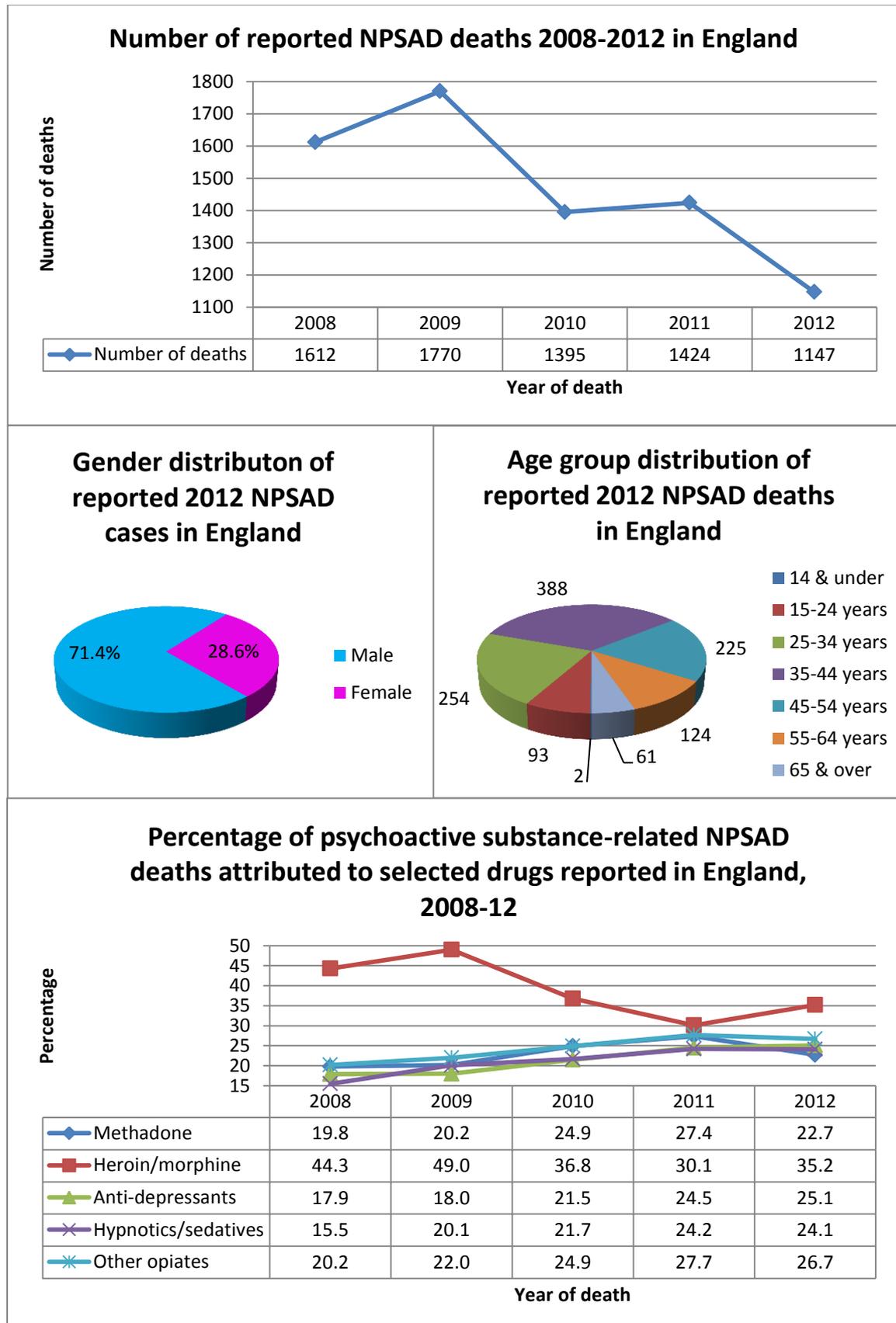
The Programme provides information to public consultations; parliamentary questions; and Ministerial briefings. For many years information has been provided to the Advisory Council on the Misuse of Drugs (ACMD) and the UK Drugs Early Warning System (DEWS) on substances being found in post mortem toxicology as well as epidemiological data relating to drug-related mortality. The analysis performed on the data is used along with other evidence, to inform the advice and recommendations given by the ACMD to Government Ministers about harms arising from drug use. The data provided play a vital role in the formulation of policy relating to particular drugs. Since 2012 data have been provided at the ACMD's request on:

- The presence and/or role of 'Z' (zaleplon, zolpidem and zopiclone) drugs in UK deaths

- UK deaths associated with ketamine analogues and derivatives including methoxetamine for the Ketamine and related matters Working Group
- UK deaths involving tramadol
- Novel Psychoactive Substances including benzofury and NBOMe

Similarly, findings from the Programme's Annual Report and research articles are used in national and international research. The European Monitoring Centre Drugs for and Drug Addiction has also used data provided by NPSAD on UK deaths where fentanyl and tramadol have been involved.

## Chapter 1: Drug-related deaths in England using the NPSAD definition



This chapter examines drug-related deaths which occurred in England in 2012, reported voluntarily by Coroners. Responses were voluntarily submitted from a total of 78 out of 99 Coroners' jurisdictions in England, giving a total coverage rate of 78.8%. This figure represents a remarkably high compliance rate for an entirely voluntary process, and we thank the Coroners of England for their continuing support.

The first section in this chapter examines the overall demographics of drug-related deaths reported to NPSAD; examines cases that capture a range of psychoactive drugs; and covers the history of drug use irrespective of the cause of death. Included within this section is a comparison of those with a history of drug use against those without. This section highlights any changes between 2011 and 2012 including figures for the Drug and Alcohol Action Team areas and a breakdown for the English regions.

## Profile of NPSAD cases

### 1.1 Demography

In 2012, there were 1,147 NPSAD drug-related deaths reported to the Programme. Male cases accounted for 71.4%, whilst 28.6% were female (Table 1.1 and Figure 1.1). Around forty-five per cent (45.2%) of cases were unemployed, and over sixty per cent (64.3%) of deaths occurred among those less than 45 years old. Those living alone accounted for 43.6% of cases; 39.6% lived with others; and 2.9% were of no fixed abode. Where ethnicity was known (n = 742), the vast majority were White (96.6%); with the remainder Black (1.6%); Indian (0.5%); and Pakistani and other ethnicities (1.2%).

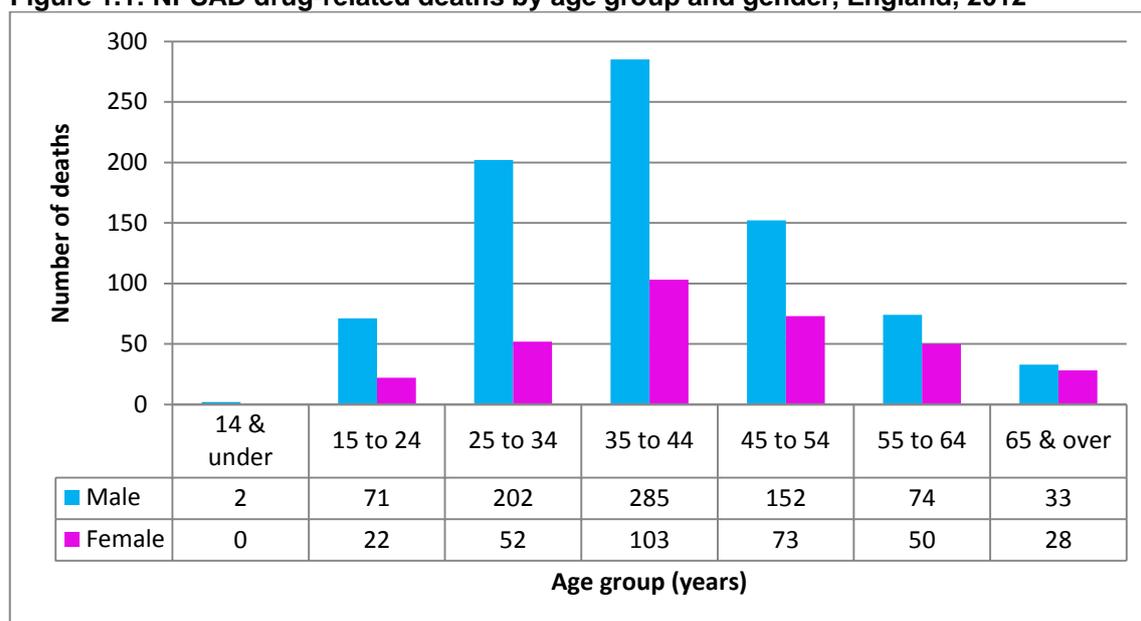
**Table 1.1: Demographic variables for NPSAD drug-related deaths, England, 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>1,147 (100.0)</b>
<b>Gender</b>	Male	819 (71.4)
	Female	328 (28.6)
<b>Employment status</b>	Employed	326 (28.4)
	Unemployed	519 (45.2)
	Childcare/house person	29 (2.5)
	Student	20 (1.7)
	Retired/invalidity/sickness	114 (9.9)
	Not known	139 (12.1)
<b>Living arrangements</b>	Alone	500 (43.6)
	With others	454 (39.6)
	Other	51 (4.4)
	No fixed abode	33 (2.9)
	Not known	109 (9.5)
<b>Ethnicity</b>	Black	12 (1.0)
	Indian	4 (0.3)
	White	717 (62.5)
	Other	9 (0.8)
	Not known	405 (35.3)

### 1.2 Age

Most NPSAD drug-related deaths in England during 2012 occurred amongst those aged 44 years and under (64.3%) (Figure 1.1). The median age at death was 41 years (interquartile range = 16). This is consistent with the statements of Bird *et al* (2003) and Ghodse *et al.* (2009), that older male, White drug users are at most risk of drug-related deaths.

**Figure 1.1: NPSAD drug-related deaths by age group and gender, England, 2012**



### 1.3 Location of death

In 2012, 70.8% of cases died at the deceased’s home address or another private residential address; 15.5% died in hospital; 6.1% died in a public place (e.g. park or public facilities); with 7.5% of cases dying at other or unspecified locations.

### 1.4 Underlying cause(s) of death

The categories of underlying cause(s) of death for coding within ICD-10 (Appendix 1) were as follows:

- Accidental poisoning (X40-X47): 63.1%
- Intentional self-poisoning (X60-X67): 13.7%
- Poisonings of undetermined intent (Y10-Y17): 12.1%
- Other (e.g. natural causes, drowning, hanging): 10.3%
- Unascertained (R99): 0.8%

Of the cases reported to NPSAD, a greater proportion of male deaths were attributed to accidental poisoning compared to female deaths (66.2% vs. 55.5%). In contrast, a proportionately larger number of female deaths were as a result of intentional self-poisoning (17.4% vs. 12.2%) and poisoning of undetermined intent (18.9% vs. 9.4%)

Deaths amongst those aged 44 years and younger were attributed to accidental poisoning more often than older cases (68.9% vs. 52.9%). By contrast, the deaths of those aged 45 years or over were not only more commonly attributed to intentional self-poisoning than younger cases (21.7% vs. 9.2%), but also to poisoning of undetermined intent (15.1% vs. 10.4%).

### 1.5 Manner of death

The results for 2012 cases are as follows:

- Accidental: 63.9%
- Suicidal: 16.7%
- Undetermined: 14.5%
- Natural: 4.4%
- Homicidal: 0.6%

A greater proportion of male deaths were deemed accidental compared to female deaths (67.0% vs. 56.1%). Conversely, there were proportionately more deaths attributed to suicide in females than in males (18.6% vs. 15.9%), and also deaths where the manner was undetermined (20.4% vs. 12.1%).

The manner of death of those aged less than 45 years was deemed accidental more often than in older cases (71.0% vs. 51.2%). Those aged 45 years or over had proportionately more deaths than younger cases attributed to suicide (24.1% vs. 12.5%), and to a manner that was undetermined (17.3% vs. 12.9%).

## Psychoactive substances implicated in death

### 1.6 Psychoactive substances

Of the 1,147 NPSAD-related deaths in 2012, psychoactive drugs, including alcohol in combination, were directly implicated in 1,033 (90.1%). Of these, the principal substances implicated were heroin/morphine (35.2%); alcohol in combination with other substances (33.7%); other opiates/opioid analgesics (26.7%); anti-depressants (25.1%); hypnotics/sedatives (24.1%); methadone (22.7%); and cocaine (11.1%) shown in Table 1.6.

**Table 1.6: Psychoactive substances implicated in NPSAD deaths, England, 2012**

Drug category	Number (%) of psychoactive drug cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>1,033 (100.0)</b>	
Alcohol in combination	-	348 (33.7)
Amphetamines	16 (1.5)	41 (4.0)
Anti-depressants	48 (4.6)	259 (25.1)
Anti-epileptics	6 (0.6)	25 (2.4)
Anti-Parkinson's	0 (0.0)	2 (0.2)
Anti-psychotics	5 (0.5)	60 (5.8)
Cannabis	2 (0.2)	24 (2.3)
Cocaine	24 (2.3)	115 (11.1)
Ecstasy-type drugs	19 (1.8)	38 (3.7)
GHB/GBL	6 (0.6)	11 (1.1)
Heroin/morphine	88 (8.5)	364 (35.2)
Hypnotics/sedatives	24 (2.3)	249 (24.1)
Mephedrone	1 (0.1)	13 (1.3)
Methadone	40 (3.9)	234 (22.7)
Other opiates/opioid analgesics	47 (4.5)	276 (26.7)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in death. Not all cases had psychoactive substances directly implicated in death: these are excluded from this table.

### 1.7 Psychoactive substances most frequently implicated for each age group

As shown in Table 1.8 below, for those aged 14 years and under, ecstasy-type drugs; heroin/morphine; and mephedrone were each implicated once (mephedrone and ecstasy-type drugs in one death; heroin/morphine alone in another); whilst for 15-24 year olds, alcohol in combination with other drugs was the most frequently implicated psychoactive substance in their deaths. Heroin/morphine was identified as the psychoactive substance most frequently implicated in the deaths of those aged between 25-44 years, representing 67.9% of all deaths implicated to the drug reported in England, in 2012. Alcohol in combination was also the most frequently implicated psychoactive substance in the deaths of those aged 45-54 years; with anti-depressants being the psychoactive substance implicated most often in the 55-64 years age

group. Hypnotics/sedatives were once again the drugs most frequently implicated in the deaths of those aged 65 and over.

### 1.8 Age group with highest frequency for each psychoactive substance implicated

As Table 1.8 below shows, alcohol in combination; amphetamines; anti-depressants; anti-Parkinson's; anti-psychotics; cannabis; cocaine; GHB/GBL; heroin/morphine; hypnotics/sedatives; methadone; and other opiates/opioid analgesics were most commonly implicated in the deaths of those aged between 35-44 years. Ecstasy-type drugs were again most commonly implicated in the deaths of the 15-24 age group. Mephedrone and anti-epileptics were implicated most often in the 25-34 age group.

**Table 1.8: Age group and psychoactive substance implicated in death, NPSAD cases, England, 2012**

		Age group at death							Total number of cases where substance implicated	% of total deaths overall with psychoactive substances implicated
		14 & under	15-24	25-34	35-44	45-54	55-64	65+		
Number of cases where psychoactive substance implicated in death (% of total deaths with substance implicated)	<b>Alcohol in combination</b>	0 (0.0)	24 (6.9)	74 (21.3)	131 (37.6)	76 (21.8)	33 (9.5)	10 (2.9)	348	33.7%
	<b>Amphetamines</b>	0 (0.0)	2 (4.9)	9 (22.0)	15 (36.6)	12 (29.3)	3 (7.3)	0 (0.0)	41	4.0%
	<b>Anti-depressants</b>	0 (0.0)	16 (6.2)	41 (15.8)	74 (28.6)	67 (25.9)	44 (17.0)	17 (6.6)	259	25.1%
	<b>Anti-epileptics</b>	0 (0.0)	2 (8.0)	9 (36.0)	7 (28.0)	3 (12.0)	3 (12.0)	1 (4.0)	25	2.4%
	<b>Anti-Parkinson's</b>	0 (0.0)	0 (0.0)	0 (0.0)	2 (100)	0 (0.0)	0 (0.0)	0 (0.0)	2	0.2%
	<b>Anti-psychotics</b>	0 (0.0)	3 (5.0)	15 (25.0)	17 (28.3)	11 (18.3)	12 (20.0)	2 (3.3)	60	5.8%
	<b>Cannabis</b>	0 (0.0)	7 (29.2)	4 (16.7)	9 (37.5)	3 (12.5)	0 (0.0)	1 (4.2)	24	2.3%
	<b>Cocaine</b>	0 (0.0)	6 (5.2)	35 (30.4)	40 (34.8)	21 (18.3)	10 (8.7)	3 (2.6)	115	11.1%
	<b>Ecstasy-type</b>	1 (2.6)	19 (50.0)	7 (18.4)	8 (21.1)	3 (7.9)	0 (0.0)	0 (0.0)	38	3.7%
	<b>GHB/GBL</b>	0 (0.0)	1 (9.1)	4 (36.4)	6 (54.5)	0 (0.0)	0 (0.0)	0 (0.0)	11	1.1%
	<b>Heroin/morphine</b>	1 (0.3)	19 (5.2)	93 (25.5)	154 (42.3)	57 (15.7)	29 (8.0)	11 (3.0)	364	35.2%
	<b>Hypnotics/sedatives</b>	0 (0.0)	13 (5.2)	55 (22.1)	98 (39.4)	39 (15.7)	23 (9.2)	21 (8.4)	249	24.1%
	<b>Mephedrone</b>	1 (7.7)	2 (15.4)	5 (38.5)	2 (15.4)	3 (23.1)	0 (0.0)	0 (0.0)	13	1.3%
	<b>Methadone</b>	0 (0.0)	13 (5.6)	63 (26.9)	97 (41.5)	38 (16.2)	20 (8.5)	3 (1.3)	234	22.7%
<b>Other opiates/opioid analgesics</b>	0 (0.0)	11 (4.0)	45 (16.3)	87 (31.5)	68 (24.6)	43 (15.6)	21 (7.6)	276	26.7%	

Notes: Column totals may sum to more than 100% since more than one substance may be implicated in a death. Not all cases had drugs directly implicated in death; these are excluded from this table.

## 1.9 Gender and implicated psychoactive substance

The type of psychoactive substances implicated in fatalities is somewhat different between male and female cases.

Among male cases in which psychoactive drugs were implicated (n = 730), the top five substances most frequently implicated alone or in combination, presented in numerical order were:

1. Heroin/morphine (38.4%)
2. Alcohol in combination (36.0%)
3. Other opiates/opioid analgesics (25.5%)
4. Methadone (24.5%)
5. Hypnotics/sedatives (24.2%).

Amongst female cases in which psychoactive drugs were implicated (n = 303), the top five substances most frequently implicated alone or in combination were:

1. Anti-depressants (39.9%)
2. Other opiates/ opioid analgesics (29.7%)
3. Alcohol in combination (28.1%)
4. Heroin/morphine (27.7%)
5. Hypnotics/sedatives (23.8%)

Comparing the type of psychoactive substances implicated in the deaths of males and females reveals that there is a higher proportion of male deaths compared to female deaths involving heroin/morphine; alcohol in combination; methadone; hypnotics/sedatives; cocaine; GHB/GBL; cannabis; amphetamines; anti-Parkinson's drugs; mephedrone; and ecstasy-type drugs.

Females, compared to males, show a greater proportion of deaths implicating anti-depressants; other opiates/opioid analgesics; anti-psychotics; and anti-epileptics.

## 1.10 Polysubstances

In 2012, 14.0% of the 1,033 psychoactive substance-related deaths reported to NPSAD involved heroin/morphine in combination with alcohol; whilst 8.5% involved heroin/morphine and hypnotics/sedatives combined; and 7.8% involved heroin/morphine in combination with methadone. Deaths involving hypnotics/sedatives with anti-depressants accounted for 7.1% of cases; 8.8% involved other opiates/opioid analgesics combined with alcohol; whilst 7.9% of deaths involved heroin/morphine and other opiates/ opioid analgesics combined. The combination of heroin/morphine and other opiates/opioid analgesics has fluctuated between 4% and 9% over the past ten years. Over the last decade alcohol in combination with two other stimulants constantly featured. Combinations of drugs, with or without alcohol, pose greater risks for mortality (Ghodse *et al.*, 2010).

In 2012, several different substance types, when implicated in combination, often featured with alcohol. Alcohol was implicated in 54.2% of deaths involving cannabis; 40.6% involving hypnotics/sedatives; 39.8% involving heroin/morphine; 38.9% involving methadone; 38.5% involving mephedrone; 33.0% involving other opiates/opioid analgesics; 32.8% involving anti-depressants; and 31.3% of cases involving cocaine.

## 1.11 Single substances

In 2012, there were 326 (31.6%) psychoactive substance deaths in which only one of the following substances was implicated. Of these 326 deaths from single substances, heroin/morphine accounted for 26.9% of deaths; anti-depressants – 14.0%; other opiates/opioid analgesics – 14.4%; methadone – 12.3%; hypnotics/sedatives – 7.4%; cocaine – 7.4%; ecstasy-type drugs – 5.8%; amphetamines – 4.9%; anti-epileptics – 1.8%; GHB/GBL – 1.8%; anti-psychotics – 1.5%; cannabis – 0.6%; and mephedrone – 0.3%.

## 1.12 Prescribed psychoactive drugs

In total, 655/1,147 cases (57.1%) were reported to be receiving prescribed psychoactive drugs at the time of their death in 2012 (Table 1.12); whilst 244 cases (21.3%) were confirmed as not being prescribed psychoactive medication; and 248 had unknown prescription status (21.6%). Of those who were prescribed psychoactive drugs (n = 655), prescribed drugs reported were: anti-depressants (58.0%); hypnotic/sedatives (39.8%); other opiates/opioid analgesics (31.0%); anti-psychotics (18.9%); methadone (17.9%); anti-epileptics (16.6%); heroin/morphine (6.3%); and anti-Parkinson's (1.7%). 'Polypharmacy', i.e. multiple prescriptions of psychoactive drugs, occurred in 63.8% (418/655) of these cases.

Age appeared to be related to whether the cases were on prescribed psychoactive medication or not when prescribing history was known at the time of death, with 40.6% of 15-24 year olds prescribed psychoactive medication; 25-34 (63.2%); 35-44 (76.4%); 45-54 (78.7%); 55-64 (90.8%); and 65 and over (74.5%).

**Table 1.12: Prescribed psychoactive medication, NPSAD cases, England, 2012**

Drug category	Number (%) of cases on prescribed psychoactive medication by drug	Number (%) of these cases where same prescribed drug was implicated in death
<b>TOTAL</b>	<b>655 (100.0)</b>	-
<b>Anti-depressants</b>	380 (58.0)	177 (46.6)
<b>Anti-epileptics</b>	109 (16.6)	16 (14.7)
<b>Anti-Parkinson's</b>	11 (1.7)	2 (18.2)
<b>Anti-psychotics</b>	124 (18.9)	44 (35.5)
<b>Heroin/morphine</b>	41 (6.3)	33 (80.5)
<b>Hypnotic/sedatives</b>	261 (39.8)	109 (41.8)
<b>Methadone</b>	117 (17.9)	78 (66.7)
<b>Other opiates/opioid analgesics</b>	203 (31.0)	117 (57.6)

Note: Column totals may sum to more than 100% since more than one substance may be prescribed to an individual and more than one substance may be implicated in a death.

The following paragraphs further examine NPSAD deaths and the involvement of prescribed medication.

Methadone, alone and in combination with other drugs, was implicated in 234 cases. Of these, 156 people (66.7%) may have obtained methadone from illicit sources, compared to 78 (33.3%) who were known to be receiving prescribed methadone prior to their death. Methadone alone was implicated in 40 cases. Of these, 30 (75.0%) may have obtained the drug from illicit sources, compared to 10 (25.0%) who were known to be receiving prescribed methadone.

Hypnotic/sedatives, alone and in combination with other drugs, were implicated in 249 cases. Of these, 109 (43.8%) were known to be prescribed these drugs, thus it is now known how 140 cases (56.2%) obtained them. Of the 24 cases in which hypnotic/sedatives alone were implicated, 11 (45.8%) had received the drugs on prescription, compared to 13 (54.2%) who may have obtained them illegally.

Anti-depressants, alone and in combination with other drugs, were implicated in 259 cases. Of these, 177 (68.3%) were known to be receiving prescribed anti-depressants at the time of their death, compared to 82 (31.7%) who may have taken drugs prescribed to others. Anti-depressants alone were implicated in 48 cases. Of these, 35 (72.9%) were known to be prescribed anti-depressants, compared to 13 (27.1%) who may have used drugs that were prescribed to others.

Other opiates/opioid analgesics (e.g. dextropropoxyphene, or where the exact opiate-type drug was unknown) alone and in combination with other drugs, were implicated in 276 cases. Of these, 159 (57.6%) may have obtained the drug by illicit means, compared to the 117 (42.4%) who were known to be prescribed other opiates/opioid analgesics. Other opiates/opioid analgesics alone were implicated in 47 cases. In 25 (53.2%) of these cases the drugs were listed as prescribed to the individual in whose death the drugs were implicated, however for the remaining 22 (46.8%) cases, the drugs appear to have been obtained by other means.

Heroin/morphine, alone and in combination with other drugs, was implicated in 364 deaths. 331 (90.9%) of these cases were not prescribed heroin/morphine, and as such may have obtained the drug illegally. Only 33 (9.1%) of the cases with heroin/morphine implicated were receiving the drug on prescription. Where heroin/morphine was implicated alone, out of 88 cases, only 9 (10.2%) were known to be prescribed the drug, meaning 79 individuals (89.8%) may have obtained heroin/morphine illegally.

## **Drug abuse/dependence**

Information was available for 839/1,147 individuals on their past or current history of drug abuse/dependence. Those with such a history (DAs) accounted for 65.9% (n = 553/839). Those without such a history - non drug abusers (NDAs) - accounted for 34.1% (286/839). Out of the total number of NPSAD cases reported for 2012, 26.9% (308/1147) were reported as “not known” with respect to known history of drug abuse/dependence. These cases were excluded from further analysis.

### **1.13 Demography**

A greater proportion of those with a history of drug abuse (DA) were male than those without such a history (NDA) (79.6% vs. 55.6%); and 44 years and younger (74.7% compared to 50.7%). The median age at death for DAs was 39 years (interquartile range = 12), while that for NDAs was 44 years (interquartile range = 22).

### **1.14 Location of death**

When location of death was known, there was little difference between the two groups with respect to dying at home or at a private residential address, with 71.2% of DAs and 74.1% NDAs dying at such a location. Indeed, hospital deaths also accounted for a similar proportion of deaths in both DA (14.3%) and NDA (13.6%) groups. A relatively similar proportion of DAs (5.4%) and NDAs (4.2%) died in public places (e.g. park, street, public toilets etc.).

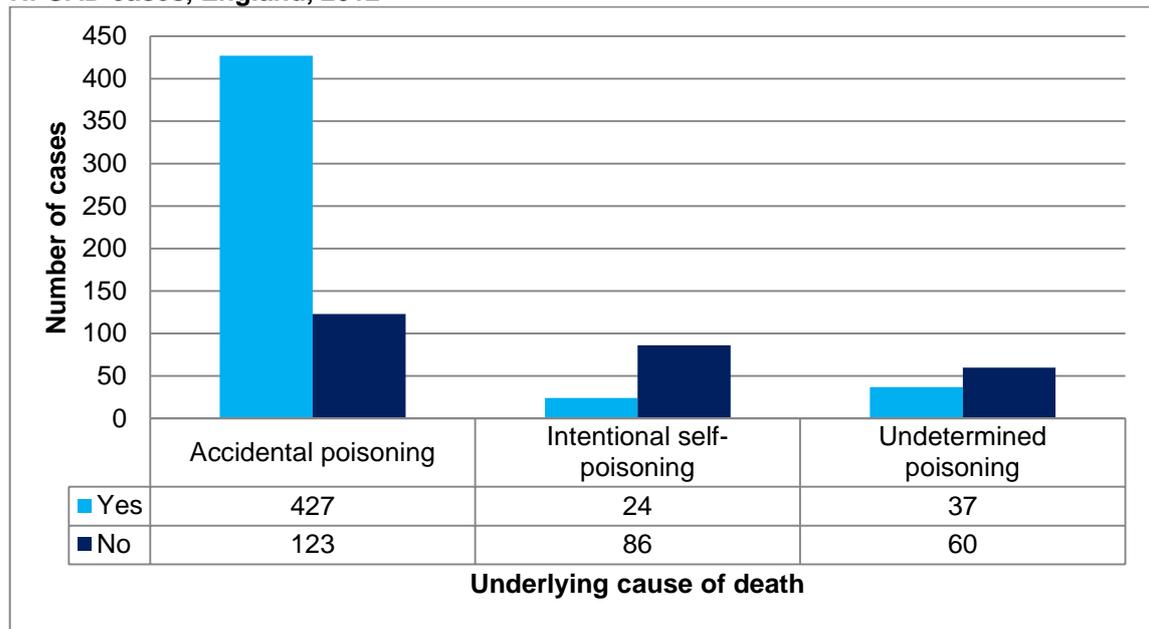
### **1.15 Underlying cause(s) of death**

A greater percentage of DAs than NDAs died from accidental poisoning (77.2% vs. 43.0%) – see Figure 1.15. Conversely, a greater proportion of NDAs died as a result of intentional self-poisoning compared to DAs (30.1% vs. 4.3%), and also poisoning of undetermined intent (21.0% vs. 6.7%).

### **1.16 Manner of death**

A similar pattern is exhibited with regard to manner of death. A greater percentage of DAs than NDAs died an accidental death (79.4% vs. 44.2%). In contrast, deaths of NDAs were more commonly attributed to suicide than those of DAs (31.5% vs. 7.1%), or to a death where the manner was undetermined (22.7% vs. 8.3%). Natural deaths were slightly more common amongst DAs (4.9%) than NDAs (3.1%).

**Figure 1.15: Principal underlying cause(s) of death by drug abuse/dependence history, NPSAD cases, England, 2012**



## Changes between 2011 and 2012

The following section compares deaths in 2012 with those that occurred in 2011. Deaths in 2012 are reported as 1,147 whereas in 2011, 1,424 cases were reported. This is a decrease in reported NPSAD deaths of 19.5% for 2012, however this does not mean there was an actual drop of this magnitude between the years. This reduction in reported cases is likely due to a combination of a reduced catchment period for drug-related death notifications compared with the previous report and a lower coverage rate of Coroners voluntarily reporting to the Programme. Furthermore, due to the nature of the Coronial reporting system and lengthy inquest procedures, the figures for 2012 (and 2011 to a lesser extent) can be expected to increase as further inquests on drug-related deaths of those who died in these calendar years are finally completed (some inquests do happen in the same calendar year); indeed reports of more than 100 other drug-related deaths in 2012 have been notified to the Programme since the analysis for this report began. However, the key information presented in this report is still highly valuable, as it is the percentage changes rather than absolute figures which are most informative, as they will be largely unaffected by fluctuations in overall reported deaths.

### 1.17 Demography

There were small changes between 2011 and 2012 in the demographic profile of cases. There was a slight increase in the proportion of male deaths, from 70.4% to 71.4%, with a 2.2% drop in the percentage of deaths amongst White cases. The proportion of deaths amongst those aged 44 years and under rose by 2.1% (62.2% in 2011 to 64.3%). Those listed as living with others fell by 2.2%, and those with no fixed abode increased by 0.9%. Increases were observed in the proportion of deaths occurring at a defined residential address (from 68.9% to 70.8%), and those occurring in hospital (from 12.6% to 15.5%). A 1.5% rise was seen in the number of people listed as drug addicts/abusers when history was known.

### 1.18 Underlying cause(s) of death

The proportion of deaths attributed to accidental drug poisoning rose slightly from 62.6% in 2011 to 63.1% in 2012, with intentional self-poisoning deaths decreasing from 15.5% to 13.7% in 2012. Poisonings of undetermined intent accounted for 10.6% in 2011, whilst in 2012 this rose to 12.1%.

### 1.19 Manner of death

The percentage of deaths attributed to accidents in 2012 decreased by 1.7%, and the percentage attributed to suicide also decreased, by 1.8%. Small rises were seen in the proportion of natural deaths (+1.0%); homicides (+0.3%); and deaths of undetermined intent (+2.4%).

### 1.20 Psychoactive substances implicated in death

In 2012 there were 1,033/1,147 deaths that involved psychoactive substances; 114 cases from 2012 were therefore excluded from the following analyses as they did not involve psychoactive substances. In 2011, 1,308/1,424 cases involved psychoactive substances, thus 116 cases from 2011 were excluded from the calculations below.

### 1.21 Psychoactive substances, both alone and in combination

There were both absolute and proportional increases in deaths involving ecstasy-type drugs and GHB/GBL, either alone or in combination with other drugs. There were proportional increases in the following substances both alone and in combination: alcohol in combination; anti-depressants; anti-psychotics; cannabis; cocaine; and heroin/morphine (Table 1.21). The 5.1% increase in the proportion of heroin/morphine-related deaths between 2011-12 is of interest when compared with the 6.9% decrease seen between 2010-11.

Moderate proportional decreases were seen in the following substances either alone or in combination: anti-epileptics; anti-Parkinson's; hypnotics/sedatives; other opiates/opioid analgesics; and methadone. The 4.7% decrease in the proportion of deaths involving methadone between 2011-12 contrasts with the 2.7% increase seen in 2010-2011.

### **1.22 Single substance deaths**

There were very slight changes between 2011 and 2012 in terms of the proportions accounted for by deaths involving a single psychoactive substance. For substances implicated alone, there were absolute and proportional increases in deaths attributed to cocaine; ecstasy-type drugs; and GHB/GBL. A proportional increase was seen in deaths in which anti-epileptics were implicated alone.

Proportional decreases were seen in deaths in which the following drugs were implicated alone: amphetamines; anti-depressants; anti-Parkinson's; anti-psychotics; cannabis; methadone; and other opiates/opioid analgesics (Table 1.22). There was no change in the proportion of deaths in 2011-12 involving either heroin/morphine or hypnotics/sedatives when implicated alone.

**Table 1.21: Changes in percentages of psychoactive substances, alone and in combination, implicated in psychoactive substance deaths, NPSAD cases, England, 2011 and 2012**

Substance	2011 (n=1172) %	2011 (n=1308) %	2012 (n=1033) %	Change (percentage points)
<b>Alcohol in combination</b>	27.7	30.7	33.7	+3.0
<b>Amphetamines</b>	3.7	3.8	4.0	+0.2
<b>Anti-depressants</b>	24.5	24.5	25.1	+0.6
<b>Anti-epileptics</b>	2.9	3.0	2.4	-0.6
<b>Anti-Parkinson's</b>	0.4	0.4	0.2	-0.2
<b>Anti-psychotics</b>	5.6	5.7	5.8	+0.1
<b>Cannabis</b>	2.0	2.1	2.3	+0.2
<b>Cocaine</b>	10.4	9.9	11.1	+1.2
<b>Ecstasy-type drugs</b>	1.7	1.6	3.7	+2.1
<b>GHB/GBL</b>	0.9	0.8	1.1	+0.3
<b>Heroin/morphine</b>	30.3	30.1	35.2	+5.1
<b>Hypnotics/sedatives</b>	24.4	24.2	24.1	-0.1
<b>Methadone</b>	27.9	27.4	22.7	-4.7
<b>Other opiates/ opioid analgesics</b>	28.0	27.8	26.7	-1.1

Note: Column totals may sum to more than 100% since more than one substance may be implicated in a death.  
†On average approximately 300 cases of inquest from the year of death are not completed and are added to next year.  
Column highlighted in:   does not include deaths in 2011 reported since the last report and is therefore not used in the change in percentage point calculations

**Table 1.22: Changes in percentages of single psychoactive substances implicated alone in psychoactive substance deaths, NPSAD cases, England, 2011 and 2012**

Substance	2011 (n=1172) %	2011 (n=1308) %	2012 (n=1033) %	Change (percentage points)
<b>Amphetamines</b>	1.6	1.6	1.5	-0.1
<b>Anti-depressants</b>	5.5	5.8	4.6	-1.2
<b>Anti-epileptics</b>	0.5	0.5	0.6	+0.1
<b>Anti-Parkinson's</b>	0.1	0.1	0.0	-0.1
<b>Anti-psychotics</b>	1.3	1.2	0.5	-0.7
<b>Cannabis</b>	0.5	0.5	0.2	-0.3
<b>Cocaine</b>	1.5	1.5	2.3	+0.8
<b>Ecstasy-type drugs</b>	0.5	0.5	1.8	+1.3
<b>GHB/GBL</b>	0.3	0.4	0.6	+0.2
<b>Heroin/morphine</b>	8.8	8.5	8.5	0.0
<b>Hypnotics/sedatives</b>	2.4	2.3	2.3	0.0
<b>Methadone</b>	7.0	7.0	3.9	-3.1
<b>Other opiates/ opioid analgesics</b>	6.9	6.9	4.5	-2.4

†On average approximately 300 cases of inquest from the year of death are not completed and are added to next year.  
Column highlighted in:   does not include deaths in 2011 reported since the last report and is therefore not used in the change in percentage point calculations

## Deaths per 100,000 population by area

This section provides a break-down of information by different geographical units for NPSAD deaths of those aged 16 years and older. Table 1A gives breakdowns for number of reported NPSAD deaths and death rate per 100,000 population for the Drug and Alcohol Action Team (DAAT) area for cases' usual area of residence and place of death. Table 1B gives detailed breakdowns by place of death DAAT area for key aspects, such as key demographic details and primary drugs implicated, for cases of all ages.

### Drug and Alcohol Action Team areas with highest and lowest rates in 2012

The following five DAAT areas in England had the highest reported NPSAD drug-related death rates per 100,000 population in 2012 for individuals who were recorded as resident within their coverage area (but did not necessarily die there): Blackpool (18.90 = +4.37 compared to 2011); Liverpool (11.80 = +3.27); Hammersmith and Fulham (10.67 = +3.48); Blackburn with Darwen (10.57 = -3.47); and Brighton and Hove (9.55 = -0.1).

The highest rates of drug-related deaths reported for 2012 for individuals that died within specified DAAT areas (but were not necessarily resident there) were found in: Liverpool (12.57 = +3.78); Blackburn with Darwen (11.45 = +0.05); Hammersmith and Fulham (11.34 = +1.54); Sunderland (10.55 = +1.30); and Manchester (8.79 = -3.62). The death rates per 100,000 population for all DAAT areas can be found in Table 1A.

It is important to note that due to the geographic coverage of DAAT areas and Coroners' jurisdictions not always being equivalent, it is not possible to give clear statements with regards how the figures presented here for DAAT areas have been affected by those Coroners' jurisdictions that did not submit drug-related death notifications to the Programme.

Table 1B provides detailed breakdowns for NPSAD deaths reported by DAAT area, including details on information such as ethnicity and selected drug-types implicated in those deaths. Comparing these figures for English regions shows that certain drugs were implicated more often in certain places than others. For example, in the South of England heroin/morphine was implicated in 37.2% of cases, whilst in London this figure dropped to 22.2%. Methadone was implicated most often in the Midlands and East of England (28.8% of deaths); whilst in the South of England it was only implicated in 12.8% of cases. Hypnotics/sedatives were involved in the deaths of a nationwide low of 15.2% of deaths in London, whilst these same substances accounted for 26.5% of deaths in the South of England. Ecstasy-type drugs were implicated in 5.3% of deaths in DAAT areas in the Midlands and East of England, whilst only 0.9% of cases in the South of England had such substances implicated. As in 2011, London exhibited the highest proportion of cocaine-related deaths (15.2%), whilst it was implicated in just 3.4% of deaths in the Midlands and East of England. However, it is important to note that when taking into account absolute figures, Liverpool alone had more deaths involving cocaine (20) than the whole of the following regions: Midlands and East of England; London; and more than the South of England (Table 1B). This is of particular interest when taking into account the population of Liverpool compared with these entire regions of the country.

### Commentary

The demographic profile of drug-related deaths in England meeting the NPSAD case criteria for 2011 remains generally consistent with previous reports: a higher proportion of males to females, with the majority of White ethnicity and aged less than 45 years. The proportion of deaths reported to the Programme amongst those younger than 25 years has fallen by 1.1% since 2010; and 4.4% over the past decade. Conversely, the proportion of NPSAD deaths of those aged 35-44 years has risen by 2.2% since 2010; and 4.8% over the past decade.

Consistent with previous years, the majority of deaths reported to the Programme for 2012 were as a direct result of accidental poisoning. However, when compared with females and males of younger age groups, older females exhibit higher rates of deaths attributed to suicide by self-poisoning.

In 2012 as in 2011, heroin/morphine was the drug most frequently implicated in the deaths of males, closely followed by alcohol in combination with other drugs. In contrast, anti-depressants and other opiates/opioid analgesics were most frequently implicated in the deaths of females.

The cases reported to the Programme which occurred in England for 2012 show increases in the proportions of deaths involving amphetamines; anti-depressants; anti-psychotics; cannabis; cocaine; ecstasy-type drugs; GHB/GBL; heroin/morphine; and alcohol in combination with other substances. Meanwhile, deaths involving anti-epileptics; anti-Parkinson's; hypnotics/sedatives; methadone; and other opiates/opioid analgesics decreased.

The rise in monovalent deaths noted in last year's report between 2010-11 appears to have reversed, with a substantial decrease from around 37% to below 32%. With regards polysubstance deaths, heroin/morphine combined with alcohol still remains the most frequent polysubstance combination – a pattern that has remained consistent over the past ten years.

The most commonly prescribed medications implicated in death were anti-depressants, followed by hypnotics/sedatives and other opiates/opioid analgesics. Using available information on individuals' prescribed medication status, it would appear that over 56% of hypnotics/sedatives-; other opiates/opioid analgesics-; and methadone-related deaths were sourced either illegally, or through other means.

**Table 1A: NPSAD cases in 2012 by Public Health England Regions, Centres and Drug and Alcohol Action Teams (16 years and over) – number and rate per 100,000 population**

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
ENGLAND	No	Rate	No	Rate
<b>NORTH OF ENGLAND</b>				
<b>1. North East</b>				
County Durham	24	5.64	5	1.18
Darlington	3	3.52	3	3.52
Gateshead	-	-	-	-
Hartlepool	-	-	-	-
Middlesbrough	7	6.33	5	4.52
Newcastle upon Tyne	1	0.43	-	-
North Tyneside	12	7.24	13	7.84
Northumberland	6	2.28	6	2.28
Redcar & Cleveland	5	1.90	6	2.28
South Tyneside	-	-	-	-
Stockton-on-Tees	7	4.52	4	2.58
Sunderland	21	9.23	24	10.55
<b>2. Cumbria &amp; Lancashire</b>				
Blackburn with Darwen	12	10.57	13	11.45
Blackpool	22	18.90	9	7.73
Cumbria	23	5.53	21	5.05
Lancashire	66	6.87	59	6.14
<b>3. Yorkshire &amp; Humber</b>				
Barnsley	1	0.53	-	-
Bradford	16	3.98	15	3.73
Calderdale	1	0.61	1	0.61
Doncaster	13	5.30	6	2.45
East Riding of Yorkshire	5	1.79	6	2.14

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>NORTH OF ENGLAND</b>				
Kingston upon Hull	15	7.21	15	7.21
Kirklees	12	3.54	9	2.66
Leeds	34	5.52	33	5.36
North East Lincolnshire	-	-	-	-
North Lincolnshire	2	1.46	1	0.73
North Yorkshire	4	0.80	4	0.80
Rotherham	5	2.39	3	1.44
Sheffield	3	0.66	1	0.22
Wakefield	13	4.86	13	4.86
York	-	-	2	1.20
<b>4. Greater Manchester</b>				
Bolton	11	4.97	7	3.16
Bury	-	-	1	4.52
Manchester	29	7.08	36	8.79
Oldham	1	0.57	-	-
Rochdale	-	-	-	-
Salford	6	3.14	6	3.14
Stockport	9	3.91	9	3.91
Tameside	13	7.33	12	6.77
Trafford	4	2.20	3	1.65
Wigan	4	1.54	3	1.16
<b>5. Cheshire &amp; Merseyside</b>				
Cheshire	18	3.11	20	3.46
Halton	2	1.98	1	0.99
Knowsley	2	1.70	-	-
Liverpool	46	11.80	49	12.57
Sefton	3	1.32	2	0.88

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>NORTH OF ENGLAND</b>				
St Helens	-	-	-	-
Warrington	7	4.25	6	3.64
Wirral	13	4.98	11	4.22
<b>MIDLANDS &amp; EAST OF ENGLAND</b>				
<b>6. East Midlands</b>				
Derby	5	2.51	4	2.01
Derbyshire	17	2.67	15	2.35
Leicester	5	1.92	3	1.15
Leicestershire	5	0.93	2	0.37
Lincolnshire	2	0.34	1	0.17
Nottingham	-	-	-	-
Nottinghamshire	1	0.15	2	0.31
Rutland	-	-	-	-
<b>7. West Midlands</b>				
Birmingham	28	3.35	33	3.94
Coventry	-	-	-	-
Dudley	1	0.39	1	0.39
Herefordshire	-	-	-	-
Sandwell	2	0.82	-	-
Shropshire	9	3.52	8	3.13
Solihull	1	0.60	1	0.60
Staffordshire	24	3.42	16	2.28
Stoke-on-Trent	13	6.47	13	6.47
Telford & Wrekin	1	0.75	1	0.75
Walsall	3	1.40	2	0.93
Warwickshire	1	0.22	-	-

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>MIDLANDS &amp; EAST OF ENGLAND</b>				
Wolverhampton	-	-	-	-
Worcestershire	3	0.64	-	-
<b>8. Anglia &amp; Essex</b>				
Cambridgeshire	1	0.19	1	0.19
Essex	2	0.17	4	0.35
Norfolk	35	4.86	36	5.00
Peterborough	1	0.68	1	0.68
Southend-on-Sea	-	-	-	-
Suffolk	11	1.84	5	0.83
Thurrock	-	-	-	-
<b>9. South Midlands &amp; Hertfordshire</b>				
Bedfordshire	14	4.16	14	4.16
Hertfordshire	25	2.77	21	2.33
Luton	9	5.69	8	5.05
Milton Keynes	-	-	-	-
Northamptonshire	18	3.21	15	2.68
<b>LONDON</b>				
<b>10. London boroughs</b>				
Barking & Dagenham	1	0.71	1	0.71
Barnet	1	0.35	-	-
Bexley	1	0.54	1	0.54
Brent	1	0.40	-	-
Bromley	3	1.19	3	1.19
Camden	2	1.07	1	0.53
City of London	-	-	-	-
Croydon	3	1.04	5	1.73
Ealing	6	2.22	9	3.33
Enfield	-	-	-	-

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
LONDON				
Greenwich	2	0.98	2	0.98
Hackney	4	2.00	2	1.00
Hammersmith & Fulham	16	10.67	17	11.34
Haringey	-	-	-	-
Harrow	1	0.52	-	-
Havering	2	1.03	1	0.51
Hillingdon	10	4.50	10	4.50
Hounslow	15	7.29	16	7.78
Islington	5	2.82	1	0.56
Kensington & Chelsea	2	1.52	1	0.76
Kingston-upon-Thames	8	6.04	7	5.29
Lambeth	1	0.39	2	0.79
Lewisham	1	0.45	1	0.45
Merton	2	1.23	1	0.62
Newham	-	-	-	-
Redbridge	1	0.45	-	-
Richmond upon Thames	5	3.31	6	3.97
Southwark	2	0.84	-	-
Sutton	2	1.29	3	1.94
Tower Hamlets	5	2.38	3	1.43
Waltham Forest	-	-	-	-
Wandsworth	1	0.39	1	0.39
Westminster	3	1.59	5	2.64

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>SOUTH OF ENGLAND</b>				
<b>11. Surrey, Sussex &amp; Kent</b>				
Brighton & Hove	22	9.55	16	6.94
East Sussex	10	2.28	6	1.37
Kent	25	2.09	26	2.18
Medway towns	1	0.47	-	-
Surrey	19	2.06	21	2.28
West Sussex	17	2.54	15	2.24
<b>12. Thames Valley</b>				
Bracknell Forest	1	1.09	1	1.09
Buckinghamshire	8	1.96	8	1.96
Oxfordshire	4	0.75	4	0.75
Reading	-	-	-	-
Slough	2	1.86	2	1.86
West Berkshire	-	-	-	-
Windsor & Maidenhead	4	3.42	5	4.28
Wokingham	1	0.80	-	-
<b>13. Wessex</b>				
Bournemouth	13	8.27	11	7.00
Dorset	8	2.30	7	2.01
Hampshire	17	1.57	13	1.20
Isle of Wight	0	0.00	1	0.86
Poole	4	3.26	4	3.26
Portsmouth	3	1.78	2	1.19
Southampton	14	7.13	7	3.57

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>SOUTH OF ENGLAND</b>				
<b>14. Devon, Cornwall &amp; Somerset</b>				
Cornwall & Isles of Scilly	11	2.45	8	1.78
Devon	25	4.04	25	4.04
Plymouth	1	0.47	-	-
Somerset	10	2.27	11	2.50
Torbay	1	0.91	-	-
<b>15. Avon, Gloucestershire &amp; Wiltshire</b>				
Bath & North East Somerset	-	-	-	-
Bristol	1	0.28	-	-
Gloucestershire	22	4.45	18	3.64
North Somerset	1	0.60	1	0.60
South Gloucestershire	-	-	-	-
Swindon	10	5.89	9	5.30
Wiltshire	5	1.30	5	1.30

Note: In addition there were a number of cases that could not be allocated to specific DAAT areas because they were of no fixed abode and/or the jurisdiction in which the inquest was held covers more than one DAAT. Some cases were usually resident outside the UK.

**Table 1B: NPSAD cases in 2012 by Drug and Alcohol Action Team according to Public Health England Regions and centres demographics and drugs implicated**

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
<b>ENGLAND</b>																					
<b>NORTH OF ENGLAND</b>																					
<b>1. North East</b>																					
County Durham	5	4	1	0	1	1	0	3	0	0	2	0	0	0	3	1	0	0	0	0	0
Darlington	3	2	1	0	1	1	1	0	0	0	1	0	0	0	2	1	1	1	0	0	1
Gateshead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hartlepool	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middlesbrough	5	2	3	0	0	3	2	0	0	0	5	0	0	0	0	2	2	0	0	0	0
Newcastle upon Tyne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Tyneside	13	4	9	0	0	3	6	3	1	0	12	0	0	0	1	0	4	4	0	2	0
Northumberland	6	5	1	0	1	2	2	1	0	0	2	0	0	0	4	1	1	2	1	0	0
Redcar & Cleveland	6	4	2	0	1	2	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0
South Tyneside	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockton-on-Tees	4	4	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0
Sunderland	24	15	9	0	4	7	10	3	0	0	23	0	0	0	1	7	3	4	1	1	0
<b>2. Cumbria &amp; Lancashire</b>																					
Blackburn with Darwen	13	9	4	0	0	4	5	2	2	0	11	0	0	0	2	3	3	4	0	2	0
Blackpool	9	9	0	0	1	2	3	2	1	0	8	0	0	0	1	6	0	2	3	1	1
Cumbria	21	15	6	0	5	2	6	2	3	3	21	0	0	0	0	4	5	12	1	1	1
Lancashire	59	44	15	0	3	9	19	17	7	4	17	0	0	1	41	14	10	9	2	2	1
<b>3. Yorkshire &amp; Humber</b>																					
Barnsley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bradford	15	12	3	0	0	5	4	6	0	0	12	0	0	2	1	8	2	0	7	1	0
Calderdale	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Doncaster	6	5	1	0	1	1	2	1	1	0	5	0	0	0	1	0	3	1	1	0	1
East Riding of Yorkshire	6	2	4	0	0	3	2	0	0	1	6	0	0	0	0	3	1	2	2	0	0
Kingston upon Hull	15	8	7	0	1	6	7	1	0	0	1	0	0	0	14	8	5	2	1	2	0
Kirklees	9	8	1	0	1	4	4	0	0	0	8	0	0	0	1	4	0	1	0	0	0
Leeds	33	22	11	0	6	6	15	3	2	1	27	0	0	0	6	11	9	10	2	0	1
North East Lincolnshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Lincolnshire	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
North Yorkshire	4	4	0	0	0	0	1	3	0	0	0	0	0	0	4	1	0	0	0	0	0
Rotherham	3	3	0	0	0	1	2	0	0	0	0	0	0	0	3	1	1	1	0	1	0
Sheffield	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Wakefield	13	10	3	0	1	6	3	2	1	0	12	0	0	0	1	4	8	6	1	1	0
York	2	1	1	0	1	0	1	0	0	0	1	0	0	0	1	1	0	1	0	1	0

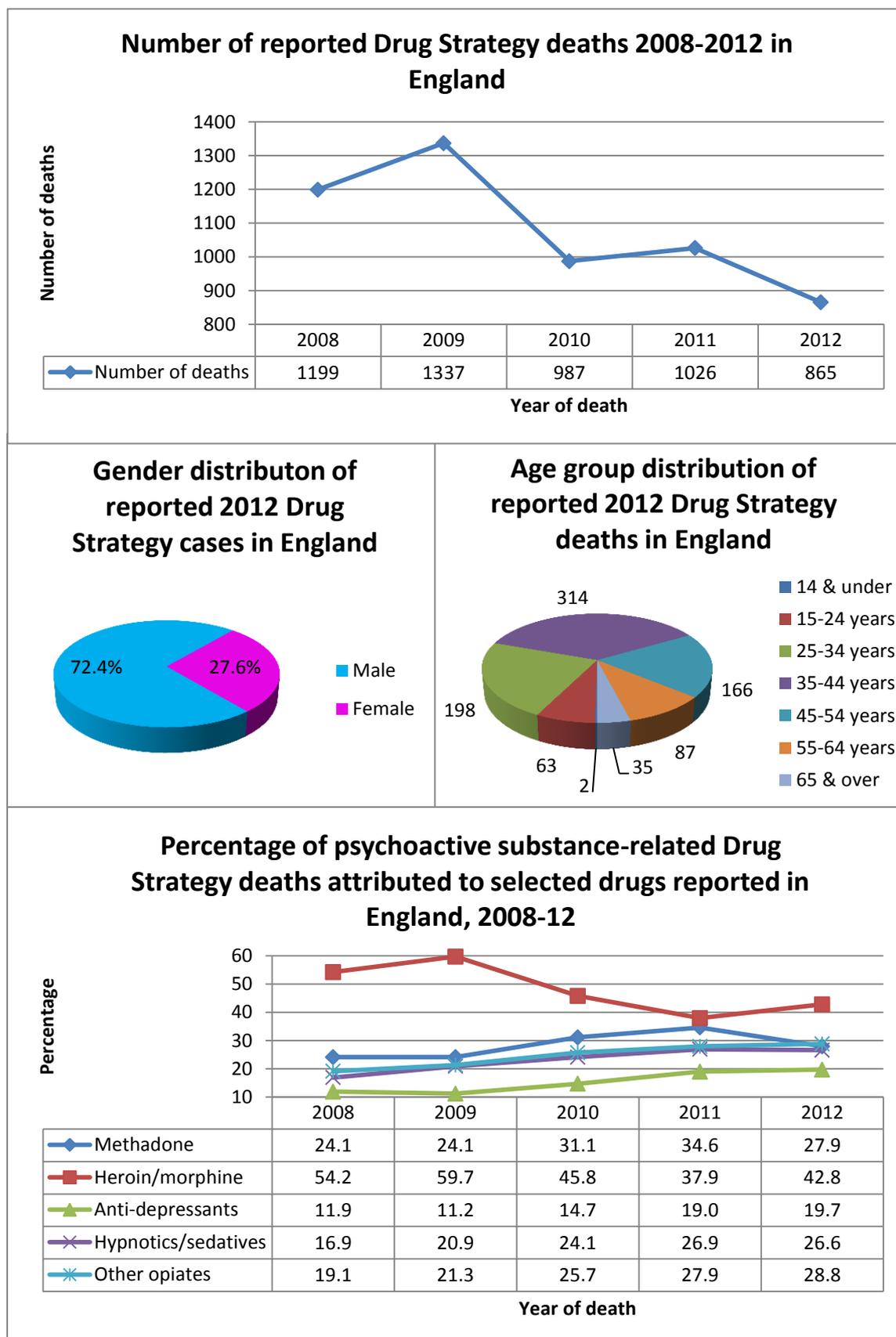
Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
<b>4. Greater Manchester</b>																					
Bolton	7	6	1	0	0	1	4	1	0	1	1	0	0	0	6	4	1	2	0	1	0
Bury	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
Manchester	36	24	12	0	2	7	6	7	11	3	23	0	0	1	12	12	3	6	4	0	2
Oldham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rochdale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salford	6	5	1	0	0	1	3	2	0	0	0	0	0	0	6	0	3	0	2	0	0
Stockport	10	5	5	0	1	0	7	2	0	0	6	1	0	0	3	3	3	2	1	1	1
Tameside	12	10	2	0	1	2	4	2	2	1	7	0	0	1	4	4	2	3	1	1	0
Trafford	3	2	1	0	0	1	1	0	0	1	2	0	0	0	1	0	0	1	2	1	0
Wigan	3	2	1	0	1	0	1	1	0	0	0	0	0	0	3	2	1	1	0	0	0
<b>5. Cheshire &amp; Merseyside</b>																					
Cheshire	20	14	6	0	0	8	4	6	0	2	18	0	0	0	2	7	5	9	2	1	0
Halton	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Knowsley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liverpool	49	39	10	0	0	7	18	17	4	3	46	2	0	1	0	13	13	7	20	0	2
Sefton	2	1	1	0	0	0	1	1	0	0	2	0	0	0	0	1	0	1	1	0	0
St Helens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Warrington	6	5	1	0	1	2	2	0	0	1	5	0	0	0	1	5	0	1	1	0	2
Wirral	12	8	4	1	1	1	3	5	0	1	11	0	0	0	1	3	6	2	2	1	1
<b>MIDLANDS &amp; EAST OF ENGLAND</b>																					
<b>6. East Midlands</b>																					
Derby	4	4	0	0	1	0	1	1	1	0	2	0	1	1	0	1	0	1	0	0	0
Derbyshire	15	7	8	0	0	5	5	1	2	2	8	0	0	0	7	4	2	1	0	2	2
Leicester	3	2	1	0	0	0	1	2	0	0	2	0	0	0	1	1	2	2	1	0	0
Leicestershire	2	1	1	0	0	1	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0
Lincolnshire	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0
Nottingham City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nottinghamshire	2	2	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	0	1	1
Rutland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>7. West Midlands</b>																					
Birmingham	33	23	10	0	2	7	7	5	6	6	0	1	0	0	32	10	6	5	0	1	1
Coventry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dudley	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Herefordshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sandwell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shropshire	8	5	3	0	1	0	4	2	1	0	0	0	0	0	8	2	3	1	0	0	0
Solihull	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Staffordshire	16	10	6	0	2	1	8	2	3	0	12	0	0	0	4	8	3	2	0	0	1
Stoke-on-Trent	13	10	3	0	1	1	9	0	2	0	2	0	0	0	11	4	5	2	0	0	0
Telford & Wrekin	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
Walsall	2	1	1	0	0	1	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0
Warwickshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wolverhampton	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Worcestershire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>8. Anglia &amp; Essex</b>																					
Cambridgeshire	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
Essex	4	3	1	0	3	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	2

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
Norfolk	36	24	12	0	1	10	14	6	5	0	0	0	0	0	36	10	14	8	1	0	0
Peterborough	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Southend-on-Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suffolk	5	5	0	0	1	2	1	1	0	0	0	1	0	0	4	1	1	0	1	0	0
Thurrock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>9. South Midlands &amp; Hertfordshire</b>																					
Bedfordshire	14	12	2	0	0	5	3	4	1	1	13	0	1	0	0	2	5	4	3	2	1
Hertfordshire	21	18	3	0	4	4	6	4	3	0	5	0	0	0	16	4	6	10	1	1	3
Luton	8	6	2	0	0	3	4	1	0	0	8	0	0	0	4	3	0	0	0	0	0
Milton Keynes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northamptonshire	15	10	5	0	1	2	8	0	2	2	13	0	0	0	2	3	7	5	0	0	0
<b>LONDON</b>																					
<b>10. London boroughs</b>																					
Barking & Dagenham	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0
Barnet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bexley	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
Brent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromley	3	0	3	0	0	0	2	1	0	0	1	0	0	0	2	0	0	0	1	1	1
Camden	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
City of London	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Croydon	5	4	1	0	0	3	2	0	0	0	2	0	0	0	3	1	0	0	0	0	0
Ealing	9	5	4	0	0	1	4	4	0	0	5	1	0	2	1	1	0	1	0	1	0
Enfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greenwich	2	2	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
Hackney	2	0	2	0	0	0	0	2	0	0	1	0	0	0	1	1	2	1	1	0	0
Hammersmith & Fulham	17	12	5	0	1	3	4	3	6	0	13	0	1	1	2	2	5	3	3	0	0
Haringey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Harrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Havering	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Hillingdon	10	7	3	0	0	4	1	2	2	1	9	1	0	0	0	1	0	1	0	0	0
Hounslow	16	11	5	0	0	8	3	3	2	0	13	1	1	0	1	4	3	3	1	2	0
Islington	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Kensington & Chelsea	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0
Kingston upon Thames	7	6	1	0	0	1	2	1	2	1	7	0	0	0	0	4	2	2	2	0	0
Lambeth	2	0	2	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Lewisham	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0
Merton	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
Newham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redbridge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Richmond upon Thames	6	4	2	0	0	1	2	2	1	0	5	0	0	0	1	2	0	1	1	0	0
Southwark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sutton	3	2	1	0	0	1	1	1	0	0	2	0	0	0	1	2	3	1	0	0	0
Tower Hamlets	3	1	2	0	0	0	1	0	1	1	1	0	0	0	2	0	2	2	1	0	0
Waltham Forest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wandsworth	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	1

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
Westminster	5	5	0	0	1	3	0	0	1	0	3	0	0	0	2	1	0	0	1	0	0
<b>SOUTH OF ENGLAND</b>																					
<b>11. Kent, Surrey &amp; Sussex</b>																					
Brighton & Hove	16	12	4	0	0	2	5	5	2	2	16	0	0	0	0	5	5	5	2	0	0
East Sussex	6	3	3	0	0	1	2	2	1	0	6	0	0	0	0	2	3	3	1	0	0
Kent	26	22	4	0	1	2	8	7	5	3	5	0	0	0	21	7	0	4	1	0	0
Medway towns	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surrey	21	17	4	0	3	2	9	4	3	0	3	0	0	0	18	9	5	6	3	0	0
West Sussex	15	7	8	0	0	3	6	2	3	1	14	0	0	0	1	7	0	5	2	0	0
<b>12. Thames Valley</b>																					
Bracknell Forest	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Buckinghamshire	8	7	1	0	1	1	2	3	0	1	5	1	0	0	2	4	0	4	1	0	1
Oxfordshire	4	4	0	0	0	3	0	1	0	0	0	0	0	4	3	1	1	1	0	0	0
Reading	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slough	2	2	0	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	2	0	0
West Berkshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windsor & Maidenhead	5	3	2	0	1	2	2	0	0	0	0	0	0	5	1	1	3	1	1	0	0
Wokingham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>13. Wessex</b>																					
Bournemouth	11	6	5	0	0	2	4	1	4	0	11	0	0	0	0	3	5	2	0	0	0
Dorset	7	4	3	0	1	0	2	1	2	1	7	0	0	0	0	3	0	4	1	0	0
Hampshire	13	12	1	0	1	5	4	1	1	1	11	0	0	0	2	6	0	1	0	0	0
Isle of Wight	1	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Poole	4	2	2	0	0	1	1	2	0	0	4	0	0	0	0	2	0	1	0	0	0
Portsmouth	2	2	0	0	0	0	1	0	1	0	2	0	0	0	0	1	1	1	1	0	0
Southampton	7	6	1	0	1	2	2	1	0	1	6	0	1	0	0	1	0	0	0	0	0
<b>14. Devon, Cornwall &amp; Somerset</b>																					
Cornwall & Isles of Scilly	8	5	3	0	1	0	5	1	1	0	5	0	0	0	3	2	3	2	1	1	0
Devon	25	17	8	0	3	2	7	4	7	2	1	0	0	0	24	6	1	2	0	0	1
Plymouth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Somerset	11	8	3	0	0	2	8	0	1	0	11	0	0	0	0	7	2	3	0	0	0
Torbay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>15. Avon, Gloucestershire &amp; Wiltshire</b>																					
Bath and North East Somerset	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bristol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gloucestershire	18	10	8	0	2	5	6	3	2	0	14	0	0	0	4	7	0	5	1	1	0
North Somerset	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0
South Gloucestershire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Swindon	9	6	3	0	0	2	3	1	0	3	9	0	0	0	0	3	2	4	1	0	0
Wiltshire	5	2	3	0	1	2	1	0	0	1	4	0	0	0	1	2	0	3	0	0	0

Note: In addition there were a number of cases that could not be allocated to specific DAAT areas because they were of no fixed abode and/or the jurisdiction in which the inquest was held covers more than one DAAT. Some cases were usually resident outside the UK. Where no reported deaths could be assigned to a DAAT area, they are marked thus: -

## Chapter 2: “Drug misuse” deaths in England using the Drug Strategy definition



This chapter considers cases meeting the definition used to monitor the Government’s Drug Strategy, i.e. “drug misuse”.

The definition comprises two types of deaths. Firstly, deaths where the underlying cause of death is mental and/or behavioural disorders due to psychoactive substance use (excluding alcohol, tobacco and volatile solvents). Secondly, deaths coded to the following categories **and** where a drug controlled under the Misuse of Drugs Act 1971 was mentioned on the death record: (i) Accidental poisoning by drugs, medicaments and biological substances; (ii) Intentional self-poisoning by drugs, medicaments and biological substances; (iii) Poisoning by drugs, medicaments and biological substances, undetermined intent; (iv) Assault by drugs, medicaments and biological substances; and (v) Mental and behavioural disorders due to use of volatile solvents. For full details see Appendix 2.

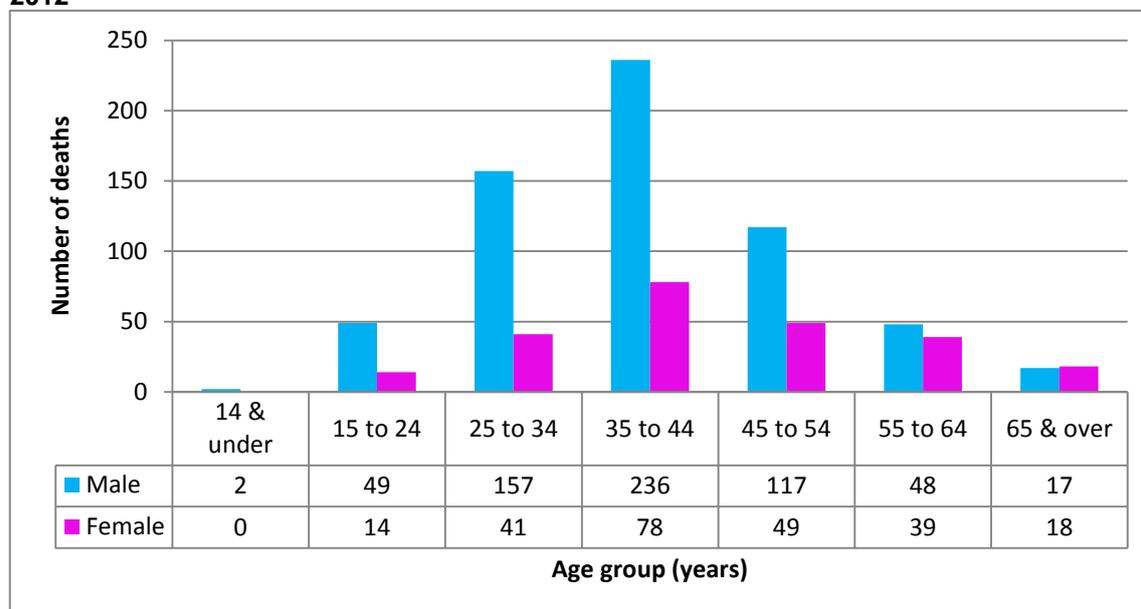
To derive these cases, the following two categories of cases are excluded from the NPSAD cases: (a) deaths of non-drug abusers where no Controlled Drugs were found at post mortem or where specific compound analgesics were found at post mortem; and (b) deaths of drug abusers where no Controlled Drugs were found at post mortem or where specific compound analgesics were found at post mortem and the mechanism of death was traumatic, such as hanging, drowning, car accident, etc.

## Profile of Drug Strategy cases

### 2.1 Demography

Similar patterns were found to those seen in previous years. Of the 865 Drug Strategy (DS) cases reported to the Programme, 72.4% of cases were male and 27.6% female (Figure 2.1 and Table 2.1). Almost half (49.2%) were unemployed, whilst 26.9% were employed. Those aged less than 45 years accounted for 66.7% of deaths. Deaths amongst those who lived alone represented 43.1% of cases, with 40.8% living with others, and 3.0% of no fixed abode. Where ethnicity was known (n = 568), the vast majority were White (96.8%); the rest were Black (1.1%); Asian (1.1%); and Other ethnicities (1.1%).

**Figure 2.1: “Drug misuse” deaths reported to NPSAD by age group and gender, England, 2012**



**Table 2.1: Demographic characteristics of “drug misuse” deaths reported to NPSAD, England, 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>865 (100.0)</b>
<b>Gender</b>	Male	626 (72.4)
	Female	239 (27.6)
<b>Employment status</b>	Employed	233 (26.9)
	Unemployed	426 (49.2)
	Childcare/house person	22 (2.5)
	Student	12 (1.4)
	Retired/invalidity/sickness	70 (8.1)
	Not known	102 (11.8)
<b>Living arrangements</b>	Alone	373 (43.1)
	With others	353 (40.8)
	Other	43 (5.0)
	No fixed abode	26 (3.0)
	Not known	70 (8.1)
<b>Ethnicity</b>	Black	6 (0.7)
	Asian	6 (0.7)
	White	550 (63.6)
	Other	6 (0.7)
	Not known	297 (34.3)

## 2.2 Age

Most DS deaths in England during 2012 occurred amongst those aged 35 years and over (69.6%); 22.9% were aged 25-34; and those aged 24 years and under accounted for just 7.5% of DS cases (Figure 2.1). The median age at death was 40 years (interquartile range = 15). Older male, White drug users are at most risk of drug-related deaths (Bird *et al.*, 2003; Ghodse *et al.*, 2009).

## 2.3 Location of death

In 2012, 73.5% of DS cases died either at the deceased’s home address or at another private residential address; whilst 14.6% died in hospital; 5.3% died elsewhere (e.g. public park, railway station, place of work etc.); and the remaining 6.6% were listed with an unknown location of death.

## 2.4 Underlying cause(s) of death

The categories of underlying cause of death (based on ICD-10 codes) were as follows:

- Accidental poisoning (X40-X47): 75.5%
- Intentional self-poisoning (X60-X67): 9.9%
- Poisonings of undetermined intent (Y10-Y14): 9.9%
- Other (e.g. natural causes, drowning, hanging, unascertained): 4.6%

A greater proportion of males compared to females died from accidental poisoning (79.2% vs. 65.7%). Females, by contrast, had a slightly greater proportion of deaths attributed to intentional self-poisoning compared to males (12.1% vs. 9.1%), and also to poisoning of undetermined intent (16.3% vs. 7.5%).

There were proportionately more deaths resulting from accidental poisoning amongst those aged less than 45 years than older cases (81.3% vs. 63.9%). Conversely, those aged 45 years and over had a greater percentage of deaths attributed to intentional self-poisoning than younger cases (16.3% vs. 6.8%), and also to poisoning of undetermined intent (14.6% vs. 7.6%).

## 2.5 Manner of death

The manner of death in DS cases was as follows:

- Accidental: 74.6%
- Undetermined: 10.5%
- Suicidal: 9.9%
- Natural: 4.7%
- Homicidal: 0.2%

Proportionately more males than females died as the result of an accident (77.8% vs. 66.1%). Conversely, female deaths were more often attributed to suicide than male deaths (12.1% vs. 9.1%); and to a manner that was undetermined (16.7% vs. 8.1%).

Deaths of those aged less than 45 years were more often accidental in nature compared to older cases (81.6% vs. 60.4%). Those aged 45 years or over had proportionately more suicides than younger cases (16.3% vs. 6.8%), and deaths of undetermined intent (15.3% vs. 8.1%).

## Psychoactive substances implicated in death

### 2.6 Psychoactive substances

Of the 865 Drug Strategy (DS) cases reported, 827 (95.6%) were directly attributed to psychoactive drugs. Those cases in which no psychoactive drugs were implicated (n = 38) were excluded from further analysis.

The principal substances implicated in psychoactive drug-related deaths alone and in combination were: heroin/morphine (42.8%) and alcohol in combination with other drugs (35.1%). Other psychoactive substances implicated alone and in combination that made a sizeable contribution (10% or over) to deaths were: other opiates/opioid analgesics (28.8%); methadone (27.9%); hypnotics/sedatives (26.6%); anti-depressants (19.7%); and cocaine (12.9%). Deaths attributed only to heroin/morphine accounted for 9.9% of cases (Table 2.6).

**Table 2.6: Psychoactive substances implicated in “drug misuse” deaths reported to NPSAD, England, 2012**

Drug category	Number (%) of psychoactive drug cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>827 (100.0)</b>	
<b>Alcohol in combination</b>	-	290 (35.1)
<b>Amphetamines</b>	13 (1.6)	38 (4.6)
<b>Anti-depressants</b>	14 (1.7)	163 (19.7)
<b>Anti-epileptics</b>	2 (0.2)	17 (2.1)
<b>Anti-Parkinson’s</b>	0 (0.0)	2 (0.2)
<b>Anti-psychotics</b>	0 (0.0)	40 (4.8)
<b>Cannabis</b>	1 (0.1)	20 (2.4)
<b>Cocaine</b>	21 (2.5)	107 (12.9)
<b>Ecstasy-type drugs</b>	19 (2.3)	34 (4.1)
<b>GHB/GBL</b>	6 (0.7)	11 (1.3)
<b>Heroin/morphine</b>	82 (9.9)	354 (42.8)
<b>Hypnotics/sedatives</b>	18 (2.2)	220 (26.6)
<b>Mephedrone</b>	0 (0.0)	12 (1.5)
<b>Methadone</b>	39 (4.7)	231 (27.9)
<b>Other opiates/opioid analgesics</b>	32 (3.9)	238 (28.8)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in death. Not all cases had psychoactive substances directly implicated in death: these are excluded from this table.

## **2.7 Psychoactive substances most frequently implicated by age group**

As Table 2.7 below shows, for those aged 14 and under, ecstasy-type drugs; heroin/morphine; and mephedrone were each implicated in an equal number of deaths. For the 15-24 year age group, ecstasy-type drugs; heroin/morphine; and alcohol in combination were implicated most often, whilst heroin/morphine was found to be most commonly implicated in the deaths of those aged between 25-44 years, accounting for 68.4% of all DS deaths implicated to the drug in England in 2012 reported to NPSAD. Alcohol in combination with other drugs was the psychoactive substance most frequently implicated for those aged between 45-54 years, and other opiates/opioid analgesics were implicated in the greatest proportion of deaths amongst those aged 55 years and older.

## **2.8 Highest frequency of each psychoactive substance implicated**

As shown in Table 2.7 below, alcohol in combination; amphetamines; anti-depressants; anti-Parkinson's; cannabis; cocaine; GHB/GBL; heroin/morphine; hypnotics/sedatives; methadone; and other opiates/opioid analgesics were most commonly implicated in the deaths of those aged between 35-44 years. Ecstasy-type drugs were most frequently implicated amongst those aged 15-24 years, whilst anti-epileptics; anti-psychotics; and mephedrone were most commonly involved in the deaths of the 25-34 years age group.

**Table 2.7: Age group and psychoactive substance implicated in Drug Strategy deaths reported to NPSAD, England, 2012**

		Age group at death							Total number of cases where substance implicated	Percentage of total deaths overall with psychoactive substances implicated
		14 & under	15-24	25-34	35-44	45-54	55-64	65+		
Number of cases where psychoactive substance implicated in death (% of total deaths with substance implicated)	<b>Alcohol in combination</b>	0 (0.0)	17 (5.9)	69 (23.8)	114 (39.3)	58 (20.0)	26 (9.0)	6 (2.1)	290	35.1%
	<b>Amphetamines</b>	0 (0.0)	1 (2.6)	7 (18.4)	15 (39.5)	12 (31.6)	3 (7.9)	0 (0.0)	38	4.6%
	<b>Anti-depressants</b>	0 (0.0)	11 (6.7)	32 (19.6)	43 (26.4)	37 (22.7)	32 (19.6)	8 (4.9)	163	19.7%
	<b>Anti-epileptics</b>	0 (0.0)	2 (11.8)	7 (41.2)	5 (29.4)	2 (11.8)	1 (5.9)	0 (0.0)	17	2.1%
	<b>Anti-Parkinson's</b>	0 (0.0)	0 (0.0)	0 (0.0)	2 (100)	0 (0.0)	0 (0.0)	0 (0.0)	2	0.2%
	<b>Anti-psychotics</b>	0 (0.0)	2 (5.0)	11 (27.5)	10 (25.0)	7 (17.5)	8 (20.0)	2 (5.0)	40	4.8%
	<b>Cannabis</b>	0 (0.0)	5 (25.0)	3 (15.0)	9 (45.0)	2 (10.0)	0 (0.0)	1 (5.0)	20	2.4%
	<b>Cocaine</b>	0 (0.0)	5 (4.7)	30 (28.0)	38 (35.5)	21 (19.6)	10 (9.3)	3 (2.8)	107	12.9%
	<b>Ecstasy-type</b>	1 (2.9)	17 (50.0)	6 (17.6)	7 (20.6)	3 (8.8)	0 (0.0)	0 (0.0)	34	4.1%
	<b>GHB/GBL</b>	0 (0.0)	1 (9.1)	4 (36.4)	6 (54.5)	0 (0.0)	0 (0.0)	0 (0.0)	11	1.3%
	<b>Heroin/morphine</b>	1 (0.3)	17 (4.8)	90 (25.4)	152 (42.9)	57 (16.1)	27 (7.6)	10 (2.8)	354	42.8%
	<b>Hypnotics/sedatives</b>	0 (0.0)	12 (5.5)	53 (24.1)	87 (39.5)	35 (15.9)	20 (9.1)	13 (5.9)	220	26.6%
	<b>Mephedrone</b>	1 (8.3)	1 (8.3)	5 (41.7)	2 (16.7)	3 (25.0)	0 (0.0)	0 (0.0)	12	1.5%
	<b>Methadone</b>	0 (0.0)	13 (5.6)	62 (26.8)	96 (41.6)	37 (16.0)	20 (8.7)	3 (1.3)	231	27.9%
	<b>Other opiates/opioid analgesics</b>	0 (0.0)	9 (3.8)	43 (18.1)	78 (32.8)	55 (23.1)	39 (16.4)	14 (5.9)	238	28.8%

Notes: Column totals may sum to more than 100% since more than one substance may be implicated in a death. Not all cases had drugs directly implicated in death; these are excluded from this table.

## 2.9 Gender and implicated psychoactive substance

The pattern of psychoactive substances with regards their implication in the deaths of the different genders reveals some interesting differences.

Amongst males, the five most frequently implicated psychoactive substances (alone or in combination), presented in numerical order, were:

1. Heroin/morphine (45.3%)
2. Alcohol in combination (42.6%)
3. Methadone (29.2%)
4. Other opiates/opioid analgesics (26.5%)
5. Hypnotics/sedatives (26.2%)

Among female cases, the most frequently implicated psychoactive substances, alone or in combination were:

1. Heroin/morphine (36.2%)
2. Other opiates/opioid analgesics (34.8%)
3. Anti-depressants (33.5%)
4. Alcohol in combination (28.1%)
5. Hypnotics/sedatives (27.7%)

Comparing the type of psychoactive substances implicated in the deaths of males and females reveals that there is a higher proportion of male compared to female deaths in which the following drugs were implicated: heroin/morphine; alcohol in combination; methadone; cannabis; cocaine; amphetamines; Ecstasy-type drugs; GHB/GBL; anti-epileptics; anti-Parkinson's; and mephedrone.

Meanwhile, females showed a greater proportion of deaths attributed to anti-depressants; other opiates/opioid analgesics; hypnotics/sedatives; and anti-psychotics.

## 2.10 Polysubstances

In 2012, heroin/morphine in combination with alcohol was implicated in 17.0% of the 827 psychoactive drug-related Drug Strategy deaths reported to NPSAD. Where other hypnotics/sedatives combined with heroin/morphine were implicated, these cases made up 10.3% of reported deaths, whilst 9.8% involved heroin/morphine implicated in combination with other opiates/opioid analgesics. Methadone was implicated in combination with heroin/morphine in 9.7% of cases.

When implicated in combination, several different substance types often featured with alcohol. Alcohol was implicated in 50.0% of all deaths involving cannabis; 40.5% involving hypnotics/sedatives; 39.8% involving heroin/morphine; and 38.5% of deaths in which methadone was implicated.

Over the past decade, around one-fifth (19.5%) of drug-related deaths has involved heroin/morphine in combination with alcohol, and in 2012 8.5% of deaths involved other opiates/opioid analgesics combined with alcohol, and in 9.3% of deaths, heroin/morphine and other opiates/opioid analgesics were combined. The combination of heroin/morphine and other opiates/opioid analgesics fluctuated between 4.3% and 10.3% over the past ten years.

The most prevalent substance combinations implicated during 2003-12 in deaths were: heroin/morphine with alcohol (19.5%); heroin/morphine with hypnotics/sedatives (11.8%); and hypnotics/sedatives with alcohol (9.7%). Combinations of drugs, with or without alcohol, pose greater risks for mortality (Ghodse *et al.*, 2010).

## 2.11 Single substances

In 2012, there were 247 (29.9%) Drug Strategy deaths involving psychoactive substances reported to NPSAD in which only one of the following substances was implicated. Of these single substance deaths, heroin/morphine accounted for 33.2%; methadone for 15.8%; other opiates/opioid analgesics – 13.0%; cocaine – 8.5%; ecstasy-type drugs – 7.7%; hypnotics/sedatives – 7.3%; anti-depressants – 5.7%; amphetamines – 5.3%; GHB/GBL – 2.4%; anti-epileptics – 0.8%; and cannabis – 0.4%.

## 2.12 Prescribed psychoactive drugs

Of the 865 Drug Strategy cases reported to NPSAD for 2012, 56.1% (n = 485) were reported as being prescribed psychoactive drugs at the time of their death (Table 2.12). Of those being prescribed such drugs, the most common prescribed medications were anti-depressants (54.8%); hypnotics/sedatives (40.8%); other opiates/opioid analgesics (35.2%); methadone (21.0%); anti-psychotics (18.7%); anti-epileptics (18.3%); heroin/morphine (8.2%); and anti-Parkinson's drugs (1.9%).

'Polypharmacy', i.e. multiple prescriptions of psychoactive drugs, occurred in 66.4% (322/485) of cases.

As with NPSAD cases, age appeared to be related in some way to whether cases were being prescribed psychoactive medication when prescribing history was known (n = 685). Those aged 14 and under were not prescribed any psychoactive medication; amongst 15-24 year olds, 33.3% were prescribed psychoactive medication; 25-34 – 61.7%; 35-44 – 75.1%; 45-54 – 76.7%; 55-64 – 88.5%; and 65 & over – 73.3%.

The following paragraphs further examine the Drug Strategy deaths and the involvement of prescribed medication.

Of those being prescribed psychoactive medication (n = 485), prescribed hypnotics/sedatives in combination with anti-depressants accounted for 19.6% of cases in 2003 and 26.0% in 2012. Hypnotics/sedatives in combination with other opiates/opioid analgesics accounted for 11.4% of cases in 2003 compared to 19.4% in 2012. Anti-depressants were prescribed together with other opiates/opioid analgesics in 8.4% of cases in 2003 and 21.5% of cases in 2012.

In 2012, methadone alone and in combination with other drugs, was implicated in 231 cases. Of these, 66.7% may have obtained methadone from illicit sources, compared to 33.3% who were known to be receiving prescribed methadone prior to their death. Methadone alone was implicated in 39 cases. Of these, 74.4% may have obtained the drug from illicit sources, compared to 25.6% who were known to be receiving prescribed methadone.

**Table 2.12: Prescribed psychoactive medication, “drug misuse” deaths reported to NPSAD, England, 2012**

Drug category	Number (%) of cases on prescribed psychoactive medication by drug	Number (%) of these cases where same prescribed drug was implicated in death
<b>TOTAL</b>	<b>485 (100.0)</b>	-
<b>Anti-depressants</b>	266 (54.8)	102 (38.3)
<b>Anti-epileptics</b>	89 (18.4)	10 (11.2)
<b>Anti-Parkinson's</b>	9 (1.9)	2 (22.2)
<b>Anti-psychotics</b>	91 (18.8)	31 (34.1)
<b>Heroin/morphine</b>	40 (8.2)	32 (80.0)
<b>Hypnotic/sedatives</b>	218 (44.9)	95 (43.6)
<b>Methadone</b>	102 (21.0)	77 (75.5)
<b>Other opiates/opioid analgesics</b>	171 (35.3)	96 (56.1)

Note: Column totals may sum to more than 100% since more than one substance may be prescribed to an individual and more than one substance may be implicated in a death.

Hypnotics/sedatives, alone and in combination with other drugs, were implicated in 220 cases. Of these, 56.8% may have obtained them illicitly, compared to the 43.2% who were known to be receiving a prescription for this drug. Eighteen cases had hypnotics/sedatives alone implicated in their death, of whom eight (44.4%) had received the drug on prescription, compared to 10 (55.6%) who may have obtained it illicitly.

Anti-depressants, alone and in combination with other drugs, were implicated in 163 cases. Of these, 62.6% were known to be receiving prescribed anti-depressants at the time of their death, compared to 37.4% who may have used drugs prescribed for others. Anti-depressants alone were implicated in 14 cases. Of these, nine (64.3%) were known to be receiving prescribed anti-depressants, compared to five (35.7%) who may have used drugs prescribed for others.

Other opiates/opioid analgesics (e.g. dihydrocodeine, dextropropoxyphene) alone and in combination with other drugs, were implicated in 238 cases. Of these, 59.7% may have obtained the drug by other means, compared to the 40.3% who were known to be receiving prescribed

opiate/opioid analgesics prior to their death. Other opiates/opioid analgesics alone were implicated in 32 cases. Of these, only half were prescribed the drugs, meaning 16 individuals obtained the drugs by other means.

Heroin/morphine, alone and in combination with other drugs, was implicated in 354 deaths. The majority (91.0%) of these cases were not prescribed heroin/morphine, and as such may have obtained the drug illegally. Only 9.0% of the cases with heroin/morphine implicated were receiving the drug on prescription. Where heroin/morphine was implicated alone, out of 82 cases, only 9.8% of these were they known to be prescribed the drug, meaning 90.2% may have obtained heroin/morphine illegally.

## **Drug abuse/dependence**

Drug abuse/dependence status was known in 655/865 cases. Such status was not known in 210 individuals, and as such these cases have been removed from the below analysis.

Where such information was known, those with drug abuse/dependence history (DA) accounted for 71.9% of cases (n = 471/655). Individuals listed as non-drug abusers (NDA) accounted for 28.1% (n = 184/655).

### **2.13 Demography**

A greater proportion of those with a history of drug abuse/dependence (DA) were male than those without such a history (NDA) (80.3% vs. 57.1%); and also a greater proportion of DAs than NDAs were younger than 45 years of age (75.6% compared to 51.6%). The median age at death for DAs was 39 years (interquartile range = 11), while that for NDAs was 44 years (interquartile range = 22).

Where ethnicity was known, there was a very similar proportion of cases recorded as belonging to a White ethnic group for both DA and NDA cases (97.1% vs. 97.0%).

A slightly greater proportion of DAs than NDAs lived alone (44.6% vs. 40.2%) and were of no fixed abode (4.5% vs. 0.5%). NDAs however, more commonly lived with others (53.3% vs. 36.3%).

Proportionately more DA cases were unemployed (56.5% vs. 31.5%); whilst NDA cases were more commonly employed (29.9% vs. 25.1%); or retired/receiving invalidity benefits (23.4% vs. 2.5%); or carrying-out childcare (3.8% vs. 1.5%).

### **2.14 Location of death**

With respect to the location of death for DAs and NDAs, in both groups the majority died at home or at a defined residential address (73.7% of DAs and 77.7% of NDAs). Hospital deaths accounted for very similar proportions of NDA (13.0%) and DA (12.7%) deaths.

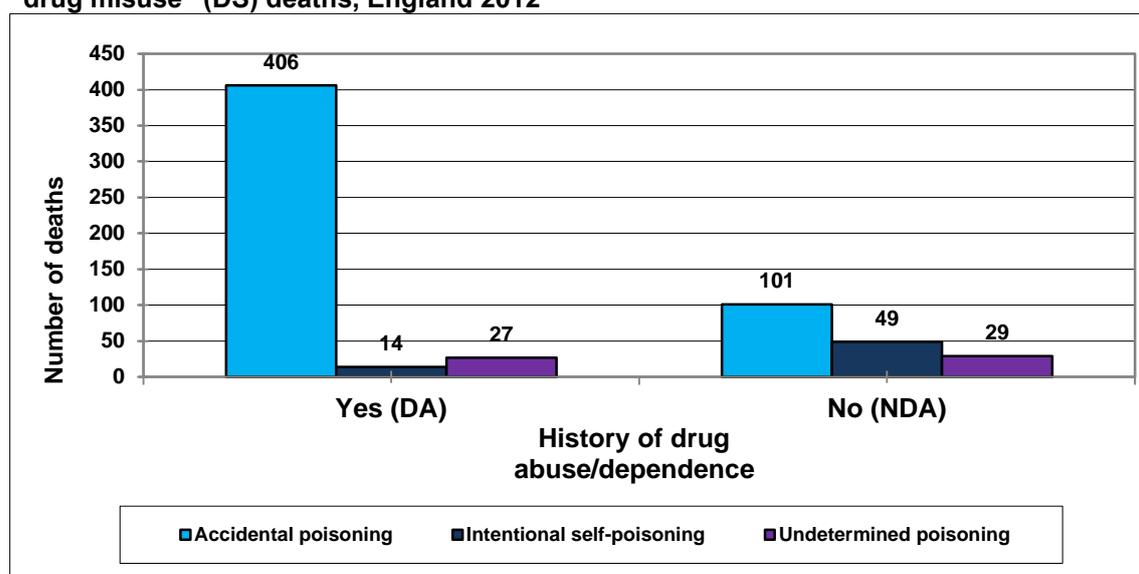
### **2.15 Underlying cause(s) of death**

The deaths of DAs were more commonly attributed to accidental poisoning than NDAs (86.2% vs. 54.9%) (see Figure 2.15). NDAs, by contrast, had a greater proportion of deaths than DAs resulting from intentional self-poisoning (26.6% vs. 3.0%) and poisoning of undetermined intent (15.8% vs. 5.7%).

### **2.16 Manner of death**

A similar pattern is exhibited with regard to manner of death. DAs more commonly had deaths resulting from an accident than NDAs (86.4% vs. 52.7%). Conversely, the deaths of NDAs when compared to DAs, were attributed more often to suicide (26.6% vs. 3.0%), or to an undetermined manner (15.8% vs. 6.2%)

**Figure 2.15: Principal underlying causes(s) of death by drug abuse/dependence history, “drug misuse” (DS) deaths, England 2012**



### Changes between 2011 and 2012

The following section compares deaths in 2012 with those that occurred in 2011. Drug Strategy (DS) deaths in 2012 are reported as 865, whereas in 2011, 1,026 cases were reported. This is a decrease in reported DS deaths of 15.7% in 2012; however this does not mean there was an actual drop of this magnitude between the years. This reduction in reported cases is likely due to a combination of a reduced catchment period for drug-related death notifications compared with the previous report and a lower coverage rate of Coroners voluntarily reporting to the Programme. Furthermore, due to the nature of the Coronial reporting system and lengthy inquest procedures, the figures for 2012 (and 2011, to a lesser extent) can be expected to increase as further inquests on drug-related deaths are completed and reported to the Programme.

### 2.17 Demography

There were minor changes between 2011 and 2012 in terms of the demographic profile of cases. Whilst median age at death; ethnicity; gender; and living arrangements remained stable, there were slight changes in other aspects. The proportion of cases listed as unemployed fell by 4.1% (from 53.3% to 49.2%), and the number of individuals listed as having a history of drug abuse/addiction when such information was known rose marginally by 1.2%, from 70.7% to 71.9%. A rise of 1.1% was also observed in the number of deaths occurring at the deceased’s home or other private residential address (from 72.4% to 73.5%). A 3.8% rise was seen in hospital deaths (from 10.8% to 14.6%).

### 2.18 Underlying cause(s) of death

The number of deaths due to accidental poisoning remained stable, at 75.7% in 2011 to 75.5% in 2012, whilst deaths attributed to intentional self-poisoning decreased by 3.5%, from 13.4% to 9.9%. Meanwhile, there was a negligible increase in poisonings of undetermined intent, from 9.3% to 9.9%, and deaths from other causes rose from 1.7% to 4.6%.

## **2.19 Manner of death**

There was a very minor decrease in accidental deaths between 2011 and 2012 from 75.1% to 74.6% and a decrease in suicides from 13.5% to 9.9%. Cases in which the manner of death was undetermined showed a small decrease, from 9.6% in 2011 to 10.5% in 2012.

## **2.20 Psychoactive substances implicated in death**

In 2012 there were 827/865 Drug Strategy deaths that involved psychoactive substances; 16 cases were therefore excluded from the following analyses due to their not involving psychoactive substances. In 2011, 994 of the 1,026 DS cases reported involved psychoactive drugs.

### **2.21 Psychoactive substances, both alone and in combination**

There was a marked increase in the proportion of deaths attributed to heroin/morphine in 2011 compared to 2012 (37.9% vs. 42.8% of deaths). As such, heroin/morphine still remains the most frequently implicated substance in deaths of DS cases. A further marked rise was seen in the proportion of cases in which alcohol was implicated in combination with other psychoactive substances (from 29.9% to 35.1%). A large drop was seen in the number of deaths involving methadone, alone or in combination (from 34.6% to 27.9%).

Minor increases were seen in the proportion of cases in which amphetamines; anti-depressants; anti-Parkinson's; anti-psychotics; cannabis; ecstasy-type drugs; GHB/GBL; and other opiates/opioid analgesics were implicated. Minor decreases were found in the number of cases in which anti-epileptics and hypnotics/sedatives were implicated (Table 2.21).

### **2.22 Single substance**

Small increases were seen in single-substance deaths in which anti-depressants; cocaine; ecstasy-type drugs; GHB/GBL; and hypnotic/sedatives were implicated.

A 4.4% reduction between 2011 and 2012 was seen in the percentage of cases in which methadone alone was implicated (9.1% to 4.7%). Deaths involving only other opiates/opioid analgesics fell (6.0% to 3.9%), as did deaths involving heroin/morphine alone (10.9% to 9.9%). Other minor falls were seen in deaths involving anti-epileptics and anti-psychotics (Table 2.22).

**Table 2.21: Changes in percentages of psychoactive substances, alone and in combination, implicated in psychoactive substance “drug misuse” deaths, England, 2011 and 2012**

Substance	2011 (n=888) %	2011 (n=994) %	2012 (n=827) %	Change (percentage points)
<b>Alcohol in combination</b>	28.0	29.9	35.1	+5.2
<b>Amphetamines</b>	4.4	4.5	4.6	+0.1
<b>Anti-depressants</b>	19.1	19.0	19.7	+0.7
<b>Anti-epileptics</b>	2.6	2.8	2.1	-0.7
<b>Anti-Parkinson’s</b>	0.1	0.1	0.2	+0.1
<b>Anti-psychotics</b>	3.8	4.1	4.8	+0.7
<b>Cannabis</b>	1.6	1.7	2.4	+0.7
<b>Cocaine</b>	12.0	11.5	12.9	+1.4
<b>Ecstasy-type drugs</b>	2.1	2.0	4.1	+2.1
<b>GHB/GBL</b>	1.1	0.9	1.3	+0.4
<b>Heroin/morphine</b>	38.2	37.9	42.8	+4.9
<b>Hypnotics/sedatives</b>	26.8	26.9	26.6	-0.3
<b>Methadone</b>	35.2	34.6	27.9	-6.7
<b>Other opiates/ opioid analgesics</b>	27.9	27.9	28.8	+0.9

Note: Column totals may sum to more than 100% since more than one substance may be implicated in a death.  
Column highlighted in:   does not include deaths in 2011 reported since the last report and is therefore not used in the change in percentage point calculations

**Table 2.22: Changes in percentages of psychoactive substances implicated alone in psychoactive substance “drug misuse” deaths, England, 2011 and 2012**

Substance	2011 (n=888) %	2011 (n=994) %	2012 (n=827) %	Change (percentage points)
<b>Amphetamines</b>	1.7	1.6	1.6	0.0
<b>Anti-depressants</b>	1.4	1.3	1.7	+0.4
<b>Anti-epileptics</b>	0.3	0.4	0.2	-0.2
<b>Anti-Parkinson’s</b>	0.0	0.0	0.0	0.0
<b>Anti-psychotics</b>	0.5	0.4	0.0	-0.4
<b>Cannabis</b>	0.1	0.1	0.1	0.0
<b>Cocaine</b>	1.8	1.8	2.5	+0.7
<b>Ecstasy-type drugs</b>	0.7	0.7	2.3	+1.6
<b>GHB/GBL</b>	0.5	0.4	0.7	+0.3
<b>Heroin/morphine</b>	11.3	10.9	9.9	-1.0
<b>Hypnotics/sedatives</b>	1.9	1.9	2.2	+0.3
<b>Methadone</b>	9.3	9.1	4.7	-4.4
<b>Other opiates/ opioid analgesics</b>	6.2	6.0	3.9	-2.1

Column highlighted in:   does not include deaths in 2011 reported since the last report and is therefore not used in the change in percentage point calculations

## Deaths per 100,000 population by area

This section provides a break-down of information by different geographical units for deaths meeting the Drug Strategy definition of those aged 16 years and older. Table 2A gives breakdowns for number of reported NPSAD deaths and death rate per 100,000 population for the Drug and Alcohol Action Team (DAAT) area for cases' usual area of residence and place of death. Table 2B gives detailed breakdowns by place of death DAAT area for key aspects, such as key demographic details and primary drugs implicated, for cases of all ages.

### Drug and Alcohol Action Team areas with highest and lowest rates in 2012

The following five DAAT areas in England had the highest reported Drug Strategy death rates per 100,000 population in 2012 for individuals resident within their coverage area (but did not necessarily die there): Blackpool (17.18 = +3.88 compared to 2011); Blackburn with Darwen (8.81 = -1.55); Liverpool (8.72 = +2.07); Brighton and Hove (8.25 = +0.1); and Sunderland (7.03 = +1.36).

The highest rates of Drug Strategy deaths reported for 2012 for individuals that died within specified DAAT areas (but were not necessarily resident there) were found in: Liverpool (9.49 = +2.04); Blackburn with Darwen (8.81 = -1.91); Sunderland (6.87 = +1.2); Brighton and Hove (6.94 = +0.60); and Blackpool (6.87 = -6.43). The death rates per 100,000 population for all DAAT areas can be found in Table 2A.

It is important to note that due to the geographic coverage of DAAT areas and Coroners' jurisdictions not always being equivalent, it is not possible to give clear statements with regards how the figures presented here for DAAT areas have been affected by those Coroners' jurisdictions that did not submit drug-related death notifications to the Programme.

Table 2B provides detailed breakdowns for Drug Strategy deaths by DAAT area reported to the Programme, with specific details of information such as age group and primary drug groups implicated. Comparing the drug types implicated for different English regions shows that certain drugs were implicated more often in certain regions than others, and the overall patterns seen are broadly similar to those for reported NPSAD cases. For example, in the South of England heroin/morphine was implicated in 49.7% of DS cases, whilst in the Midlands and East of England this figure dropped to 35.7%. Methadone was implicated most frequently in the Midlands and East of England (34.4% of deaths), whilst in the South of England it was implicated in just 16.8% of deaths. London showed the lowest proportion of deaths attributed to hypnotics/sedatives (19.4%), which contrasts with the South of England in which these drug types were implicated in 31.2% of cases. As in 2011, London showed the highest proportion of cocaine-related deaths (21.0%), whilst it was only implicated in 4.5% of deaths in the Midlands and East of England. Ecstasy-type drugs were implicated in 6.4% of deaths in DAAT areas in the North of England, whilst only 1.2% of cases in the South of England had drugs such as ecstasy implicated.

## Commentary

The demographic profile of “drug misuse” deaths in England remains generally consistent with previous reports: a higher proportion of males to females; predominantly White; with the majority under 45 years of age. The proportion of “drug misuse” deaths reported to the Programme amongst those aged under 25 years has dropped between 2010-12 by 1.7%; and 6.2% over the past decade. Meanwhile, the proportion of those aged 35-44 years has increased by 6.6% since 2003.

Accidental poisoning still remains the most frequent underlying cause of death across all age groups. In comparison with females and males of younger age groups, older females again show a greater proportion of deaths attributed to intentional self-poisoning.

Amongst males, heroin/morphine followed by alcohol in combination were the most frequently implicated drugs in their deaths, whilst in females it was heroin/morphine, closely followed by other opiates/ opioid analgesics. In 2011, anti-depressants contributed to the greatest proportion of female deaths.

“Drug misuse” deaths reported to the Programme for 2012 suggest an increase in the involvement in death of amphetamines; anti-depressants; anti-Parkinson’s; anti-psychotics; cannabis; cocaine, ecstasy-type drugs; GHB/GBL; heroin/morphine; other opiates/opioid analgesics; and alcohol in combination. Deaths involving anti-epileptics; hypnotics/sedatives; and methadone have decreased. The plateau in monovalent deaths noted in last year’s report appears to have ended, with a substantial drop from 36% in 2011 to around 30% in 2012. Heroin/morphine combined with alcohol remains the most frequently implicated polysubstance combination over the past decade, followed by heroin/morphine combined with hypnotics/sedatives, and then hypnotics/sedatives with alcohol.

The most commonly prescribed medications implicated in death were anti-depressants; other opiates/opioid analgesics; hypnotics/sedatives; followed by methadone. Taking into account known prescription status of individuals in which hypnotics/sedatives; other opiates/opioid analgesics; and heroin/morphine were implicated, upwards of 56.8% of these individuals with these drugs implicated in their deaths may have obtained the drugs illegally. Over 66.7% of those cases in which methadone was implicated may have obtained the drug illegally.

It has to be acknowledged that there are some distinct differences between the definition of drug-related death used by NPSAD and that of “drug misuse” employed by Government departments to monitor trends in the effectiveness of the Government’s Drug strategy.

Whilst the main source of information for the Office for National Statistics is the medical certificate of death, supplemented by part V of the Coroner’s Inquisition form, NPSAD receives detailed information from inquests with reports from various sources (including toxicology) to the Coroner to determine the cause of death and thus the verdict. Both sets of data are of value and complementary. The detailed data from Coroners allows for the Programme to contribute to early warning monitoring systems, providing information on the epidemiology of Novel Psychoactive Substances (including “legal highs”), as well as on prescribing history, risk factors, etc. Both sources of data are needed to obtain a fuller understanding of the nature of drug-related mortality in England, and the UK as a whole.

**Table 2A: Drug Strategy cases in 2012 by Public Health England Regions, Centres and Drug and Alcohol Action Teams (16 years and over) – number and rate per 100,000 population**

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>ENGLAND</b>				
<b>NORTH OF ENGLAND</b>				
<b>1. North East</b>				
County Durham	14	3.29	2	0.47
Darlington	3	3.52	3	3.52
Gateshead	-	-	-	-
Hartlepool	-	-	-	-
Middlesbrough	3	2.71	3	2.71
Newcastle upon Tyne	-	-	-	-
North Tyneside	8	4.82	9	5.43
Northumberland	6	2.28	4	1.52
Redcar & Cleveland	3	2.71	2	1.80
South Tyneside	-	-	-	-
Stockton-on-Tees	2	1.29	2	1.29
Sunderland	16	7.03	18	7.91
<b>2. Cumbria &amp; Lancashire</b>				
Blackburn with Darwen	10	8.81	10	8.81
Blackpool	20	17.18	8	6.87
Cumbria	19	4.57	17	4.09
Lancashire	48	4.99	44	4.58
<b>3. Yorkshire &amp; Humber</b>				
Barnsley	1	0.53	-	-
Bradford	13	3.24	12	2.99
Calderdale	1	0.61	1	0.61
Doncaster	11	4.48	5	2.04
East Riding of Yorkshire	5	1.79	6	2.14

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>NORTH OF ENGLAND</b>				
Kingston upon Hull	14	6.72	14	6.72
Kirklees	8	2.36	6	1.77
Leeds	27	4.38	27	4.38
North East Lincolnshire	-	-	-	-
North Lincolnshire	2	1.46	1	0.73
North Yorkshire	3	0.60	4	0.80
Rotherham	5	2.39	3	1.44
Sheffield	3	0.66	1	0.22
Wakefield	12	4.49	12	4.49
York	-	-	1	0.60
<b>4. Greater Manchester</b>				
Bolton	10	4.52	7	3.16
Bury	-	-	1	0.67
Manchester	23	5.62	28	6.84
Oldham	1	0.57	-	-
Rochdale	-	-	-	-
Salford	4	2.09	4	2.09
Stockport	6	2.60	7	3.04
Tameside	12	6.77	11	6.20
Trafford	3	1.65	2	1.10
Wigan	2	0.77	2	0.77
<b>5. Cheshire &amp; Merseyside</b>				
Cheshire	13	2.25	15	2.59
Halton	2	1.98	1	0.99
Knowsley	2	1.70	-	-
Liverpool	34	8.72	37	9.49
Sefton	3	1.32	2	0.88
St Helens	-	-	-	-

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>NORTH OF ENGLAND</b>				
Warrington	6	3.64	5	3.03
Wirral	12	4.60	10	3.83
<b>MIDLANDS &amp; EAST OF ENGLAND</b>				
<b>6. East Midlands</b>				
Derby	4	2.01	3	1.51
Derbyshire	15	2.35	13	2.04
Leicester	4	1.53	2	0.77
Leicestershire	4	0.74	2	0.37
Lincolnshire	2	0.34	1	0.17
Nottingham	-	-	-	-
Nottinghamshire	1	0.15	2	0.31
Rutland	-	-	-	-
<b>7. West Midlands</b>				
Birmingham	15	1.79	18	2.15
Coventry	-	-	-	-
Dudley	1	0.39	1	0.39
Herefordshire	-	-	-	-
Sandwell	1	0.41	-	-
Shropshire	7	2.74	6	2.35
Solihull	1	0.60	1	0.60
Staffordshire	18	2.56	13	1.85
Stoke-on-Trent	9	4.48	9	4.48
Telford & Wrekin	-	-	-	-
Walsall	3	1.40	2	0.93
Warwickshire	1	0.22	-	-
Wolverhampton	-	-	-	-
Worcestershire	2	0.43	-	-

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>MIDLANDS &amp; EAST OF ENGLAND</b>				
<b>8. Anglia &amp; Essex</b>				
Cambridgeshire	1	0.19	1	0.19
Essex	1	0.09	2	0.17
Norfolk	28	3.89	29	4.03
Peterborough	1	0.68	1	0.68
Southend-on-Sea	-	-	-	-
Suffolk	7	1.17	3	0.50
Thurrock	-	-	-	-
<b>9. South Midlands &amp; Hertfordshire</b>				
Bedfordshire	9	2.67	9	2.67
Hertfordshire	22	2.44	19	2.11
Luton	8	5.05	7	4.42
Milton Keynes	-	-	-	-
Northamptonshire	14	2.50	12	2.14
<b>LONDON</b>				
<b>10. London boroughs</b>				
Barking & Dagenham	-	-	1	0.71
Barnet	-	-	-	-
Bexley	1	0.54	1	0.54
Brent	-	-	-	-
Bromley	2	0.79	3	1.19
Camden	2	1.07	1	0.53
City of London	-	-	-	-
Croydon	2	0.69	3	1.04
Ealing	5	1.85	5	1.85
Enfield	-	-	-	-
Greenwich	2	0.98	2	0.98

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>LONDON</b>				
Hackney	4	2.00	2	1.00
Hammersmith & Fulham	8	5.34	9	6.00
Haringey	-	-	-	-
Harrow	-	-	-	-
Havering	1	0.51	-	-
Hillingdon	4	1.80	4	1.80
Hounslow	10	4.86	10	4.86
Islington	3	1.69	1	0.56
Kensington & Chelsea	2	1.52	1	0.76
Kingston upon Thames	6	4.53	5	3.78
Lambeth	1	0.39	1	0.39
Lewisham	1	0.45	1	0.45
Merton	2	1.23	-	-
Newham	-	-	-	-
Redbridge	1	0.45	-	-
Richmond upon Thames	2	1.32	3	1.99
Southwark	2	0.84	-	-
Sutton	2	1.29	3	1.94
Tower Hamlets	5	2.38	3	1.43
Waltham Forest	-	0.97	-	-
Wandsworth	1	0.39	1	0.39
Westminster	1	0.53	2	1.06
<b>SOUTH OF ENGLAND</b>				
<b>11. Surrey, Sussex &amp; Kent</b>				
Brighton & Hove	19	8.25	16	6.94
East Sussex	9	2.05	5	1.14

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>SOUTH OF ENGLAND</b>				
Kent	11	0.92	11	0.92
Medway towns	0	0.00	0	0.00
Surrey	17	1.84	20	2.17
West Sussex	15	2.24	14	2.09
<b>12. Thames Valley</b>				
Bracknell Forest	1	1.09	1	1.09
Buckinghamshire	8	1.96	7	1.71
Oxfordshire	4	0.75	4	0.75
Reading	-	-	-	-
Slough	2	1.86	2	1.86
West Berkshire	-	-	-	-
Windsor & Maidenhead	4	3.42	5	4.28
Wokingham	-	-	-	-
<b>13. Wessex</b>				
Bournemouth	10	6.36	9	5.73
Dorset	6	1.72	6	1.72
Hampshire	12	1.11	8	0.74
Isle of Wight	0	0.00	0	0.00
Poole	4	3.26	4	3.26
Portsmouth	3	1.78	2	1.19
Southampton	6	3.06	2	1.02
<b>14. Devon, Cornwall &amp; Somerset</b>				
Cornwall & Isles of Scilly	8	1.78	6	1.34
Devon	15	2.42	15	2.42
Plymouth	-	-	-	-
Somerset	9	2.04	10	2.27
Torbay	1	0.91	-	-

Drug and Alcohol Action Team	Number and annual death rate per 100,000 population – usual area of residence		Number and annual death rate per 100,000 population – place of death	
	No	Rate	No	Rate
<b>SOUTH OF ENGLAND</b>				
<b>15. Avon, Gloucestershire &amp; Wiltshire</b>				
Bath & North East Somerset	-	-	-	-
Bristol	-	-	-	-
Gloucestershire	1	0.60	1	0.60
North Somerset	19	3.84	15	3.03
South Gloucestershire	-	-	-	-
Swindon	7	4.12	7	4.12
Wiltshire	3	0.78	3	0.78

Note: In addition there were a number of cases that could not be allocated to specific DAAT areas because they were of no fixed abode and/or the jurisdiction in which the inquest was held covers more than one DAAT. Some cases were usually resident outside the UK. Where no reported deaths could be assigned to a DAAT area, they are marked thus: -

**Table 2B: “Drug misuse” cases in 2012 by Drug and Alcohol Action Team according to Public Health England Regions and centres demographics and drugs implicated**

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
<b>ENGLAND</b>																					
<b>NORTH OF ENGLAND</b>																					
<b>1. North East</b>																					
County Durham	2	2	0	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0
Darlington	3	2	1	0	1	1	1	0	0	0	1	0	0	0	2	1	1	1	0	0	1
Gateshead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hartlepool	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middlesbrough	3	1	2	0	0	2	1	0	0	0	3	0	0	0	0	2	2	0	0	0	0
Newcastle upon Tyne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Tyneside	9	3	6	0	0	3	3	3	0	0	8	0	0	0	1	0	4	4	0	2	0
Northumberland	4	3	1	0	1	1	1	1	0	0	2	0	0	0	2	1	1	2	0	0	0
Redcar & Cleveland	2	2	0	0	0	2	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0
South Tyneside	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockton-on-Tees	2	2	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Sunderland	18	9	9	0	2	6	8	2	0	0	17	0	0	0	1	7	3	4	1	1	0
<b>2. Cumbria &amp; Lancashire</b>																					
Blackburn with Darwen	10	7	3	0	0	2	4	2	2	0	9	0	0	0	1	3	3	4	0	2	0
Blackpool	8	8	0	0	1	2	3	1	1	0	8	0	0	0	0	6	0	2	3	1	1
Cumbria	17	13	4	0	4	2	5	1	2	3	17	0	0	0	0	4	5	12	1	1	1
Lancashire	44	33	11	0	2	8	20	11	2	1	14	0	0	1	29	14	10	8	2	3	1
<b>3. Yorkshire &amp; Humber</b>																					
Barnsley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bradford	12	9	3	0	0	2	4	6	0	0	9	0	0	2	1	8	2	0	7	1	0
Calderdale	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Doncaster	5	4	1	0	1	1	1	1	1	0	4	0	0	0	1	0	3	1	1	0	1
East Riding of Yorkshire	6	2	4	0	0	3	2	0	0	1	6	0	0	0	0	3	1	2	2	0	0
Kingston upon Hull	14	8	6	0	1	6	6	1	0	0	13	0	0	0	1	8	5	2	1	2	0
Kirklees	6	5	1	0	0	3	3	0	0	0	5	0	0	0	1	4	0	1	0	0	0
Leeds	27	18	9	0	3	5	13	3	2	1	21	0	0	0	6	11	9	10	2	0	0
North East Lincolnshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Lincolnshire	1	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0
North Yorkshire	4	4	0	0	0	0	1	3	0	0	0	0	0	0	4	1	0	0	0	0	0
Rotherham	3	3	0	0	0	1	2	0	0	0	0	0	0	0	3	1	1	1	0	1	0
Sheffield	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Wakefield	12	9	3	0	1	6	2	2	1	0	11	0	0	0	1	4	8	5	1	1	0

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
York	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0
<b>4. Greater Manchester</b>																					
Bolton	7	6	1	0	0	1	4	1	0	1	1	0	0	0	6	4	1	2	0	1	0
Bury	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Manchester	28	18	10	0	2	5	4	5	10	2	18	0	0	0	10	12	3	5	3	0	2
Oldham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rochdale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salford	4	3	1	0	0	0	2	2	0	0	0	0	0	0	4	0	3	0	2	0	0
Stockport	8	4	4	0	1	0	5	2	0	0	4	1	0	0	3	4	3	2	1	1	1
Tameside	11	9	2	0	1	2	4	2	1	1	6	0	0	1	4	4	2	3	1	1	0
Trafford	2	2	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1	1	0
Wigan	2	1	1	0	0	0	1	1	0	0	0	0	0	0	2	1	1	0	0	0	0
<b>5. Cheshire &amp; Merseyside</b>																					
Cheshire	15	11	4	0	0	7	2	5	0	1	14	0	0	0	1	6	5	7	2	1	0
Halton	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Knowsley	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liverpool	37	30	7	0	0	5	15	14	1	2	34	2	0	1	0	13	12	6	18	0	2
Sefton	2	1	1	0	0	0	1	1	0	0	2	0	0	0	0	1	0	0	1	0	0
St Helens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Warrington	5	5	0	0	1	1	2	0	0	1	5	0	0	0	0	4	0	1	1	0	2
Wirral	11	7	4	1	0	1	3	5	0	1	10	0	0	0	1	3	6	2	2	1	1
<b>MIDLANDS &amp; EAST OF ENGLAND</b>																					
<b>6. East Midlands</b>																					
Derby	3	3	0	0	1	0	1	0	1	0	1	0	0	0	2	1	0	0	0	0	0
Derbyshire	13	5	8	0	0	4	5	1	2	1	6	0	0	0	7	4	2	1	0	2	2
Leicester	2	2	0	0	0	0	1	1	0	0	2	0	0	0	0	1	2	1	1	0	0
Leicestershire	2	1	1	0	0	1	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0
Lincolnshire	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0		
Nottingham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nottinghamshire	2	2	0	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	0	1	1
Rutland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>7. West Midlands</b>																					
Birmingham	18	12	6	0	2	3	3	2	6	2	0	0	0	0	18	9	6	3	0	1	1
Coventry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dudley	1	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Herefordshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sandwell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shropshire	6	5	1	0	1	0	4	1	0	0	0	0	0	0	6	2	3	1	0	0	0
Solihull	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Staffordshire	13	9	4	0	2	1	7	1	2	0	9	0	0	0	4	8	3	2	0	0	1
Stoke-on-Trent	9	7	2	0	1	1	6	0	1	0	1	0	0	0	8	4	5	2	0	0	0
Telford & Wrekin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Walsall	2	1	1	0	0	1	0	0	1	0	2	0	0	0	0	1	0	0	0	0	0
Warwickshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wolverhampton	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Worcestershire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

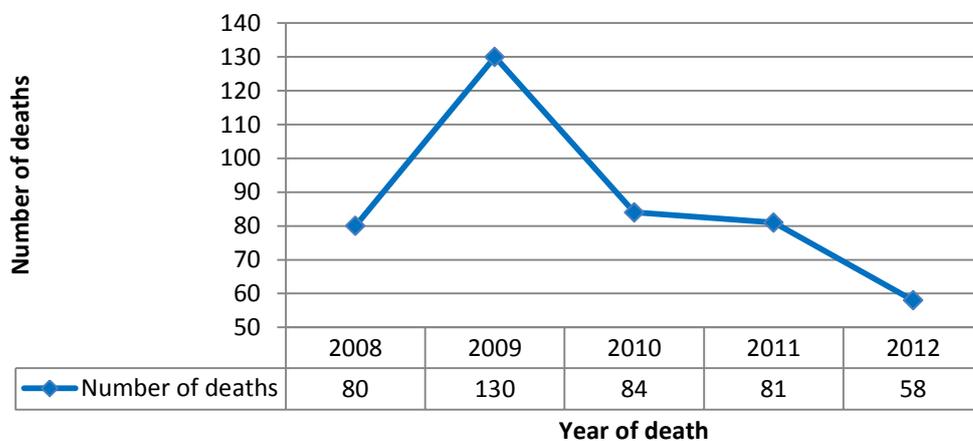
Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
<b>8. Anglia &amp; Essex</b>																					
Cambridgeshire	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
Essex	2	2	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Norfolk	29	21	8	0	1	8	11	6	3	0	0	0	0	0	29	10	14	7	1	0	0
Peterborough	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Southend-on-Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suffolk	3	3	0	0	0	1	1	1	0	0	0	0	0	0	3	1	1	0	1	0	0
Thurrock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>9. South Midlands &amp; Hertfordshire</b>																					
Bedfordshire	9	7	2	0	0	2	3	2	1	1	8	0	1	0	0	2	0	4	3	0	0
Hertfordshire	19	16	3	0	4	3	6	3	3	0	4	0	0	0	15	4	6	10	1	1	3
Luton	7	5	2	0	0	3	3	1	0	0	7	0	0	0	4	3	0	0	0	0	0
Milton Keynes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northamptonshire	12	8	4	0	1	2	7	0	1	1	10	0	0	0	2	3	7	5	0	0	0
<b>LONDON</b>																					
<b>10. London boroughs</b>																					
Barking and Dagenham	1	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
Barnet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bexley	1	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Brent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromley	3	0	3	0	0	0	2	1	0	0	1	0	0	0	2	0	0	0	1	1	1
Camden	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
City of London	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Croydon	3	3	0	0	0	2	1	0	0	0	1	0	0	0	2	1	0	0	0	0	0
Ealing	5	4	1	0	0	0	3	2	0	0	2	1	0	1	1	1	0	0	0	1	0
Enfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greenwich	2	2	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
Hackney	2	0	2	0	0	0	0	2	0	0	1	0	0	0	1	1	2	1	1	0	0
Hammersmith and Fulham	9	8	1	0	0	2	0	2	5	0	7	0	1	0	1	2	5	2	2	0	0
Haringey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Harrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Havering	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hillingdon	4	2	2	0	0	2	0	0	1	1	4	0	0	0	0	1	0	1	0	0	0
Hounslow	10	6	4	0	0	5	2	2	1	0	9	0	1	0	0	4	3	3	1	1	0
Islington	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Kensington & Chelsea	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0
Kingston upon Thames	5	5	0	0	0	1	2	0	2	0	5	0	0	0	0	4	2	1	2	0	0
Lambeth	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Lewisham	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0
Merton	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Newham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redbridge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Richmond upon Thames	3	3	0	0	0	0	0	2	1	0	3	0	0	0	0	2	0	1	1	0	0
Southwark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Drug and Alcohol Action Team	No	Gender		Age group							Ethnicity					Main Drug Strategy drug implicated					
		Total	Male	Female	14 & under	15-24	25-34	35-44	45-54	55-64	65 & over	White	Black	Asian	Other	Not known	Heroin/ morphine	Methadone	Hypnotics/ sedatives	Cocaine	Amphetamine
Sutton	3	2	1	0	0	1	1	1	0	0	2	0	0	0	1	2	3	1	0	0	0
Tower Hamlets	3	1	2	0	0	0	1	0	1	1	1	0	0	0	2	0	2	2	1	0	0
Waltham Forest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wandsworth	1	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Westminster	2	2	0	0	0	2	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0
<b>SOUTH OF ENGLAND</b>																					
<b>11. Kent, Surrey &amp; Sussex</b>																					
Brighton & Hove	16	12	4	0	0	2	5	5	2	2	16	0	0	0	0	5	5	5	2	0	0
East Sussex	5	2	3	0	0	1	1	2	1	0	5	0	0	0	0	2	3	3	1	0	0
Kent	11	9	2	0	0	0	7	2	2	0	2	0	0	0	9	7	0	1	1	0	0
Medway towns	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Surrey	20	16	4	0	3	2	9	3	3	0	3	0	0	0	17	9	5	6	3	0	0
West Sussex	14	6	8	0	0	3	6	2	2	1	1	0	0	0	13	7	0	5	2	0	0
<b>12. Thames Valley</b>																					
Bracknell Forest	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Buckinghamshire	7	6	1	0	1	1	1	3	0	1	4	1	0	0	2	4	0	3	1	0	1
Oxfordshire	4	4	0	0	0	3	0	1	0	0	0	0	0	0	4	3	1	1	1	0	0
Reading	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slough	2	2	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0	0	2	0	0
West Berkshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windsor & Maidenhead	5	3	2	0	1	2	2	0	0	0	0	0	0	0	5	1	1	3	1	1	0
Wokingham	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>13. Wessex</b>																					
Bournemouth	9	6	3	0	0	2	3	1	3	0	9	0	0	0	0	3	5	2	0	0	0
Dorset	6	4	2	0	1	0	2	0	2	1	6	0	0	0	0	3	0	4	1	0	0
Hampshire	8	8	0	0	1	4	3	0	0	0	8	0	0	0	0	6	0	1	0	0	0
Isle of Wight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poole	4	2	2	0	0	1	1	2	0	0	4	0	0	0	0	2	0	1	0	0	0
Portsmouth	2	2	0	0	0	0	1	0	1	0	2	0	0	0	0	1	1	1	1	0	0
Southampton	2	2	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0
<b>14. Devon, Cornwall &amp; Somerset</b>																					
Cornwall & Isles of Scilly	6	4	2	0	0	0	4	1	1	0	4	0	0	0	2	1	3	2	1	1	0
Devon	15	11	4	0	2	2	3	2	4	2	1	0	0	0	14	6	1	2	0	0	1
Plymouth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Somerset	10	8	2	0	0	2	8	0	0	0	10	0	0	0	0	7	2	3	0	0	0
Torbay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>15. Avon, Gloucestershire &amp; Wiltshire</b>																					
Bath & North East Somerset	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bristol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Somerset	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0
Gloucestershire	15	7	8	0	1	3	6	3	2	0	13	0	0	0	2	7	0	5	1	1	0
South Gloucestershire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Swindon	7	6	1	0	0	2	3	1	0	1	7	0	0	0	0	3	2	3	1	0	0
Wiltshire	3	2	1	0	1	1	1	0	0	0	2	0	0	0	1	2	0	2	0	0	0

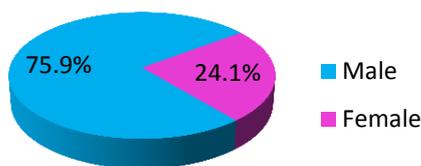
Note: In addition there were a number of cases that could not be allocated to specific DAAT areas because they were of no fixed abode and/or the jurisdiction in which the inquest was held covers more than one DAAT. Some cases were usually resident outside the UK. Where no reported deaths could be assigned to a DAAT area, they are marked thus: -

## Chapter 3: Drug-related deaths in Wales

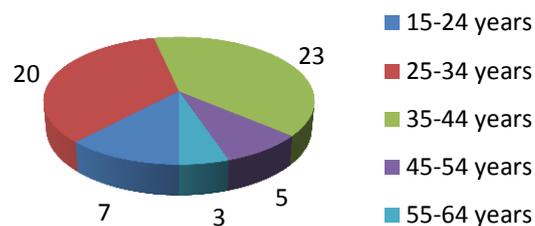
**Number of reported NPSAD deaths 2008-2012 in Wales**



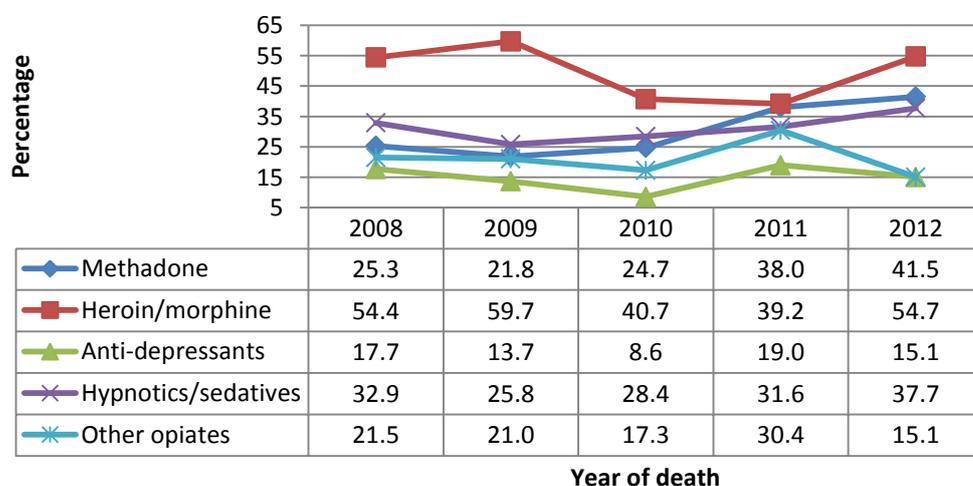
**Gender distribution of reported 2012 NPSAD deaths in Wales**



**Age group distribution of reported 2012 NPSAD deaths in Wales**



**Percentage of psychoactive substance-related NPSAD deaths attributed to selected drugs reported in Wales, 2008-12**



This chapter describes the pattern of drug-related deaths in Wales reported by Coroners to NPSAD that meet the Programme's case criteria.

## Profile of NPSAD cases

### 3.1 Demography

Notifications of 58 drug-related deaths occurring in 2012 which met the NPSAD case criteria were received from Coroners in Wales – a fall of 28.4% compared to 2011, when the number of such deaths was 81; whilst in 2010, 84 deaths were reported. However, this does not mean there was an actual drop of this magnitude between the years. This reduction in reported cases is likely due to a combination of a reduced catchment period for drug-related death notifications compared with the previous report and a lower coverage rate of Coroners voluntarily reporting to the Programme. Furthermore, due to the nature of the Coronial reporting system and lengthy inquest procedures, the figures for 2012 (and 2011 to a lesser extent) can be expected to increase as further inquests on drug-related deaths of those who died in these calendar years are finally completed (some inquests do happen in the same calendar year). However, the key information presented in this report is still highly valuable, as it is the percentage changes rather than absolute figures which are most informative, as they will be largely unaffected by fluctuations in overall reported deaths.

The majority (75.9%) of the cases in 2012 were male (Table 3.1). The median age at death was 36.0 years (interquartile range = 12.3) (Figure 3.1) and 86.2% of all cases were aged under 45 years. Those who were unemployed accounted for 58.6% of cases, and the living arrangements showed 43.1% living with others. Addict status was known in 47 cases, 80.1% of which had a history of dependence or drug use. Ethnicity was known in 38 cases, and 97.4% of these were White; whilst 2.6% were Black. In 20 cases, ethnicity information was not provided.

**Table 3.1: Demographic variables for drug-related deaths reported by Coroners meeting NPSAD criteria, Wales, 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>58 (100.0)</b>
<b>Gender</b>	Male	44 (75.9)
	Female	14 (24.1)
<b>Employment status</b>	Employed	20 (34.5)
	Unemployed	34 (58.6)
	Retired/sickness/invalidity	2 (3.4)
	Not known	2 (3.4)
<b>Living arrangements</b>	Alone	22 (37.9)
	With others	25 (43.1)
	No fixed abode	4 (6.9)
	Other	2 (3.4)
	Not known	5 (8.6)
<b>Ethnicity</b>	Black	1 (1.7)
	White	37 (63.8)
	Not known	20 (34.5)

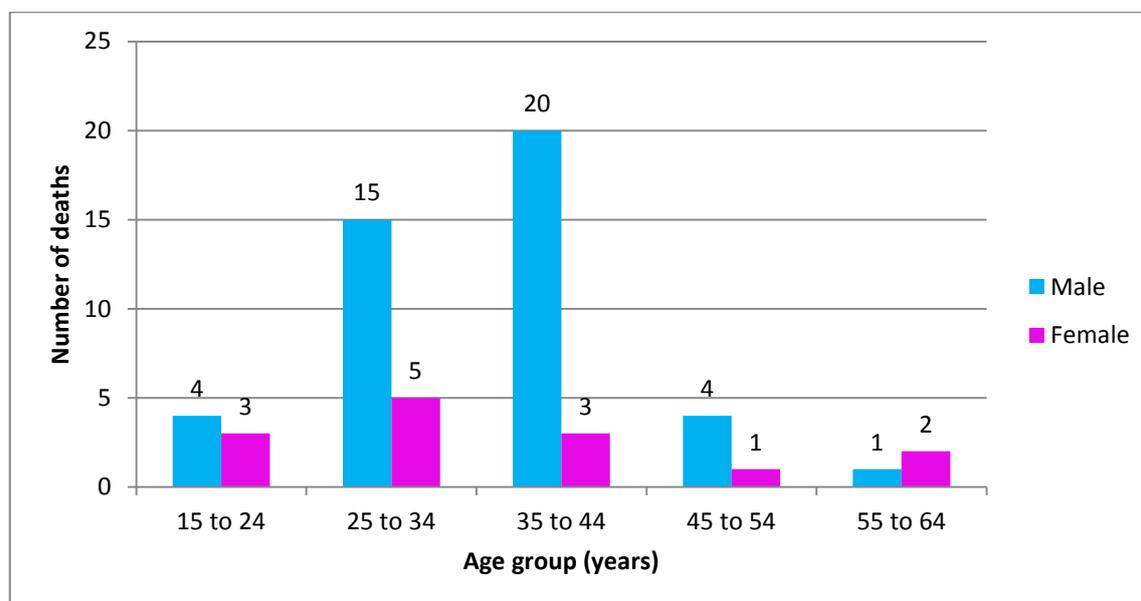
### 3.2 Location of death

Most fatalities (74.1%) occurred at a defined residential address (i.e. the deceased's home address or other private residential address). Deaths in hospital accounted for 10.3% of cases; a further 10.3% died in a public place such as a park; and 5.2% occurred at unspecified locations.

### 3.3 Cause(s) of death

Accidental poisoning accounted for 89.7% of deaths, with 1.7% of deaths from intentional self-poisoning, and a further 1.7% from poisonings of undetermined intent. The remaining 6.9% died from other causes.

**Figure 3.1: Drug-related deaths reported by Coroners meeting NPSAD criteria, by age group and gender, Wales, 2012**



### Psychoactive substances implicated in death

#### 3.4 All substances

Psychoactive drugs were directly implicated in 53/58 (91.4%) cases. The principal substances implicated alone or in combination were: heroin/morphine (54.7%); methadone (41.5%); hypnotics/sedatives (37.7%); other opiates/ opioid analgesics (15.1%); anti-depressants (15.1%); and alcohol in combination (13.2%) (Table 3.4).

Figure 3.7 takes into account data where one of the following drugs was known to be implicated: alcohol in combination; amphetamines; anti-depressants; anti-psychotics; cannabis; cocaine; ecstasy-type drugs; heroin/morphine; hypnotics/sedatives; methadone; and other opiates/opioid analgesics.

#### 3.5 Single substances

Single substance deaths accounted for 43.4% (23/53) of all fatalities where psychoactive substances were implicated. Heroin/morphine and methadone accounted for 73.9% (17/23) of these deaths when implicated alone (Table 3.4).

**Table 3.4: Psychoactive substances implicated in deaths reported by Coroners meeting NPSAD criteria, Wales, 2012**

Drug category	Number (%) of psychoactive drug cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>53 (100.0)</b>	
Alcohol in combination	-	7 (13.2)
Amphetamines	2 (3.8)	2 (3.8)
Anti-depressants	1 (1.9)	8 (15.1)
Anti-psychotics	0 (0.0)	1 (1.9)
Cannabis	0 (0.0)	1 (1.9)
Cocaine	0 (0.0)	2 (3.8)
Ecstasy-type drugs	0 (0.0)	1 (1.9)
Heroin/morphine	11 (20.8)	29 (54.7)
Hypnotics/sedatives	0 (0.0)	20 (37.7)
Methadone	6 (11.3)	22 (41.5)
Other opiates/opioid analgesics	3 (5.7)	8 (15.1)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in death. Not all cases had psychoactive substances directly implicated in death: these are excluded from this table.

### 3.6 Age and drug implicated in death

Of the 53 drug related deaths where a psychoactive drug was implicated, heroin/morphine accounted for the most deaths in all age groups below 55 years old; whilst hypnotics/sedatives accounted for the most deaths amongst those aged 55 years and above when compared to any other drug type. Table 3.6 shows where any particular drug was implicated across the whole range of age groups.

**Table 3.6: Age and drug implicated in deaths meeting NPSAD criteria reported by Coroners, Wales, 2012**

Age group	Drug category most frequently implicated (alone or in combination) in each age group										
	Heroin/morphine	Methadone	Hypnotics/sedatives	Anti-depressants	Other opiates/opioid analgesics	Alcohol in combination	Amphetamines	Cocaine	Anti-psychotics	Cannabis	Cocaine
15-24	3	1	1	0	0	0	2	0	0	0	0
25-34	9	6	5	0	4	1	0	1	0	1	1
35-44	14	14	11	6	2	4	0	1	1	0	0
45-54	2	1	1	1	1	1	0	0	0	0	0
55-64	1	0	2	1	1	1	0	0	0	0	0
<b>TOTAL</b>	<b>29</b>	<b>22</b>	<b>20</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

### 3.7 Gender and drug implicated in death

The pattern of drugs implicated in mortality was somewhat different in male and female cases (Figure 3.2).

Among male cases in which psychoactive drugs were implicated (n = 44), the three most frequently mentioned drugs were:

1. Heroin/morphine (52.3%)
2. Methadone (40.9%)
3. Hypnotics/sedatives (40.9%)

In female cases in which psychoactive drugs were implicated (n = 14), the top three drugs mentioned were:

1. Heroin/morphine (42.9%)
2. Methadone (28.6%)
3. Other opiates/opioid analgesics (14.3%)

Examining the principal differences between male and female deaths for implicated drugs reveals a higher proportion of male deaths involving: heroin/morphine; methadone; hypnotics/sedatives; and alcohol in combination with other drugs. A greater proportion of female deaths were attributed to other opiates/opioid analgesics than amongst males.

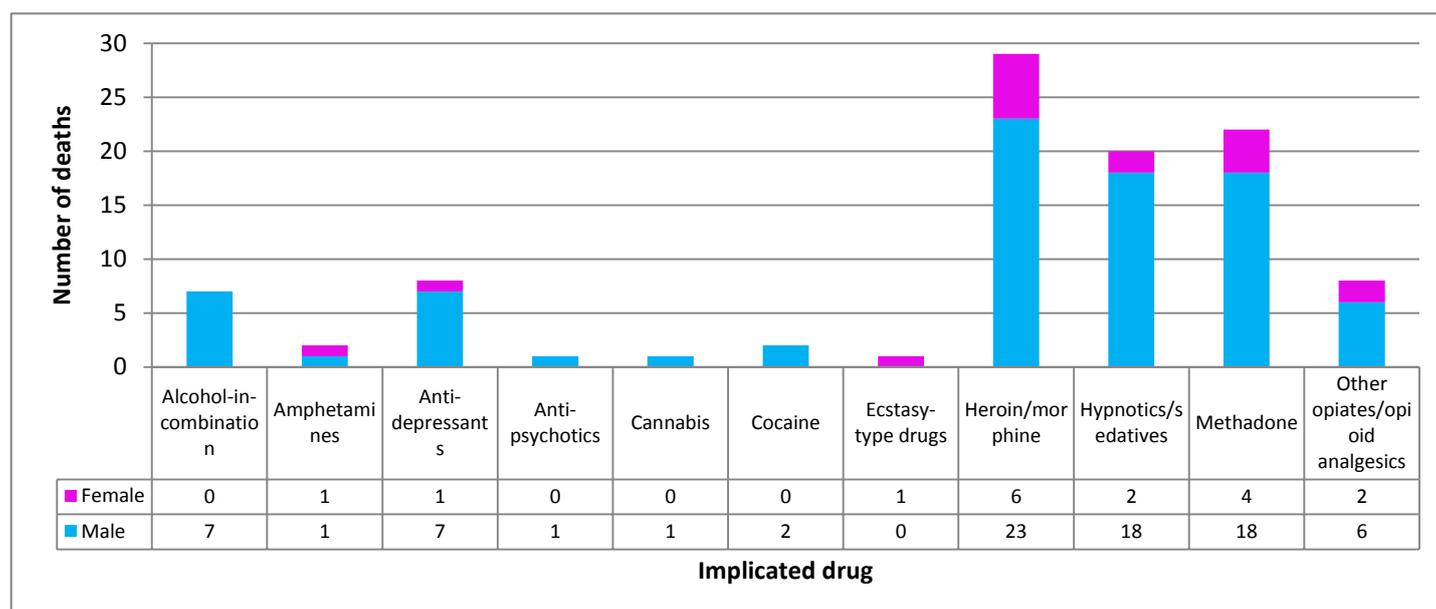
### Regional data

This section contains information based on Welsh Drug and Alcohol Action Team (DAAT) areas.

Data for Drug and Alcohol Action Team (DAAT) areas are given in Tables 3.8 and 3.9. Table 3.4 shows the number of deaths by population (rate per 100,000 population aged 16 years and over), and show the age group; gender; ethnicity; and principal psychoactive drugs implicated in death.

Heroin/morphine was implicated in the greatest proportion of deaths in Iechyd Morgannwg (54.5%) and Bro Taf (52.3%), whilst Bro Taf also had the greatest proportion of deaths attributed to hypnotics/sedatives (38.1%) when compared with other DAAT areas. The two deaths located in Powys also both involved hypnotics/sedatives.

**Figure 3.7: Drug-related deaths meeting NPSAD criteria reported by Coroners, by selected psychoactive drug implicated, Wales, 2012**



**Table 3.8: Deaths by Drug and Alcohol Action Team (DAAT) area (16 years and over) – number and rate per 100,000 population, Wales, 2012**

Drug and Alcohol Action Team Area	National and annual death rate per 100,000 population – usual area of residence		National and annual death rate per 100,000 population – place of death	
	Number	Rate	Number	Rate
<b>Bro Taf</b>	28	4.48	21	3.36
<b>Dyfed Powys</b>	5	1.17	5	1.17
<b>Gwent*</b>	-	-	1*	-
<b>Iechyd Morgannwg</b>	15	3.51	11	2.57
<b>North Wales</b>	6	1.06	4	0.71

Note: There were two cases that were resident outside of Wales and two of unknown usual address. There were 16 deaths that could not be allocated to a specific DAAT.  
\* Case details obtained through media sources thus incomplete coverage.

**Table 3.9: Deaths by Drug and Alcohol Action Team area – demographics and drugs implicated, Wales, 2012**

Drug and Alcohol Action Team Area	No	Gender		Age group					Ethnicity			Main Drug Strategy drug implicated					
		Male	Female	15-24	25-34	35-44	45-54	55-64	White	Black	Not known	Heroin/morphine	Methadone	Hypnotics/sedatives	Cocaine	Amphetamines	Ecstasy-type
<b>Bro Taf</b>	21	17	4	2	6	11	0	2	14	1	6	11	7	8	1	1	0
<b>Dyfed Powys</b>	5	3	2	1	2	1	0	1	5	0	0	1	2	3	0	1	0
<b>Gwent*</b>	1*	-	1*	-	1*	-	-	-	-	-	1*	-	-	-	-	-	1*
<b>Iechyd Morgannwg</b>	11	7	4	0	5	4	2	0	8	0	3	6	4	3	0	0	0
<b>North Wales</b>	4	4	0	0	1	2	1	0	1	0	3	1	3	0	1	0	0

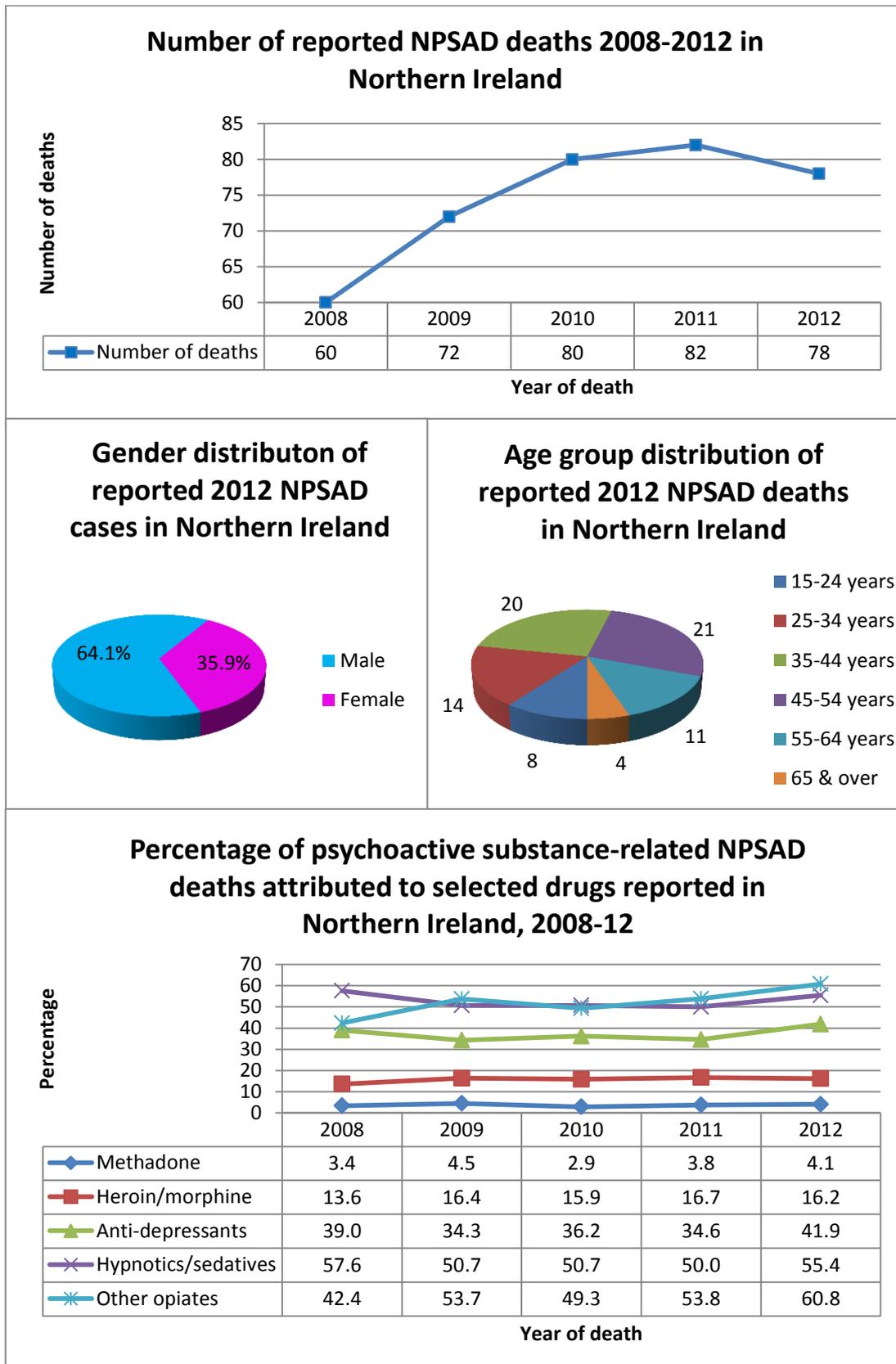
Note: There were 16 deaths that could not be allocated to a specific DAAT.  
\* Case details obtained through media sources thus incomplete coverage.

## Commentary

There was a higher ratio of male to female (4.25:1) drug-related deaths in Bro Taf compared to other areas in Wales in 2011. The majority of deaths in Wales were amongst those aged 25 to 44 years, which is a pattern seen across the UK. Deaths of those aged 15-24 occurred in Bro Taf and Dyfed Powys.

The proportion of deaths attributed to heroin/morphine was higher in Wales than in any other part of the UK, having been implicated in 54.7% of cases. The proportion of cases in which methadone was implicated was second only to Scotland, being involved in 41.5% of deaths, which is almost double that of England. Meanwhile, the role other opiates/opioid analgesics played in Welsh deaths was substantially lower than other countries in the UK (15.1% in Wales vs. 60.8% in Northern Ireland).

## Chapter 4: Drug-related deaths in Northern Ireland



This chapter describes the pattern of drug-related deaths in Northern Ireland reported by Coroners and from registrations data supplied by The Northern Ireland Statistics and Research Agency (NISRA) recorded by the General Register Office for Northern Ireland.

## Profile of NPSAD cases

### 4.1 Demography

Notifications of 78 drug-related deaths occurring in 2012 which met the NPSAD case criteria were received from NISRA and Coroners. In 2011 the number of such deaths was 82; whilst in 2010, 80 deaths were reported (these figures include deaths in these years reported in 2012-13). This represents a fall of 4.9% in reported deaths in Northern Ireland from 2011-12.

In 2012, 64.1% of cases were male (Table 4.1), and 35.9% were female. Unemployed individuals made up 53.8% of the cases, and 50.0% of cases lived with others. Ethnicity was known in 62 cases with all decedents being White, and in the remaining 16 cases ethnicity was not known. Addict status was known in 20/78 cases, 12 (60.0%) of which had a history of drug use or dependence.

The median age at death was 40.5 years (interquartile range = 17.3). Over half of the decedents (53.8%) were under the age of 45 years.

**Table 4.1: Demographic variables for drug-related deaths reported by NISRA and Coroners meeting NPSAD criteria, Northern Ireland, 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>78 (100.0)</b>
<b>Gender</b>	Male	50 (64.1)
	Female	28 (35.9)
<b>Employment status</b>	Employed	19 (24.4)
	Unemployed	42 (53.8)
	Childcare/house person	3 (3.8)
	Retired	10 (12.8)
	Not known	4 (5.1)
<b>Living arrangements</b>	Alone	33 (42.3)
	With others	39 (50.0)
	Other	2 (2.6)
	Not known	4 (5.1)
<b>Ethnicity</b>	White	62 (79.5)
	Not known	16 (20.5)

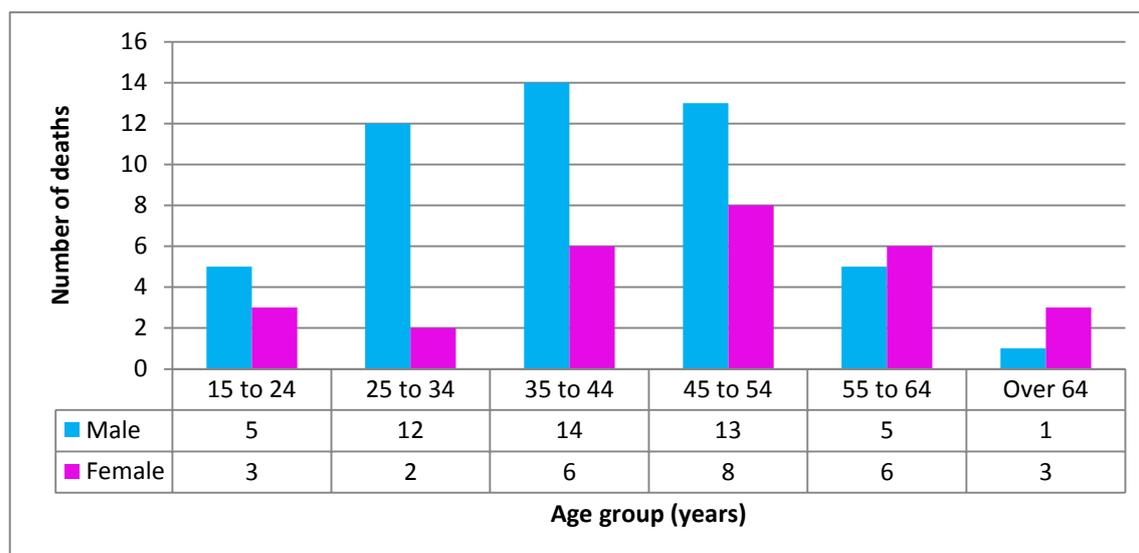
### 4.2 Location of death

Most fatalities (93.6%) occurred at a defined residential address (i.e. the deceased's home address or another private residential address); with 5.1% deaths occurring in hospital and 1.3% in a public place, such as a bus shelter.

### 4.3 Cause(s) of death

Based on the information available from Coroners, 33.3% of cases died from accidental poisoning, 23.1% from intentional self-poisoning, and in 42.3% of cases the intent was undetermined. The cause of death of the remaining case was unascertained.

**Figure 4.1: Drug-related deaths reported by NISRA and Coroners meeting NPSAD criteria, by age group and gender, Northern Ireland, 2012**



## Psychoactive substances implicated in death

### 4.4 All substances

Psychoactive drugs were directly implicated in 74/78 (94.9%) cases. The principal substances implicated were: other opiates/opioid analgesics (60.8%); hypnotics/sedatives (55.4%); anti-depressants (41.9%); alcohol in combination (39.2%); heroin/morphine (16.2%); and anti-psychotics (13.5%) (Table 4.4).

### 4.5 Single substances

Single substance deaths accounted for 18.9% (14/74) of deaths where psychoactive substances were implicated. These substances were: other opiates/opioid analgesics; anti-depressants; and heroin/morphine (Table 4.4).

**Table 4.4: Psychoactive substances implicated in deaths reported by NISRA and Coroners meeting NPSAD criteria, Northern Ireland, 2012**

Drug category	Number (%) of psychoactive drug cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>74 (100.0)</b>	
Alcohol in combination	-	29 (39.2)
Anti-depressants	5 (6.8)	31 (41.9)
Anti-epileptics	0 (0.0)	4 (5.4)
Anti-psychotics	0 (0.0)	10 (13.5)
Cannabis	0 (0.0)	1 (1.4)
Cocaine	0 (0.0)	1 (1.4)
Ecstasy-type drugs	0 (0.0)	2 (2.7)
Heroin/morphine	2 (2.7)	12 (16.2)
Hypnotics/sedatives	0 (0.0)	41 (55.4)
Methadone	0 (0.0)	3 (4.1)
Other opiates/opioid analgesics	7 (9.5)	45 (60.8)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in death. Not all cases had psychoactive substances directly implicated in death: these are excluded from this table.

Figure 4.6 takes into account data where one of the following drugs was known to be implicated: alcohol in combination; amphetamines; anti-depressants; anti-epileptics; anti-psychotics; cannabis; cocaine; heroin/ morphine; hypnotics/sedatives; methadone; and other opiates/opioid analgesics.

#### 4.6 Gender and drug implicated in death

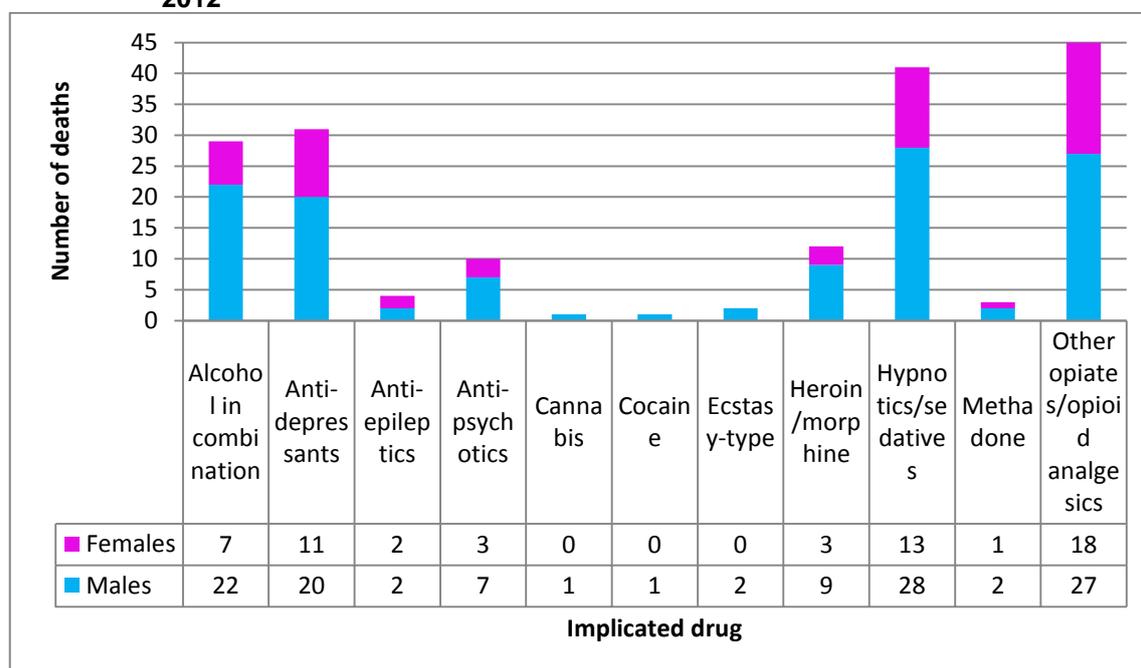
The pattern of other drug-specific mortality was somewhat different in male and female cases. Of the total 50 male deaths, the most frequently mentioned drugs were: hypnotics/sedatives (56.0%); other opiates/opioid analgesics (54.0%); alcohol in combination (44.0%); anti-depressants (40.0%); heroin/morphine (18.0%); anti-psychotics (14.0%); methadone (4.0%); anti-epileptics (4.0%); ecstasy-type drugs (4.0%); cocaine (2.0%); and cannabis (2.0%).

Of the total 28 female deaths, the drugs mentioned most commonly were: other opiates/opioid analgesics (64.3%); hypnotics/sedatives (46.4%); anti-depressants (39.3%); alcohol in combination (25.0%); heroin/morphine (10.7%); anti-psychotics (10.7%); anti-epileptics (7.1%); and methadone (3.6%). There were no female deaths involving ecstasy-type drugs; cocaine; or cannabis.

Compared to female cases, males had a higher proportion of fatality associated with all drugs, except other opiates/opioid analgesics (female 64.3% vs. male 54.0%) and anti-epileptics (female 7.1% vs. male 4.0%).

There were no male or female deaths involving amphetamines; anti-Parkinson's drugs; or GHB/GBL.

**Figure 4.6: Number and gender of drug-related deaths reported by NISRA and Coroners meeting NPSAD criteria, by psychoactive drug implicated, Northern Ireland, 2012**



#### 4.7 Age and drug implicated in death

Overall, of the 74 drug-related deaths where a psychoactive drug was implicated, other opiates/opioid analgesics were the leading substances implicated (60.8%). Such drugs also accounted for the greatest proportion of cases in most age groups, apart from in the 45-54 and 65+ age groups.

Hypnotic/sedatives and anti-depressants drugs were implicated in the greatest proportion of deaths amongst 45-54 year olds. Table 4.7 shows where any particular drug-type was implicated across the whole range of age groups.

**Table 4.7: Age and psychoactive drug implicated in deaths reported to NISRA meeting NPSAD criteria, Northern Ireland, 2012**

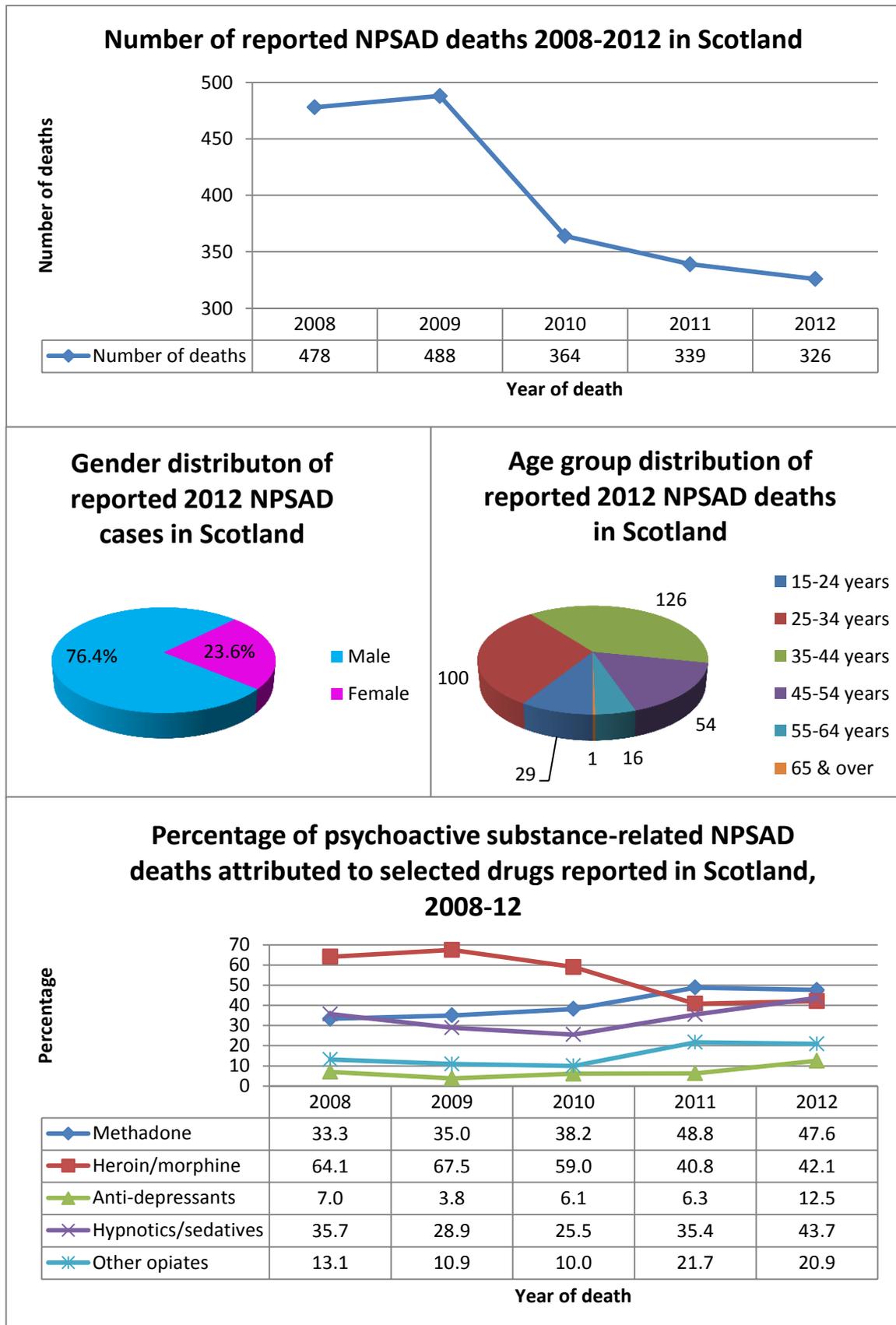
Drug category most frequently implicated (alone or in combination) in each age group											
Age group	Other opiates/opioid analgesics	Hypnotics/sedatives	Anti-depressants	Alcohol in combination	Heroin/morphine	Anti-psychotics	Anti-epileptics	Methadone	Ecstasy-type	Cannabis	Cocaine
15-24	5	5	4	5	2	1	0	0	0	0	0
25-34	9	8	4	2	1	0	0	0	2	1	1
35-44	11	11	4	6	4	4	0	1	0	0	0
45-54	11	12	12	10	2	3	2	2	0	0	0
55-64	8	4	6	5	3	2	2	0	0	0	0
65+	1	1	1	1	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>45</b>	<b>41</b>	<b>31</b>	<b>29</b>	<b>12</b>	<b>10</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>

### Commentary

The number of deaths notified to the Programme from sources in Northern Ireland showed a small decrease from 2011 to 2012 (however, it is important to note that due to the nature of the reporting system there are likely to be proportionately more 2012 deaths reported in 2013-14 than 2011 deaths, meaning these results may change). The demographic profile of those dying in 2012 showed a very slight increase in the proportion of male compared to female deaths.

The general profile of the psychoactive substances implicated in the Northern Ireland NPSAD cases is relatively similar to previous years. Northern Ireland contrasts with the rest of the UK with higher proportions of deaths attributed to the following substance types: hypnotics/sedatives; other opiates/opioid analgesics; anti-depressants; alcohol in combination with other drugs; and anti-psychotics. As in previous years, Northern Ireland displayed a substantially lower proportion of deaths attributed to heroin/morphine and methadone than other regions.

## Chapter 5: Drug-related deaths in Scotland



This section describes the pattern of drug-related deaths in Scotland. The Scottish Crime and Drug Enforcement Agency (SCDEA) collate data on drug-related deaths obtained from Scottish police forces. These data are used to populate a police/SCDEA national database maintained by the SCDEA. As such the data supplied to the SCDEA remain the property of the submitting force that is also responsible for its accuracy and submission to the database.

Drug-related death cases are those that meet the definition used by the Association of Chief Police Officers (Scotland) – “where there is prima facie evidence of a fatal overdose of controlled drugs. Such evidence would be recent drug misuse, for example controlled drugs and/or a hypodermic syringe found in close proximity to the body and/or the person is known to the police as a drug misuser although not necessarily a notified addict.” Thus, most suicides in Scotland are excluded. Figures for “drug misuse” deaths registered in 2012 have been published by the National Records of Scotland (NRS, 2013).

## **Profile of NPSAD cases**

### **5.1 Demography**

Notifications of 326 drug-related deaths occurring in 2012 were received by the SCDEA, covering the following police force areas: Central Scotland (3.1%); Dumfries & Galloway (1.2%); Fife (6.1%); Grampian (3.7%); Lothian & Borders (28.2%); Northern (5.5%); Strathclyde (35.0%); and Tayside (17.2%). This represents a fall of 3.8% compared to 2011 (339 cases).

The majority (76.4%) of cases were male (Table 5.1). The median age at death was 37.1 years (interquartile range = 13.8) (Figure 5.1). Most cases (78.2%) were under 45 years. Where ethnicity was known, 98.2% were White.

### **5.2 Location of death**

In line with data protection, the SCDEA database structure does not record information on living arrangements and place of death. Where such information was available (from external sources – five cases), three died at a defined residential address, and two in hospital.

### **5.3 Cause(s) of death**

Most of the fatalities (92.3%) were considered to be accidental (i.e. clearly non-deliberate) poisoning; this reflects the definition being used by Scottish police. Possible intentional poisonings accounted for 2.1% and deaths caused by mental disorders due to psychoactive substances (3.7%) accounted for most of the remaining cases.

## **Psychoactive substances implicated in death**

### **5.4 All substances**

Psychoactive drugs were not directly implicated in 4.6% of cases (n = 15). Of the remaining 311 cases, the principal substances implicated were: methadone (47.6%); hypnotics/sedatives (43.7%); heroin/morphine (42.1%); other opiates/ opioid analgesics (20.9%); alcohol in combination with other substances (19.9%); and cocaine (5.5%) (Table 5.4).

Figure 5.2 takes into account data where one of the following drugs was known to be implicated: alcohol in combination; amphetamines, anti-depressants; cocaine; ecstasy-type drugs; heroin/morphine; methadone; hypnotics/ sedatives; or other opiates/opioid analgesics.

## 5.5 Single substances

The following substances, as the sole implicated drug, accounted for 77 (24.8%) deaths: heroin/morphine (10.6%); methadone (7.4%); other opiates/opioid analgesics (2.6%); cocaine (1.3%); amphetamines (1.0%); GHB/GBL (1.0%); anti-depressants (0.3%); ecstasy-type (0.3%); and hypnotics/sedatives (0.3%) (Table 5.4).

**Table 5.1: Demographic variables for drug-related deaths as reported by Scottish police forces to the SCDEA, 2012**

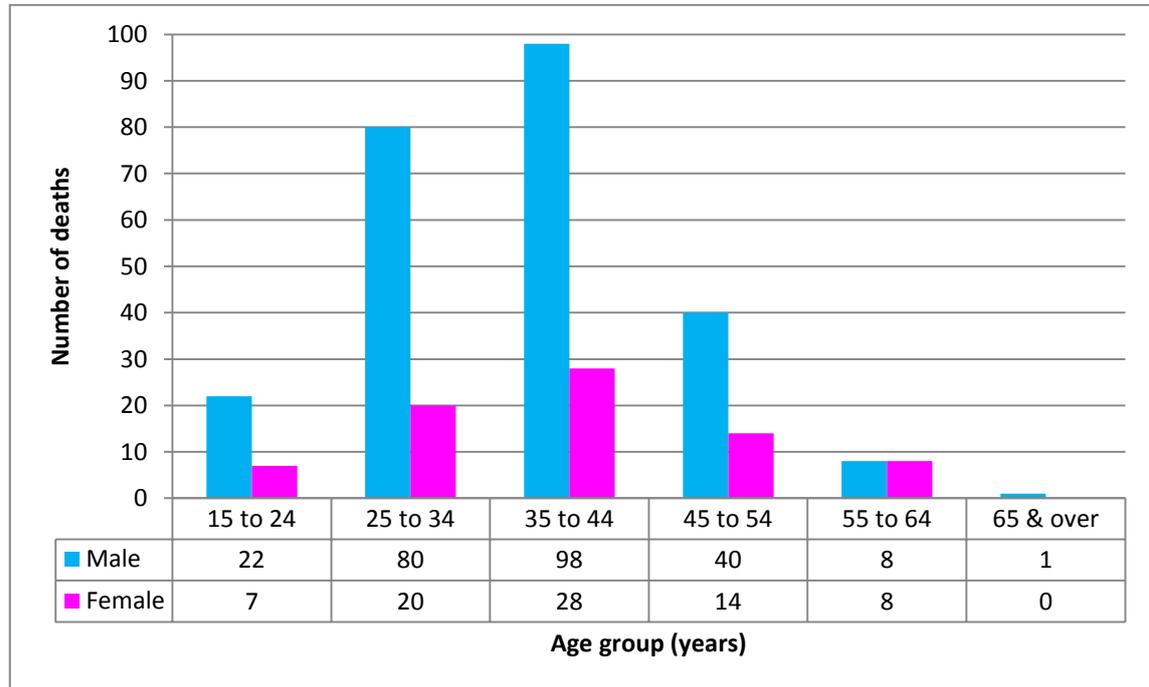
Variable	Category	Number (%)
<b>TOTAL</b>		<b>326 (100.0)</b>
<b>Gender</b>	Male	249 (76.4)
	Female	77 (23.6)
<b>Age group (years)</b>	15-24	29 (8.9)
	25-34	100 (30.7)
	35-44	126 (38.7)
	45-54	54 (16.6)
	55-64	16 (4.9)
	65 & over	1 (0.3)

**Table 5.4: Psychoactive substances implicated in drug-related deaths as reported by Scottish police forces to the SCDEA, 2012**

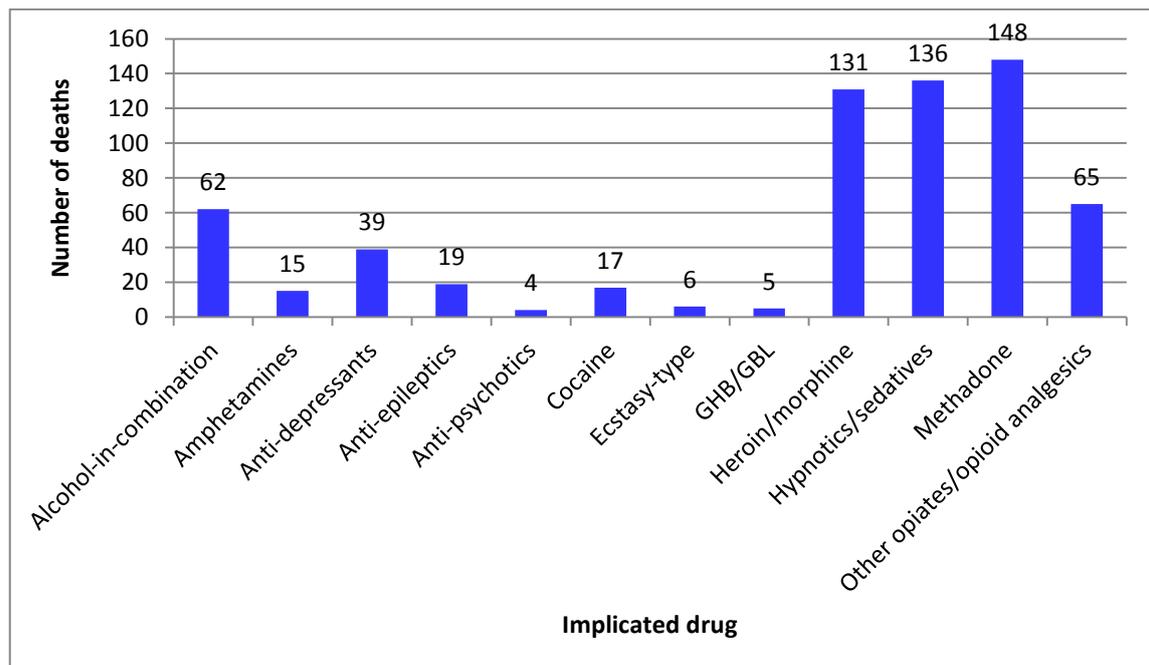
Drug category	Number (%) of psychoactive drug cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>311 (100.0)</b>	
<b>Alcohol in combination</b>	-	62 (19.9)
<b>Amphetamines</b>	3 (1.0)	15 (4.8)
<b>Anti-depressants</b>	1 (0.3)	39 (12.5)
<b>Anti-epileptics</b>	0 (0.0)	19 (6.1)
<b>Anti-psychotics</b>	0 (0.0)	4 (1.3)
<b>Cocaine</b>	4 (1.3)	17 (5.5)
<b>Ecstasy-type drugs</b>	1 (0.3)	6 (1.9)
<b>GHB/GBL</b>	3 (1.0)	5 (1.6)
<b>Heroin/morphine</b>	33 (10.6)	131 (42.1)
<b>Hypnotics/sedatives</b>	1 (0.3)	136 (43.7)
<b>Methadone</b>	23 (7.4)	148 (47.6)
<b>Other opiates/opioid analgesics</b>	8 (2.6)	65 (20.9)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in death. Not all cases had psychoactive substances directly implicated in death: these are excluded from this table.

**Figure 5.1: Drug-related deaths as reported by Scottish police forces to the SCDEA, by age and gender, 2012**



**Figure 5.4: Drug-related deaths as reported by Scottish police forces to the SCDEA, by selected psychoactive substance implicated, 2012**



## 5.5 Age and drug implicated in death

Methadone was the most frequently mentioned drug contributing to fatality for all (jointly for 25-34 year-olds) of the individual age groups from 25-34 to 45-54 years (Table 5.5), occurring in between 47-54% of cases in these groups.

**Table 5.5: Age and psychoactive substance implicated in drug-related deaths as reported by Scottish police forces to the SCDEA, 2012**

Age group (years)	Number (%)	Drug category most frequently implicated (alone or in combination) in each age group (%)
<b>All ages combined</b>	311 (100.0)	Methadone (47.4)
<b>15-24</b>	28 (9.0)	Hypnotics/sedatives (46.4)
<b>25-34</b>	100 (32.2)	Heroin/morphine (47.0) Methadone (47.0)
<b>35-44</b>	114 (36.7)	Methadone (50.0)
<b>45-54</b>	52 (16.7)	Methadone (53.8)
<b>55-64</b>	16 (5.1)	Other opiates/opioid analgesics (56.3)
<b>65 &amp; over</b>	1 (0.3)	Heroin/morphine (100.0) Alcohol in combination (100.0)

## 5.6 Gender and drug implicated in death

In males (n = 236) and females (n = 75), the pattern of drug-specific fatality was somewhat different.

Among males, the most frequently mentioned drugs were: methadone (47.0%); heroin/morphine (44.5%); hypnotics/sedatives (43.2%); alcohol in combination (20.3%); other opiates/ opioid analgesics (18.2%); anti-depressants (9.3%); cocaine (6.4%); and amphetamines (5.9%). Furthermore, there appears to be a higher proportion of cases of drug-specific fatality among males compared to females in respect of heroin/morphine (44.5% vs. 34.7%); cocaine (6.4% vs. 2.7%); and amphetamines (5.9% vs. 1.3%)

Among female cases, the most frequently mentioned drugs were: methadone (49.3%); hypnotics/sedatives (45.3%); heroin/morphine (34.7%); other opiates/opioid analgesics (29.3%); anti-depressants (22.7%); alcohol in combination (18.7%); and anti-epileptics (14.7%). Compared to male cases, it appears that female cases had a higher proportion of fatality associated with other opiates/opioid analgesics (29.3% vs. 18.2%); anti-depressants (22.7% vs. 9.3%); and anti-epileptics (14.7% vs. 3.4%).

## Regional data

The number of drug-related deaths reported by police to the SCDEA and meeting the NPSAD case criteria fell from 312 in 2004 to 254 in 2005 and then rose to 374 in 2006. The figure for 2007 was 357, but rose to a new peak of 478 in 2008, remaining stable in 2009. This figure fell in 2010 to 364, 339 in 2011 and to 326 in 2012 - a decrease of 3.8% (Table 5.7). The rates in the Lothian & Borders and Tayside police force areas are on a par with some of the higher rates reported in England and Wales.

**Table 5.7: Deaths meeting NPSAD criteria as reported by Scottish police forces to the SCDEA, per 100,000 population by police force area, 2010-12**

Police force area	Number of deaths 2010	Annual death rate per 100,000 population 2010	Number of deaths 2011	Annual death rate per 100,000 population 2011	Number of deaths 2012	Annual death rate per 100,000 population 2012
Central Scotland Police	11	5.80	12	4.96	10	4.07
Dumfries & Galloway Constabulary	2	2.19	8	6.46	4	3.17
Fife Constabulary	31	13.17	17	5.62	20	6.63
Grampian Police	38	10.52	48	10.47	12	2.52
Lothian & Borders Police	79	12.49	98	12.26	92	11.58
Northern Constabulary	7	3.83	22	9.16	18	7.15
Strathclyde Police	164	11.23	103	5.60	114	6.13
Tayside Police	32	12.55	31	9.49	56	16.33
<b>Scotland</b>	<b>364</b>	<b>10.66</b>	<b>339</b>	<b>7.81</b>	<b>326</b>	<b>7.41</b>

\* The rate per 100,000 population is based on published mid-year population estimates for local government administrative areas for the years in question.

## Commentary

Data received by NPSAD from Coroners suggests that the number of drug-related deaths decreased in the rest of the UK during 2012, and information from the Scottish police also indicates a fall in SCDEA cases. Figures released by the National Records of Scotland (NRS) also show a decrease in deaths registered in 2012, using a number of different definitions (NRS, 2013). The fall in notifications to the SCDEA may be due, in part, to reduced compliance.

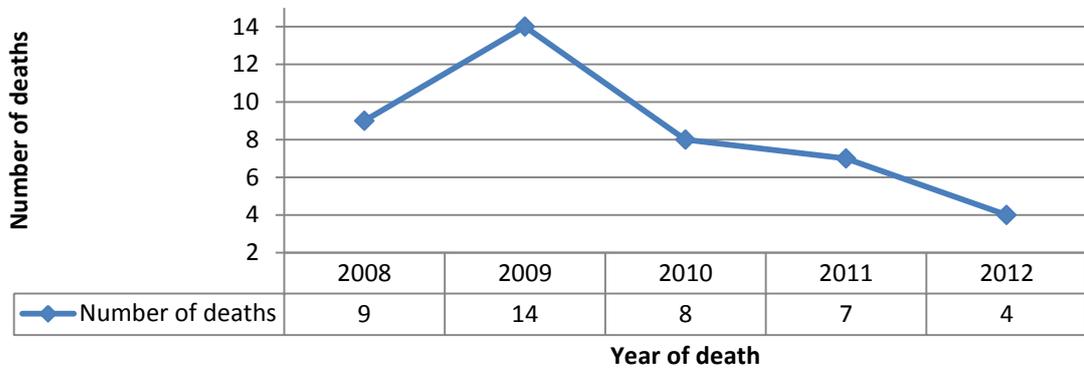
Where recorded by the SCDEA, the demographic profile of those who died from drug-related causes is similar to those in other parts of the UK e.g. a higher proportion of males to females, aged typically 25-44 years, and White. The overwhelming majority of deaths were accidental drug overdoses. The level in Scotland was much higher than in other regions reflecting the different case definition used by Scottish police forces.

Opiates such as heroin and methadone are implicated in the majority of cases, and play a larger role than in other regions. These drugs in combination with other substances and hypnotics/sedatives (which are mostly diazepam and temazepam) also feature prominently in Scottish deaths.

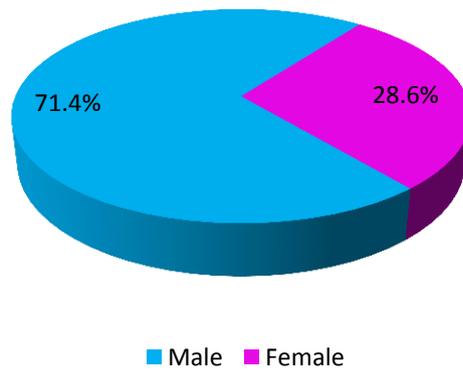
The most important changes emerging from these data are that for the second year running methadone accounts for more deaths than heroin/morphine as the principal drug involved in deaths. This echoes the pattern described in deaths registered in Scotland during 2011 (NRS, 2012). The fall in 2011 was followed by a stabilisation in the proportions for both substances. The proportion of cases in which hypnotics/sedatives (35% vs. 42%) and anti-depressants (7% vs. 13%) also increased between 2011 and 2012, as did those for cocaine and ecstasy-type drugs.

## Chapter 6: Drug-related deaths in the Islands (Guernsey, Jersey, and the Isle of Man)

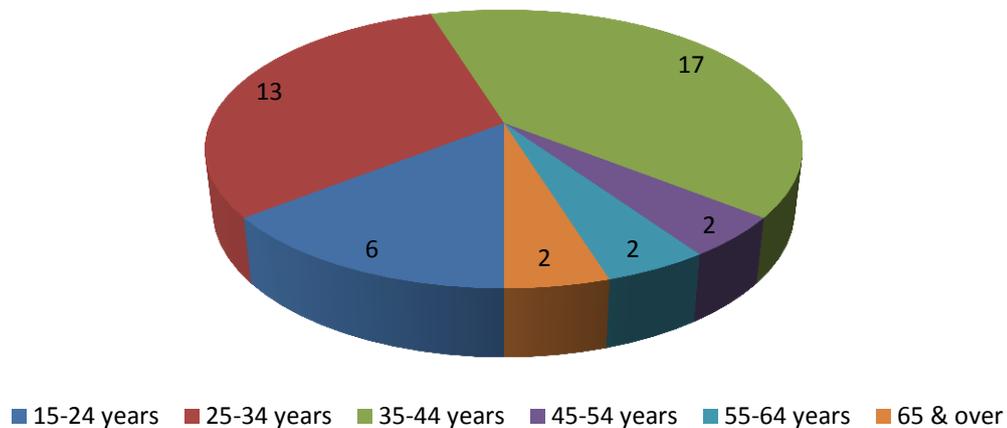
**Number of reported NPSAD deaths 2008-2012 in the Islands**



**Gender distributon of reported 2008-2012 NPSAD cases in the Islands**



**Age group distribution of reported 2008-2012 NPSAD cases in the Islands**



This chapter reports on deaths in 2012 and examines the pattern of drug-related deaths in the Islands between 2008 and 2012. Coroners and their equivalents in Guernsey, Jersey and the Isle of Man routinely submit returns on drug-related deaths to NPSAD that meet the Programme's case criteria. As there are comparatively few cases in a single year when compared with the UK, even when combining data for the Islands together, data for 2008-12 have been aggregated together so that the findings are more statistically robust.

## Profile of NPSAD cases

### 6.1 Demography

The Programme has been notified of a total of four drug-related deaths that occurred during 2012: two deaths on Jersey, two on the Isle of Man, and none on Guernsey. Between 2008 and 2012 a total of 42 cases were notified, respectively: nine in 2008; 14 in 2009; eight in 2010; seven in 2011 and four in 2012. Considering the number of deaths in each island in the five year period (2008-2012), it was: five on Guernsey; 21 on Jersey; and 16 on the Isle of Man.

In 2012 the number of deaths per 100,000 population aged 16 years and over was 2.42 for Jersey and 2.88 for Isle of Man (Tables 6.1.1 and 6.1.2).

**Table 6.1.1: Changes in annual death rate per 100,000 population for NPSAD cases (16 years old and over), and annual percentage of all inquests held, by Island, 2010 and 2012**

Island	Annual death rate per 100,000 population 2010 <sup>1</sup>	Annual death rate per 100,000 population 2011 <sup>1</sup>	Annual death rate per 100,000 population 2012
Guernsey	1.91	3.80	0.00
Jersey	4.45	2.44	2.42
Isle of Man	2.91	4.31	2.88

<sup>1</sup> Including deaths notified after the publication of the NPSAD Annual Report for 2011 deaths

**Table 6.1.2: Number per 100,000 population (16 years and over) for NPSAD cases, by place of residence and death, by Island, 2012**

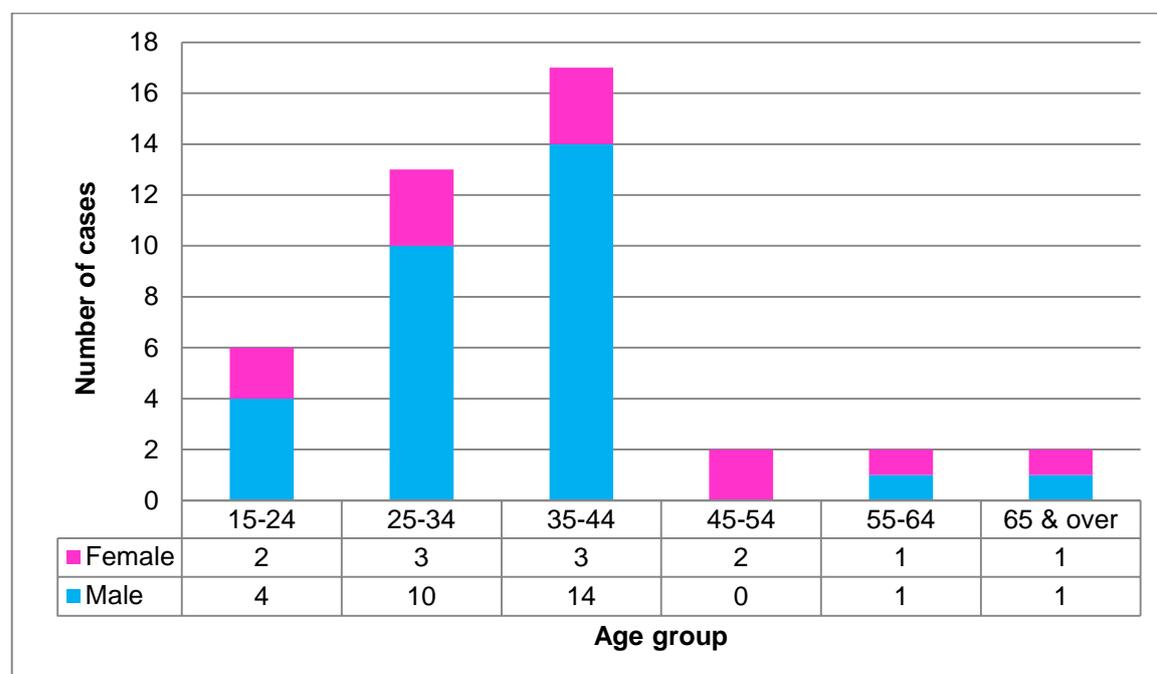
Island	National and annual death rate per 100,000 population-usual area of residence		National and annual death rate per 100,000 population-place of death	
	No.	Rate	No.	Rate
Guernsey	0	0.00	0	0.00
Jersey	2	2.42	2	2.42
Isle of Man	2	2.88	2	2.88

Among the 42 drug-related deaths that occurred during the five year period, 30 were male and 12 were female. The median age at death was 36.6 years (interquartile range = 15.03), with the majority (85.8%) of cases under 45 years old (Figure 6.1.4). Where ethnicity was known, the overwhelming majority of decedents were White (97.6%). Those that were employed accounted for 50.0% of cases, whilst 35.7% were unemployed. In terms of living arrangements, 40.5% were living alone and 47.6% lived with others (Table 6.1.3). Previous drug use history was known in 34/42 cases, and of these, 18 (52.9%) had a history of drug use or dependence.

**Table 6.1.3 Demographics of drug-related deaths in the Islands, 2008-2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>42 (100.0)</b>
<b>Gender</b>	Male	30 (71.4)
	Female	12 (28.6)
<b>Employment status</b>	Employed	21 (50.0)
	Unemployed	15 (35.7)
	Retired/sickness/invalidity	5 (11.9)
	Not known	1 (2.4)
<b>Living arrangements</b>	With others	20 (47.6)
	Alone	17 (40.5)
	Not known	2 (4.8)
	Other	2 (4.8)
	No fixed abode	1 (2.4)

**Figure 6.1.4 Drug-related deaths meeting NPSAD criteria, by age group and gender, the Islands, 2008-2012**



Key demographics and the principal drugs implicated in death during 2012 are given for the individual Islands in Table 6.4.

**Table 6.4: Key demographics and principal drugs implicated in deaths for NPSAD cases, by Island, 2012**

Island	No	Gender		Age group			Ethnicity		Drug implicated				
		TOTAL	Male	Female	15-24	25-34	35-44	White	Not known	Alcohol in combination	Antidepressants	Heroin/morphine	Hypnotic/sedatives
<b>Jersey</b>	2	1	1	2	0	0	2	0	1	1	0	1	1
<b>Isle of Man</b>	2	2	0	0	1	1	2	0	0	1	1	0	0

Notes: The number of cases for principal drugs implicated, may sum to more than the total case number since more than one substance may be implicated in a death

## 6.2 Location of death

Most fatalities (76.2%) occurred at a defined residential address (i.e. the deceased's home address or another private residential address); 16.7% of the deaths occurred in hospital; and 7.1% elsewhere.

## 6.3 Manner of death

Based on the information available from Coroners, the manner of death of cases reported was accidental in 26 cases (61.9%), intentional in 13 (31.0%) and undetermined in three cases (7.1%).

## Psychoactive substances implicated in death

### 6.4 All substances

Psychoactive drugs were directly implicated in all 42 cases. The main substances implicated alone or in combination were: heroin/morphine (40.5%); other opiates/opioid analgesics (28.6%); alcohol in combination (28.6%); hypnotics/sedatives (26.2%); and anti-depressants (23.8%) (Table 6.4).

### 6.5 Single substances

The following substances, as the sole implicated drug, accounted for 20/42 (47.6%) deaths: heroin/morphine (12 cases); anti-depressants (three cases); other opiates/opioid analgesics (three cases); hypnotic/sedatives (one case); and methadone (one case).

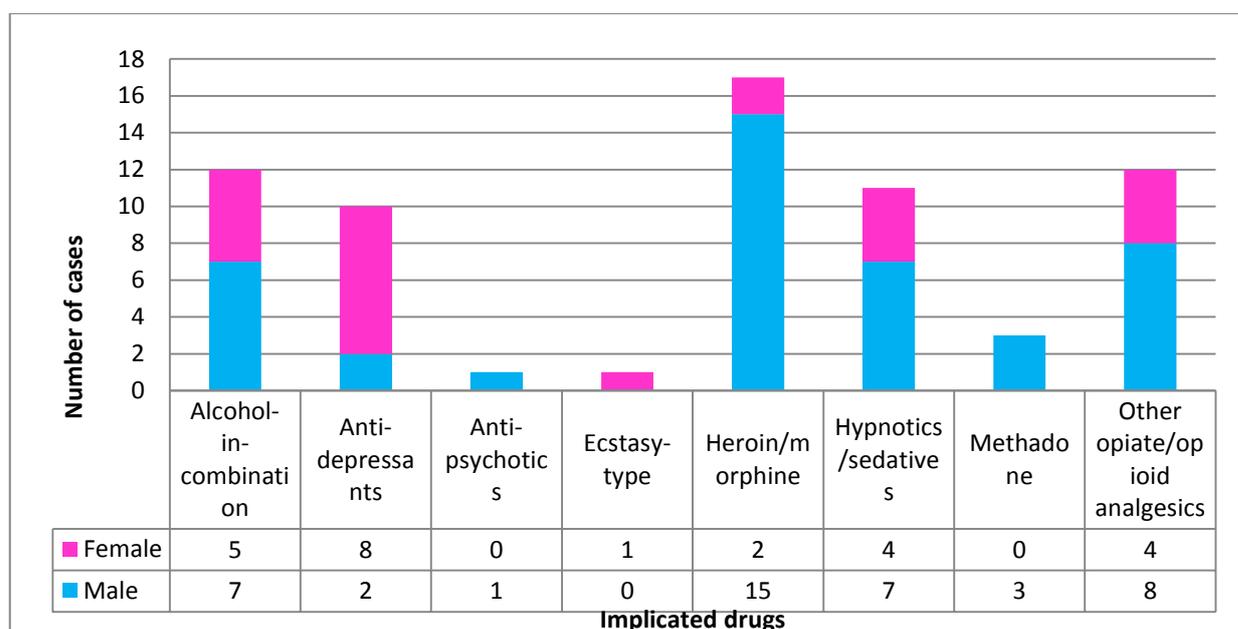
## 6.6 Age and drug implicated in death

Among those aged 15-34 years, heroin/morphine was the leading drug implicated, whilst for those aged between 35-44 the substance type most frequently implicated was hypnotic/sedatives. Table 6.6 provides a breakdown for each age group.

**Table 6.4: Psychoactive substances implicated in deaths meeting NPSAD criteria, the Islands, 2008-2012**

Drug category	Number (%) of cases where no other substance was implicated	Number (%) of psychoactive drug cases where drug was implicated
<b>TOTAL</b>	<b>42 (100.0)</b>	
Alcohol in combination	-	12 (28.6)
Anti-depressants	3 (7.1)	10 (23.8)
Anti-psychotics	0 (0.0)	1 (2.4)
Ecstasy-type drugs	0 (0.0)	1 (2.4)
Heroin/morphine	12 (28.6)	17 (40.5)
Hypnotic/sedatives	1 (2.4)	11 (26.2)
Methadone	1 (2.4)	3 (7.1)
Other opiates/opioid analgesics	3 (7.1)	12 (28.6)

**Figure 6.7 Gender and drug implicated in death by gender (2008-2012)**



## 6.7 Gender and drug implicated in death

The gender distribution by type of psychoactive substances implicated in fatalities reveals some interesting differences between male and female cases. Among the 30 male cases in which psychoactive drugs were implicated, the top three substances most frequently implicated alone or in combination were:

1. Heroin/morphine (50.0%)
2. Other opiates/opioid analgesics (26.7%)
3. Hypnotics/sedatives (23.3%) & alcohol in combination with other drugs (23.3%)

Among the 12 female cases, the top three substances were:

1. Anti-depressants (66.7%)
2. Alcohol in combination with other drugs (41.7%)
3. Other opiates/opioid analgesics (33.3%) & hypnotics/sedatives (33.3%)

Comparing the type of psychoactive substances implicated in the deaths of both genders, heroin/morphine contributed to a substantially larger proportion of male deaths than female deaths (50.0% vs. 16.7%), whilst anti-depressants accounted for a greater proportion of female deaths (66.7% vs. 6.7%). There were no female fatalities due to methadone or anti-psychotics reported to the Programme. Conversely, there were no male deaths involving ecstasy-type substances, whilst one female death involved such drugs.

**Table 6.6: Age and psychoactive drug implicated in deaths reported by Guernsey, Jersey, and the Isle of Man**

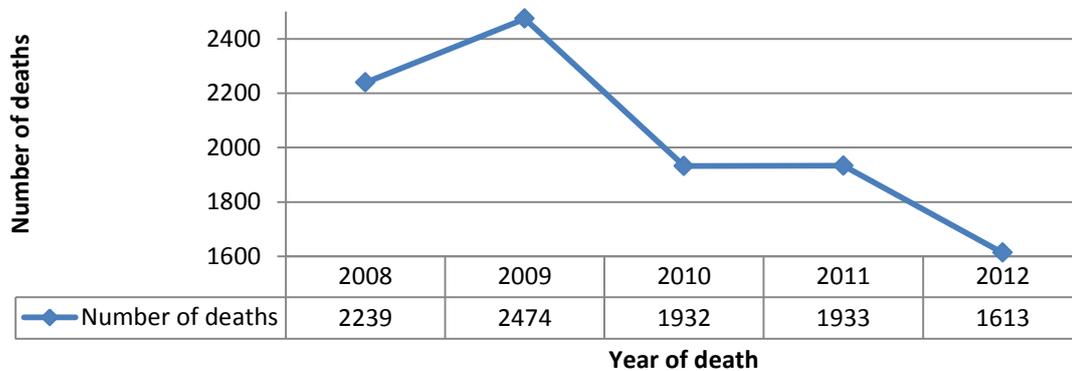
Age group (years)	Number of cases	Drug category (alone or in combination) most frequently implicated in each group
All ages	42	Alcohol in combination (12) Anti-depressants (10) Anti-psychotics (1) Ecstasy-type drugs (1) Heroin/morphine (17) Hypnotics/sedatives (11) Methadone (3) Other opiates/opioid analgesics (12)
15-24	6	Alcohol in combination (2) Anti-depressants (1) Ecstasy-type drugs (1) Heroin/morphine (3) Hypnotics/sedatives (1) Other opiates/opioid analgesics (1)
25-34	13	Alcohol in combination (3) Anti-depressants (1) Heroin/morphine (8) Hypnotics/sedatives (2) Methadone (1) Other opiates/opioid analgesics (3)
35-44	17	Alcohol in combination (5) Anti-depressants (5) Anti-psychotics (1) Heroin/morphine (5) Hypnotics/sedatives (6) Methadone (2) Other opiates/opioid analgesics (4)
45-54	4	Alcohol in combination (1) Heroin/morphine (1) Hypnotics/sedatives (1) Other opiates/opioid analgesics (1)
55-64	2	Alcohol in combination (1) Anti-depressants (1)
65 & over	2	Hypnotics/sedatives (1) Other opiates/opioid analgesics (1)

## Commentary

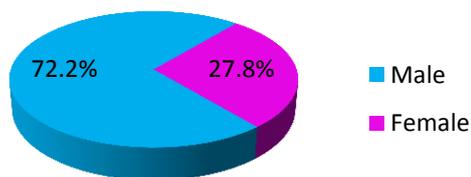
The number of deaths notified to the Programme for 2012 from the Islands showed a decrease in general and for each island in particular. There were no reported drug-related deaths on Guernsey. The general demographic profile of cases in the Islands is in line with the pattern in the UK as a whole. When data for the three Islands are combined together, the relative proportions of deaths attributed to certain psychoactive substances is broadly similar across the period 2008-12, with heroin/morphine; other opiates/opioid analgesics; alcohol in combination with other drugs; hypnotic/sedatives; and anti-depressants drugs being implicated most frequently. The proportion of cases involving only one substance is much lower than in the UK.

## Chapter 7: Drug-related deaths in the United Kingdom and Islands

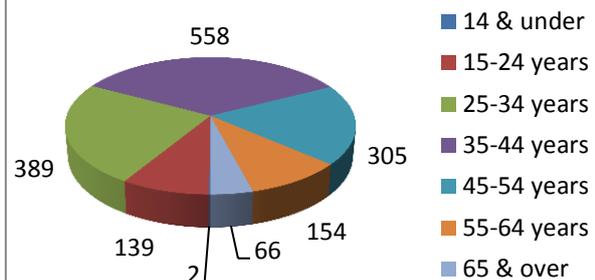
**Number of reported NPSAD deaths 2008-2012 in the UK and Islands**



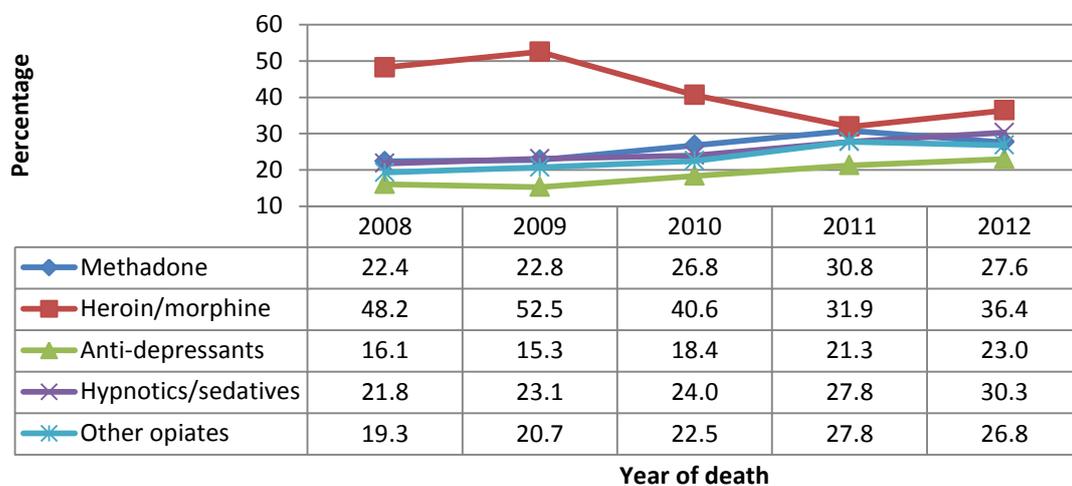
**Gender distribution of reported 2012 NPSAD cases in the UK and Islands**



**Age group distribution of reported 2012 NPSAD deaths in the UK and Islands**



**Percentage of psychoactive substance-related NPSAD deaths attributed to selected drugs reported in the UK and Islands, 2008-12**



## Total reported deaths

The total number of deaths that occurred during 2011 in the UK and Islands reported to the National Programme on Substance Abuse Deaths (NPSAD) was 1,613. This number compares to 1,933 cases reported by similar sources for 2011. This change represents a decrease of 16.6% for the UK in the number of notifications to the Programme, but not necessarily in drug-related mortality during this period. This reduction in reported cases is likely due to a combination of a reduced catchment period for drug-related death notifications compared with the previous report and a lower coverage rate of Coroners voluntarily reporting to the Programme. Furthermore, due to the nature of the Coronial reporting system and lengthy inquest procedures, the figures for 2012 (and 2011, to a lesser extent) can be expected to increase as further inquests on drug-related deaths are completed and reported to the Programme.

Of the 1,613 drug-related deaths reported for 2012, England had 1,147 (71.1%); Scotland 326 (20.2%); Wales 58 (3.6%); Northern Ireland 78 (4.8%); and the Islands 4 (0.2%). Out of the 1,933 reported cases for 2011, England had 1,424 (73.7%); Scotland 339 (17.5%); Wales 81 (4.2%); Northern Ireland 82 (4.2%); and the Islands 7 (0.4%).

The number of cases reported from England represents a decrease of 19.5% between 2011 and 2012; 28.4% in Wales; 4.9% in Northern Ireland; 3.8% in Scotland; and the number of deaths reported for the Islands fell from seven cases to four. These falls are only in relation to the number of deaths reported to the Programme, and not necessarily a reflection of actual reductions in the number of NPSAD deaths that occurred.

## Profile of NPSAD cases

### 7.1 Demography

The majority (72.2%) of cases were male (Table 7.1 and Figure 7.1). This proportion varied from 64.1% in Northern Ireland to 76.4% in Wales. Where ethnicity was known, the majority were White (97.3%), and the proportion of cases living with others ranged from 39.6% in England to 50.0% in Northern Ireland. Those who were unemployed accounted for 37.1% of cases, ranging from 45.2% in England to 58.6% in Wales. Where previous drug use was known, 67.1% of cases had such a history of drug use or dependence.

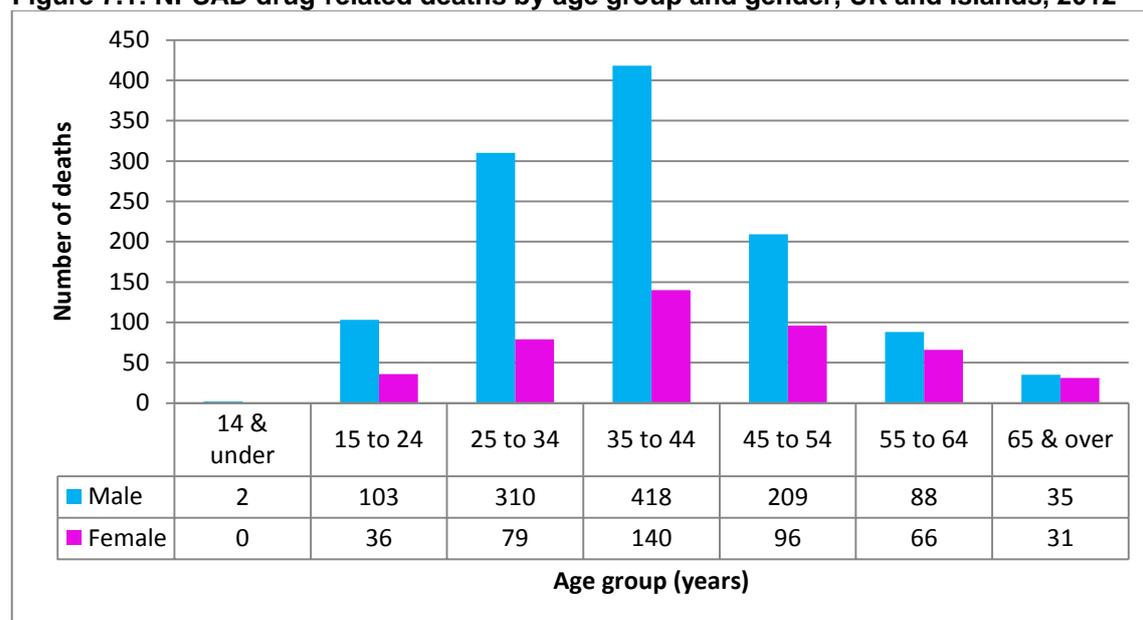
The median age at death was 40 years (interquartile range = 15 years) for all regions combined. The medians ranged from 36 years in Wales to 41 years in England. There were also differences in the median ages broken down by gender: 39 years (interquartile range = 14 years) for males compared to 42 years (interquartile range = 18 years) for females. Figure 7.1 gives a breakdown by gender and age group.

The above differences reflect distinctions in the nature and purpose of the data sources; the types of cases covered including the definitions used; and the volumes of cases dealt with by them. These variations also illustrate the limitations on making comparisons between them.

**Table 7.1: Demographic variables for drug-related deaths, UK and Islands, 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>1,613 (100.0)</b>
<b>Gender</b>	Male	1165 (72.2)
	Female	448 (27.8)
<b>Age group (years)</b>	14 & under	2 (0.1)
	15-24	139 (8.6)
	25-34	389 (24.1)
	35-44	558 (34.6)
	45-54	305 (18.9)
	55-64	154 (9.5)
	65 & over	66 (4.1)
<b>Living arrangements</b>	Alone	557 (34.5)
	With others	521 (32.3)
	Other	55 (3.4)
	No fixed abode	37 (2.3)
	Not known	443 (27.5)
<b>Ethnicity</b>	Black	11 (0.7)
	Asian	8 (0.5)
	White	1140 (70.7)
	Other	13 (0.8)
	Not known	441 (27.3)
<b>Employment status</b>	Unemployed	598 (37.1)
	Employed	366 (22.7)
	Childcare/houseperson	32 (2.0)
	Student/pupil	21 (1.3)
	Retired/invalidity/sickness	126 (7.8)
	Other	11 (0.7)
	Not known	459 (28.5)
<b>History of drug use/addiction</b>	Yes	619 (38.4)
	No	304 (18.8)
	Not known	690 (42.8)
<b>Location of death</b>	Defined residential address	934 (57.9)
	Hospital	191 (11.8)
	Public place	77 (4.8)
	Other	11 (0.7)
	Not known	400 (24.8)

**Figure 7.1: NPSAD drug-related deaths by age group and gender, UK and Islands, 2012**



## 7.2 Location of death

In 2012, amongst cases whose place of death was known, 77.0% died at a defined residential address (i.e. the deceased's home address or other private residential address), whilst 15.7% died in hospital and 7.3% died elsewhere (e.g. in a public place or derelict building). The proportion of cases dying at a defined residential address when such information was reported ranged from 75.8% in England to 93.6% in Northern Ireland. The corresponding proportions for deaths in hospital ranged from 16.6% in England to 5.1% in Northern Ireland. Information for Scotland on living arrangements and place of death was not available as the SCDEA does not report information on these details for data protection reasons.

## 7.3 Cause(s) of death

Over two thirds (67.9%) of the fatalities in 2012 reported to the Programme were considered to be as a result of accidental poisoning (i.e. clearly non-deliberate). Deaths attributed to intentional self-poisoning accounted for 11.0%, whilst 11.2% were poisonings of undetermined intent. The remaining 9.9% of cases were attributed to other or unascertained causes of death. There are differences between different parts of the UK and Islands in the proportions of deaths accounted for by these main groupings of underlying cause(s) of death (Table 7.3.1). These reflect, in part, differences between the SCDEA and NPSAD case definitions. A detailed breakdown for all cases covered by this report is given in Table 7.3.2.

**Table 7.3.1: Main underlying causes of death, by country and territory, 2012**

		Country or territory						
		England	Wales	Scotland	Northern Ireland	Jersey	Isle of Man	UK & Islands
	<b>Number of deaths</b>	1147	58	326	78	2	2	1613
<b>Underlying cause of death (%)</b>	<b>Accidental poisoning</b>	724 (63.1)	52 (89.7)	291 (89.3)	26 (33.3)	1 (50.0)	1 (50.0)	1095 (67.9)
	<b>Intentional poisoning</b>	157 (13.7)	1 (1.7)	0 (0.0)	18 (23.1)	0 (0.0)	1 (50.0)	177 (11.0)
	<b>Undetermined poisoning</b>	139 (12.1)	1 (1.7)	7 (2.1)	33 (42.3)	1 (50.0)	0 (0.0)	181 (11.2)
	<b>Other/unascertained causes</b>	127 (11.1)	4 (6.9)	28 (8.6)	1 (1.3)	0 (0.0)	0 (0.0)	160 (9.9)

Note: no NPSAD deaths were reported for Guernsey in 2012

**Table 7.3.2: Drug-related deaths by underlying cause(s) of death, UK and Islands, 2012**

ICD-10	No. of cases (n = 1,613)	%	Description
X40	6	0.4	<i>Accidental poisoning</i> Non-opioid analgesics, antipyretics and anti-rheumatics
X41	132	8.2	Anti-epileptic, sedative-hypnotic, Anti-parkinsonism and psychotropic drugs, not elsewhere classified
X42	907	56.2	Narcotics and psychodysleptics (hallucinogens), not elsewhere classified
X43	1	0.1	Other drugs acting on the autonomic nervous system
X44	31	1.9	Other and unspecified drugs, medicaments and biological substances
X45	11	0.7	Alcohol
X46	1	0.1	Organic solvents and halogenated hydrocarbons and their vapours
X47	6	0.4	Gases
X60	5	0.3	<i>Intentional self-poisoning</i> Non-opioid analgesics, antipyretics and anti-rheumatics
X61	87	5.4	Anti-epileptic, sedative-hypnotic, Anti-parkinsonism and psychotropic drugs, not elsewhere classified
X62	77	4.8	Narcotics and psychodysleptics (hallucinogens), not elsewhere classified
X63	4	0.2	Other drugs acting on the autonomic nervous system
X64	3	0.2	Other and unspecified drugs, medicaments and biological substances
X67	1	0.1	Other gases and vapours
Y10	3	0.2	<i>Poisoning of undetermined intent</i> Non-opioid analgesics
Y11	55	3.4	Antiepileptic, sedative-hypnotic, anti-Parkinsonism and psychotropic drugs not elsewhere classified
Y12	113	7.0	Narcotics and psychodysleptics
Y13	1	0.1	Other drugs acting on autonomic nervous system
Y14	8	0.5	Other/unspecified drugs
Y17	1	0.1	Other gases and vapours
F10.2	1	0.1	<i>Mental &amp; behavioural disorders due to psychoactive substance use</i> Chronic alcoholism
F12.0	1	0.1	Intoxication – cannabinoids
F15.2	1	0.1	Dependence – stimulants
F18.0	1	0.1	Intoxication – volatile substances
F19.0	2	0.1	Intoxication – unspecified substances
F19.2	8	0.5	Multiple drug use
Z72.2	11	0.7	Drug abuse, personal history
G04.8	1	0.1	<i>Brain</i> Other encephalitis, myelitis and encephalomyelitis
G40.9	1	0.1	Epileptic seizures
G93.1	2	0.1	Anoxic or hypoxic brain damage
G97.8	1	0.1	Cerebral hypoxia unspecified
I11	1	0.1	<i>Cardiovascular system – diseases, defects or conditions affecting</i> Hypertensive heart disease
I20-I25	1	0.1	Ischaemic heart diseases
I25.1	4	0.2	Atherosclerotic heart disease
I33	1	0.1	Acute and subacute endocarditis
I38	1	0.1	Endocarditis, unspecified valve
I40.9	1	0.1	Acute myocarditis
I46.9	1	0.1	Cardiac arrest, unspecified
I49.9	1	0.1	Cardiac arrhythmia
I61.9	2	0.1	Intracerebral haemorrhage
I70	1	0.1	Atherosclerosis

ICD-10	No. of cases (n = 1,613)	%	Description
J18.9	1	0.1	<i>Diseases of the respiratory system</i> Pneumonia, unspecified
J20	1	0.1	Acute bronchitis
J44.9	3	0.2	Chronic obstructive pulmonary disease
J45.9	1	0.1	Asthma, unspecified
J46	2	0.1	Status asthmaticus
J69.0	1	0.1	Aspiration pneumonia
J85.1	1	0.1	Abscesses of lung with pneumonia
J98.8	1	0.1	Other specified respiratory disorders
B17.1	1	0.1	<i>Diseases of the liver</i> Acute hepatitis C
K70.3	1	0.1	Alcoholic cirrhosis of liver
K70.9	2	0.1	Alcoholic liver disease
V47.3	3	0.2	<i>Road traffic incidents</i> Car occupant injured in collision with fixed object
V47.5	2	0.1	Driver injured in collision with fixed/stationary object
W76	2	0.1	<i>Hanging</i> Other accidental hanging and strangulation
X70	22	1.4	Intentional hanging
X91	1	0.1	Assault by hanging, strangulation and suffocation
Y20	11	0.7	Hanging, undetermined intent
R09.0	2	0.1	<i>Asphyxia</i> Asphyxia general
W78	2	0.1	Aspiration of gastric contents
T75.1	1	0.1	<i>Drowning &amp; submersion</i> Immersion in water
W69	1	0.1	Whilst in natural water
W70	1	0.1	Following fall into natural water
W74	4	0.2	Drowning and submersion, unspecified
X71	3	0.2	Intentional self-harm by drowning
A22.7	1	0.1	<i>Other</i> Anthrax septicaemia
E10	2	0.1	Diabetic ketoacidosis
E87.2	4	0.2	Metabolic acidosis, exc. diabetic acidosis
I72.9	1	0.1	Aneurysm and dissection of unspecified site
I87.2	1	0.1	Chronic peripheral venous insufficiency
K22.3	1	0.1	Rupture of oesophagus
K92.2	1	0.1	Gastrointestinal haemorrhage, unspecified
L02.2	1	0.1	Groin abscess
L08.8	1	0.1	Other specified local infections of skin and tissue
M80.1/6	1	0.1	Carcinoma, metastatic not elsewhere specified
S02.9	2	0.1	Fracture of skull & facial bones, part unspecified
S09.9	1	0.1	Head injuries, unspecified
S15	1	0.1	Injury of blood vessels at neck level
S29.9	1	0.1	Injury of thorax, unspecified
T04	1	0.1	Crushing injuries involving multiple body regions
T07	5	0.3	Multiple injuries, unspecified
W19	1	0.1	Fall, unspecified
X00	1	0.1	Exposure to uncontrolled fire in building or structure
X73	1	0.1	Intentional self-harm by rifle, shotgun and larger firearm discharge
X81	2	0.1	Jumping or lying before moving object, intentional
X85	1	0.1	Assault by drugs, medicaments and biological substances
X93	1	0.1	Assault by handgun discharge
X99	1	0.1	Assault by sharp object
R99	13	0.8	Unascertained

Where possible, causes of death have been grouped together in terms of the mechanisms of death. At present, although all causes of death on the death certificate (together with other information if available) are taken into consideration in classifying underlying cause of death, the principal cause of death is used here by NPSAD to allocate the ICD-10 code. In order to achieve a greater level of consistency, a hierarchical system was introduced for classifying the underlying cause of death using ICD-10 criteria for deaths involving multiple substances. Deaths that involve a combination of narcotics and other psychoactive drugs are coded as narcotic deaths. Where possible a code which specifies intentionality is used.

## Psychoactive substances implicated in death

Psychoactive substances were directly implicated in the deaths of 91.4% (1,475/1,613) of all cases reported to the Programme. The remaining 8.6% (n = 138) did not have any psychoactive substances implicated in their deaths, and have therefore been excluded from the following analyses. Of the 1,475 cases in which psychoactive substances were implicated, the principal substances were: heroin/morphine (36.4%); hypnotics/sedatives (30.3%); alcohol in combination (30.3%); methadone (27.6%); other opiates/opioid analgesics (26.8%); and anti-depressants (23.0%).

Table 7.4 shows that whilst there are certain similarities across the UK and Islands in terms of the various psychoactive substances implicated in death, there are some interesting regional differences. For example, hypnotics/sedatives; other opiates/opioid analgesics; anti-depressants; alcohol in combination; and anti-psychotics play a proportionately greater role in Northern Ireland than in other parts of the UK. Meanwhile, methadone; anti-epileptics; amphetamines; and GHB/GBL feature in proportionately more deaths in Scotland than in other areas. Heroin/morphine accounted for over half of the deaths in Wales in which psychoactive substances were implicated, which is higher than any other part of the UK. However, England showed the greatest proportion of deaths involving cocaine; cannabis; ecstasy-type drugs; and anti-Parkinson's drugs.

Some of these regional differences can be attributed in part to differences in prescribing practice and case qualification standards. For example, the lesser role played by methadone in Northern Ireland may be attributable to the fact that methadone is not prescribed as widely there as in other areas. Also, a potential explanation why anti-depressants are not implicated as often in Scottish cases as in other areas is that the definition used by the SCDEA does not cover the general population or suicides, but focuses on accidental overdoses involving controlled drugs.

## Commentary

The data received by NPSAD from Coroners suggest that the number of drug-related deaths in 2012 fell in England; Wales; Northern Ireland; Jersey; and the Isle of Man. However, as discussed previously, with regards England and Wales, the very sharp drop in drug-related deaths reported to the Programme may be due in part to lower coverage rates and also potentially a reduction in reporting from the responding Coroners. Information from the SCDEA police indicates a fall in Scottish police cases, and this is supported by information from the National Records of Scotland (NRS, 2013).

As has been found in previous years, the general demographic details of those who died from drug-related causes are relatively similar across the UK, with a higher proportion of males to females; typically between 25-44 years of age; White; and mostly living with others.

Accidental drug overdoses accounted for the greatest proportion of deaths across the UK, and most cases died at home or at another private residential address. The substances playing the most prominent roles in deaths have not changed substantially over recent years, with opiates – such as heroin, methadone and opioid analgesics – and hypnotics/sedatives and alcohol in combination with other substances being involved in the greatest proportions of deaths. However, as covered in the individual countries' chapters, there are regional variations in the deaths attributed to these substances.

Deaths reported to the Programme for 2012 in the UK and Islands as a whole show proportional increases in cases involving heroin/morphine; alcohol in combination with other drugs; hypnotics/sedatives; ecstasy-type drugs; cannabis; GHB/GBL; anti-depressants; anti-epileptics; and amphetamines. Slight drops were found in deaths in which anti-Parkinson's drugs; anti-psychotics; methadone; and other opiates/opioid analgesics were implicated. The fall in methadone-related deaths is in contrast with the gradual rise in the number of deaths involving the drug in recent years. The rise in the number of deaths involving heroin/morphine is also an abrupt change considering the reduction in such deaths found over the past few years. The patterns observed in different parts of the UK, and possible reasons for the continuing changes in recreational drug use, are examined in the following chapter.

**Table 7.4: Psychoactive substances (%) implicated in drug-related deaths, by country and territory, 2012**

		Country or territory						UK & Islands
		England	Wales	Scotland	Northern Ireland	Jersey	Isle of Man	
<b>Total deaths</b>		<b>1033</b>	<b>53</b>	<b>311</b>	<b>74</b>	<b>2</b>	<b>2</b>	<b>1475</b>
<b>Number of deaths (%)</b>								
<b>Drug category</b>	<b>Alcohol in combination</b>	348 (33.7)	7 (13.2)	62 (19.9)	29 (39.2)	1 (50.0)	0 (0.0)	447 (30.3)
	<b>Amphetamines</b>	41 (4.0)	2 (3.8)	15 (4.8)	0 (0.0)	0 (0.0)	0 (0.0)	58 (3.9)
	<b>Anti-depressants</b>	259 (25.1)	8 (15.1)	39 (12.5)	31 (41.9)	1 (50.0)	1 (50.0)	339 (23.0)
	<b>Anti-epileptics</b>	25 (2.4)	0 (0.0)	19 (6.1)	4 (5.4)	0 (0.0)	0 (0.0)	48 (3.3)
	<b>Anti-Parkinson's</b>	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.1)
	<b>Anti-psychotics</b>	60 (5.8)	1 (1.9)	4 (1.3)	10 (13.5)	0 (0.0)	0 (0.0)	75 (5.1)
	<b>Cannabis</b>	24 (2.3)	1 (1.9)	0 (0.0)	1 (1.4)	0 (0.0)	0 (0.0)	26 (1.8)
	<b>Cocaine</b>	115 (11.1)	2 (3.8)	17 (5.5)	1 (1.4)	0 (0.0)	0 (0.0)	135 (9.2)
	<b>Ecstasy-type drugs</b>	38 (3.7)	1 (1.9)	6 (1.9)	2 (2.7)	0 (0.0)	0 (0.0)	47 (3.2)
	<b>GHB/GBL</b>	11 (1.1)	0 (0.0)	5 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	16 (1.1)
	<b>Heroin/morphine</b>	364 (35.2)	29 (54.7)	131 (42.1)	12 (16.2)	0 (0.0)	1 (50.0)	537 (36.4)
	<b>Hypnotics/sedatives</b>	249 (24.1)	20 (37.7)	136 (43.7)	41 (55.4)	1 (50.0)	0 (0.0)	447 (30.3)
	<b>Methadone</b>	234 (22.7)	22 (41.5)	148 (47.6)	3 (4.1)	0 (0.0)	0 (0.0)	407 (27.6)
	<b>Other opiates/ opioid analgesics</b>	276 (26.7)	8 (15.1)	65 (20.9)	45 (60.8)	1 (50.0)	0 (0.0)	395 (26.8)

Note: Column totals may sum to more than 100% since more than one substance may be implicated in a death.  
No NPSAD deaths were reported for Guernsey in 2012.

## Chapter 8: Commentary and emerging themes

### Introduction

This chapter provides up-to-date information on emerging trends and issues for those who investigate drug-related deaths (DRDs) and those who are trying to prevent such fatalities. The main trends and issues highlighted here emerge from the submitted forms, communications from Coroners, and other relevant sources. This section also draws on published sources and intelligence from forensic toxicological agencies.

### General patterns

The total number of deaths that occurred during 2012 in the UK reported to the National Programme on Substance Abuse Deaths (NPSAD) was 1,613. This number compares to 1,757 cases reported by the same sources during the equivalent period in 2011. This change represents a decrease in the number of notifications to the Programme, but not necessarily in drug-related mortality during this period. Similarly, the decreased number of cases reported by Coroners in England and by the SCDEA for Scotland, does not necessarily mean a decrease in deaths related to drug use.

The demographic profile of fatalities reported to the NPSAD remains broadly consistent with previous reports. Compared to 2011, the proportion under 45 years of age increased by about one percent; the proportion unemployed fell by 5%; and the proportion with a known history of drug use or dependence rose by 2%. There was a decrease in the proportion of UK deaths where the underlying cause of death was accidental poisoning (down from 70% to 68%) and for poisonings of undetermined intent (from 13% to 11%), with corresponding increases in the proportions recorded as intentional self-poisoning and other causes.

Opiates/opioids (i.e. heroin/morphine; methadone; other opiates/opioid analgesics), alone or in combination with other drugs continue to account for the majority of all cases. Heroin/morphine alone or in combination with other drugs, accounted for the highest proportion (36%) of 'drug misuse' fatalities in 2012, an increase over the 2011 level of 32% (53% in 2009). There were modest increases in the proportions of deaths due to alcohol in combination (27% to 30%); anti-depressants (21% to 23%); and hypnotics/sedatives (28% to 30%). There were falls in the proportions accounted for by methadone (31% to 28%) and other opiates/opioid analgesics (28% to 27%), whilst the proportion involving anti-psychotics remained stable at 5%. For stimulants, there was a stabilisation in the proportion of cases involving cocaine (9%) and amphetamines (4%), but there were further slight increases for ecstasy-type drugs (from 1.7% to 3.4%) and GHB/GBL (0.6% to 1.1%). These patterns are also generally reflected at country level. Over recent years there has been a trend towards multiple substances, including alcohol, being implicated in deaths. In 2012, there was a fall in the proportion of monovalent deaths, from 34% to 30%.

Prescribed heroin/morphine and methadone are most commonly involved in deaths where these substances are directly implicated in death. Other opiates/opioid analgesics, hypnotics/sedatives, and anti-depressants prescribed to individuals are less frequently involved in their deaths.

The median age at death of individuals notified to NPSAD with a known history of drug use or dependence was 38 years (interquartile range = 12 years) in 2012.

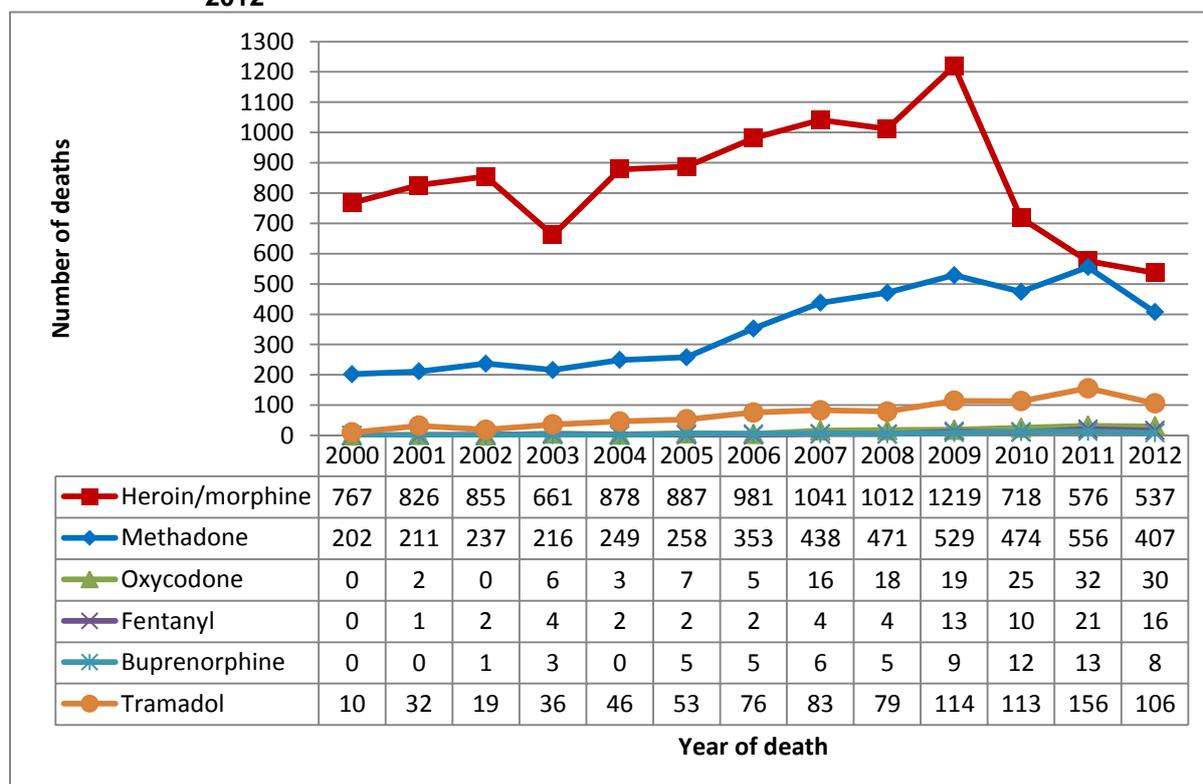
## Emerging issues

### Opioid-related deaths

Over recent years there has been growing concern in North America, Australia, and the European Union (Giraudon *et al.*, 2013), about increasing recreational use and abuse of prescription drugs and fatalities resulting from such use, especially those involving synthetic opioid pain-killers (Darke *et al.*, 2011; Fischer *et al.*, 2013; Häkkinen *et al.*, 2012; Okic *et al.*, 2013; Rintoul *et al.*, 2011). Interest in these developments has been expressed in the UK (National Treatment Agency, 2011). Specific substances of interest are oxycodone and fentanyl (Mounteney *et al.*, 2012). At the same time, there has been interest in the evolution of deaths involving buprenorphine and tramadol. The Home Office concluded a public consultation in late October 2013 on the proposed control of tramadol as a Class C drug, the intention being to reduce its misuse whilst ensuring that those who need it as a prescription medicine will still have access to it under a process known as scheduling (Home Office, 2013a). Oxycodone has featured in fatalities in the USA and Australia, and fentanyl (both those used therapeutically and those produced illicitly) in deaths in the Baltic States. The patterns in UK deaths involving these substances over the period 2000-12 are examined below against the background of the noticeable changes involving heroin/morphine and methadone noted above.

Figure 8.1 shows that deaths involving buprenorphine, fentanyl and oxycodone have steadily increased over the last 13 years, particularly since 2007 but are still at relatively low levels. As noted in previous NPSAD reports, there was a steady increase in deaths involving tramadol following the tightening up of prescribing of the pain-killer co-proxamol. There was an increase in such deaths between 2008 and 2009 followed by stabilisation in 2010; however, there was a further increase in 2011 – deaths nearly tripling between 2005 and 2011 (from 53 to 156). In 2012 there was drop to pre-2009 levels. During the period 2000-12, heroin/morphine deaths rose from 767 to peak at 1,219 in 2009 before falling by more than 50% to 537 in 2012. By contrast methadone-related deaths more than doubled, from 202 in 2000 to 556 in 2011 before falling to 407 in 2012.

**Figure 8.1: Trends in UK deaths involving opiate/opioid analgesics, NPSAD data, 2000-2012**



## Stimulant use

As reported in last year's NPSAD report (Ghodse *et al.*, 2013), previous years saw decreases in the number of deaths involving 'traditional' stimulants such as cocaine, amphetamines, and ecstasy-type substances. Reasons for these decreases, also seen in death registration statistics from the General Mortality Registers, may include a decline in cocaine purity and/or a shift to using alternative stimulants, including 'legal highs'. However, 2012 saw rises in the proportion of deaths involving cocaine and ecstasy-type drugs, and this reversal of the pattern of recent years may in part be due to changes in purity. For example, the mean purity of powder cocaine seized by the police in England & Wales fell from 33% in 2007 to 24% in 2010 but rose to 37% in 2012; the MDMA content of 'ecstasy' tablets fell from 52mg in 2007 to 33mg in 2008, then rose very slightly in 2009-10 to 49mg but by 2012 had risen to 102mg (Davies and Murray, 2013). Last year use of powder cocaine amongst 16–59 year-olds in England & Wales fell from 3.0% in 2008/9 to 1.9% in 2012/13 (Home Office, 2012b). During the same period, last year use of amphetamines fell from 1.2% to 0.6%, and that of ecstasy-type drugs from 1.8% to 1.3%. It has been suggested that the fall in ecstasy and cocaine-related deaths in the United Kingdom in 2008-10 may be as a result of users switching to 'legal highs' with the suggestion that this may have had an unintended harm reduction effect (Bird, 2010).

Whilst the use of amphetamine, ecstasy-type drugs and cocaine appears to have continued to fall between 2009 and 2012 (Home Office, 2013b), the street purity of these substances rose in 2011 and 2012 (Davies and Murray, 2013). The proportion of stimulant deaths reported to the NPSAD that occurred in 2011 and 2012 increased compared to 2010. This is in line with the rises in the average street purity of the stimulants mentioned above, both in the UK, EU and elsewhere. UK deaths registered in 2011 involving ecstasy-type substances and amphetamine showed increases whereas cocaine-related fatalities fell (Davies and Murray, 2013). The number of seizures of cocaine and amphetamines has continued to fall in recent years, whereas those for ecstasy rose in 2012/3; the amount of amphetamines and cocaine seized rose in 2012/3 (Coleman, 2013). These changes in traditional and newer stimulants and club drugs are evident in treatment presentations in England (National Treatment Agency, 2012), and inquiries to the National Poisons Information Service and Toxbase (NPIS, 2013).

## Misuse of prescribed medications

In the UK there has been growing concern about the misuse of prescribed medications, including tramadol (see above) and the hypnotic/sedative 'Z' drugs – zaleplon, zolpidem and zopiclone. For further details of cases involving 'Z' drugs see the Programme's evidence to the ACMD (Casula *et al.*, 2013). So far during 2013 the EMCDDA has been notified of at least six NPS which are or were prescribed medications. We look briefly at these (Table 8.1), together with pregabalin, which was first reported as an NPS in 2009.

Atomoxetine is used in the treatment of Attention-Deficit Hyperactivity Disorder (ADHD). This drug was prescribed in only one case in 2011 and two in 2012, otherwise there have been no notifications to the Programme. It has not been recorded in post mortem toxicology or in the cause of death in any NPSAD cases.

Diphenhydramine is an antihistamine used to treat allergy symptoms, motion-sickness, and induce sleep (e.g. Nytol). This medication has only occasionally been prescribed to individuals whose deaths have been notified. The number of cases in which it was found in post mortem toxicology and/or implicated in death increased from 2003-4 but has since varied from year to year with only a slight apparent upward trend. The majority of cases involving the drug do not appear to have been prescribed it.

Gabapentin is a GABA ( $\gamma$ -Amino butyric acid) analogue used to treat epilepsy and neuropathic pain. This medication seems to have been increasingly prescribed to individuals notified since 2003 but has been stable during 2009-12. Instances of it being found in post mortem toxicology and/or cause of death rose sharply in 2012, with most cases (two-thirds in 2012) not prescribed it.

**Table 8.1: Profile of deaths involving selected medications notified to NPSAD, 2000-12**

Substance	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
<b>Atomoxetine</b>															
Prescribed	Sole														
	Any												1	2	
Post Mortem +	Sole														
	Any														
Implicated in death	Sole														
	Any														
<b>Diphenhydramine</b>															
Prescribed	Sole											1			
	Any					1	1	3	1	2	1	1			
Post Mortem +	Sole					1	1					1	4		
	Any		3	2	2	11	13	18	24	13	26	24	29	21	
Implicated in death	Sole						1					2	4		
	Any		1	2	2	2	10	9	14	6	11	10	20	10	
<b>Gabapentin</b>															
Prescribed	Sole					1	1			1	2		1	3	
	Any		1		6	10	17	12	11	11	34	30	33	32	
Post Mortem +	Sole												1		
	Any					2	2	2	3	5	10	13	18	52	
Implicated in death	Sole												1		
	Any						1		2	4	4	6	5	22	
<b>Pregabalin</b>															
Prescribed	Sole												3	1	
	Any							1	9	14	15	27	46	50	
Post Mortem +	Sole														
	Any							1	3	4	5	6	12	17	
Implicated in death	Sole													1	
	Any							1	2	5	3	3	7	13	
<b>Venlafaxine</b>															
Prescribed	Sole		1			6	7	7	9	4	1	5	9	2	
	Any	7	19	14	29	65	44	44	53	44	44	36	61	38	
Post Mortem +	Sole	1			3	6	8	6	6	3	2	1	5		
	Any	7	11	5	20	47	40	37	45	45	51	38	78	54	
Implicated in death	Sole	1	1		2	6	9	9	8	8	5	4	9	6	
	Any	6	8	4	13	19	34	32	32	33	30	21	44	33	
<b>n (all NPSAD deaths notified)</b>			1484	1708	1806	1689	2039	1968	2077	2247	2239	2474	1932	1933	1613

Pregabalin is used in the treatment of several conditions including neuropathic pain, epilepsy and anxiety. It is structurally related to GABA. This medication first emerged in cases reported to the Programme in 2006 and has shown an increasing trend in respect of being prescribed, positive post mortem toxicology findings and being implicated in death.

Sibutramine is an oral anorexiant used in the treatment of obesity (in conjunction with dieting and exercise), but following increased instances of cardiovascular events and strokes was withdrawn from the UK in 2010 as well as in other markets. It is a serotonin-norepinephrine reuptake inhibitor (SNRI) structurally related to amphetamines, although its mode of action is different. There are no cases on the NPSAD database.

Venlafaxine is a SNRI antidepressant. Cases where this medication had been prescribed to cases notified rose from 7 in 2000 to a peak of 65 in 2004 before falling moderately, before

another peak of 61 in 2011. Positive post mortem findings increased over this period peaking in 2011, as did the number of cases where it was implicated in death. Most of such cases appear to have been prescribed it.

For all of those substances for which cases have been reported to NPSAD, the majority involved multiple prescriptions of psychoactive drugs. Similarly, most post mortem toxicology findings and deaths involved multiple substances. The psychoactive properties of these (prescription) medications make them liable to potential misuse/abuse. However, so far as the information submitted to NPSAD to date will allow, none of the deaths notified to the Programme was the result of recreational use of these six specific medications.

## Novel Psychoactive Substances (NPS)

The UK Advisory Council on the Misuse of Drugs (ACMD) uses the following definition:

*“psychoactive drugs which are not prohibited by the United Nations Single Convention on Narcotic Drugs or by the Misuse of Drugs Act 1971, and which people in the UK are seeking for intoxicant use”* (ACMD, 2011:10).

This report considers substances brought under control by legislation after being examined by the ACMD; being considered for control/regulation; or still legal. This presentation makes no distinctions. However, changes in legal status may affect availability – and thus use.

The number of NPS reported to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) has increased year on year from 24 in 2009 to 73 in 2012 (EMCDDA-Europol, 2013). It is likely that the number reported during 2013 will be of a similar magnitude; more than one a week.

There have been calls at the international level, e.g. EU (EU, 2013; G8, 2013) for increased sharing of information via early warning systems (EWS) such as the Reitox networks and the Home Office Forensic EWS (Home Office, 2013c). Such information can assist in establishing what is known of the characteristics and potential harms of these chemicals, and therefore inform prevention, intervention, and treatment options.

As part of its surveillance function, in recent years the NPSAD Annual Report has reported on new substances which are appearing on the drug scene and which have either been noted in post mortem toxicological reports and/or implicated in deaths reported to the Programme. In the main, new substances appear first in the toxicological reports and then sometime later in the cause of death.

Against this background, NPSAD has observed an increase in the number and range of NPS in the post mortem toxicology results and/or cause of death of cases notified to the Programme (see Figure 8.2). Chemical groups represented by these NPS include: aminoindanes; amphetamine-type substances; anabolic steroids; benzofurans; benzodiazepines; dietary supplements; indoles; ketamine derivatives; piperidines; synthetic cannabinoids; tryptamines (AMT, 5-MeO-DALT); natural products (ibogaine, khat (*Catha edulis*), mescaline, *salvia divinorum*); and, most prominently, the methcathinones.

## Methcathinones

This class of chemical continues to dominate the UK NPS scene in terms of fatalities, being implicated in nearly half of such deaths in 2009-12. The Programme's annual reports for 2010-12 specifically mentioned mephedrone (Methylmethcathinone); MDPV (Methylenedioxypyrovalerone); and NRG-1 (Naphyrone). As can be seen from Table 8.2 (which also includes cases not recorded on the NPSAD database), the number of cases where mephedrone and MDPV were mentioned increased significantly in 2010, falling away in 2011. Mephedrone involvement stabilised in 2012. Other methcathinones also emerged onto the scene during this period; of note is 4-MEC which was involved in a total of 12 deaths in 2011-12. In many instances, several such chemicals were involved in individual cases.

**Table 8.2: Deaths involving Novel Psychoactive Substances known\* to NPSAD, 2009-12**

Substance	PM toxicology				Cause of Death			
	2009	2010	2011	2012	2009	2010	2011	2012
<b>Year</b>								
<b>Aminoindanes</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
5-IAI	0	0	0	1	0	0	0	1
MDAI	0	0	2	1	0	0	2	1
<b>Amphetamine-type substances</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>23</b>
2,5-Dimethoxy-4-chloroamphetamine	0	0	1	0	0	0	1	0
4-MA	0	0	1	2	0	0	1	2
Bromo-STP	0	0	0	0	0	0	0	0
Fluoroamphetamine	1	0	0	1	0	0	0	1
MPA	0	0	0	6	0	0	0	4
PMA	0	1	5	19	0	0	5	17
PMMA	0	0	2	3	0	0	2	3
<b>Benzofurans</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>
APB	0	0	1	4	0	0	1	2
6-APB	0	0	0	3	0	0	0	3
Benzofuran, unspecified	0	0	0	2	0	0	0	2
<b>Benzodiazepines (phenazepam)</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>5</b>
<b>Ketamine derivatives (Methoxetamine)</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>
<b>Natural products</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>
Cathinone (khat)	1	1	1	1	1	1	1	0
Datura products	1	0	0	0	1	0	0	0
Ibogaine	1	0	0	0	1	0	0	0
Noribogaine	1	0	0	0	0	0	0	0
Mescaline	0	0	0	1	0	0	0	0
Salvia	0	0	0	0	0	0	1	0
<b>Piperidines (Desoxypipradrol)</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>
<b>Methcathinones</b>	<b>8</b>	<b>62</b>	<b>39</b>	<b>37</b>	<b>5</b>	<b>37</b>	<b>26</b>	<b>24</b>
3-Fluoroephedrine	0	0	0	2	0	0	0	2
4-MEC	0	0	6	12	0	0	5	7
Flephedrone	0	2	2	3	0	2	2	2
MDPBP	0	0	1	0	0	0	1	0
MDPV+	0	9	5	1	0	4	6	0
Mephedrone	8	53	26	22	5	33	16	14
Methedrone	0	2	3	0	0	1	2	0
Methylone	0	2	0	2	0	2	0	2
N-desakyl-4-methylmethcathinone	0	1	0	0	0	0	0	0
Naphyrone	0	2	0	0	0	2	0	0
Pentylone	0	0	1	0	0	0	1	0
Pyrovalerone	0	1	0	0	0	1	0	0
<b>Tryptamines</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>
5-MeO-DALT	0	1	0	1	0	1	0	1
AMT	0	0	2	4	0	0	2	4
Tryptamine	1	0	0	0	1	0	0	0
<b>Dietary supplements</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>
DMAA (1,3-dimethylamylamine)	0	0	2	2	0	0	1	1
DNP	0	0	0	2	0	0	0	2
<b>Indoles (5-IT)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
<b>Synthetic cannabinoid (AM2201)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

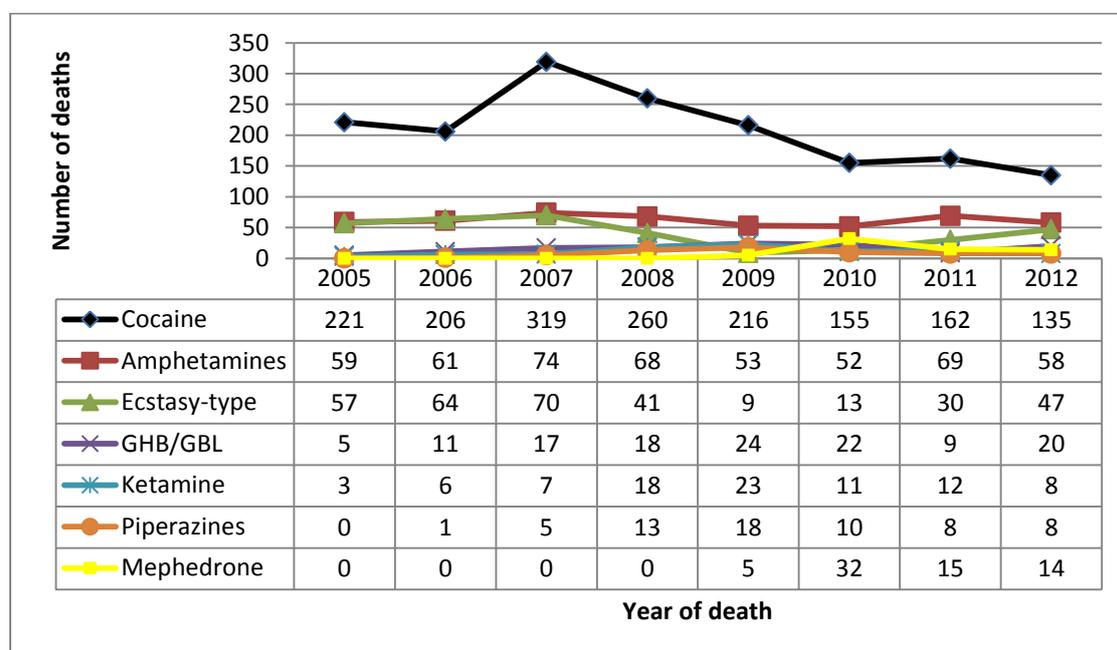
<b>Anabolic steroids</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>DHEA</b> (Dehydroepiandrosterone)	1	0	1	0	1	0	1	0
<b>Trenbolone</b>	0	0	0	0	0	0	0	0
<b>Metendone</b>	1	0	0	0	1	0	0	0
<b>Methandienone</b>	0	0	0	0	0	0	0	0
<b>Stanozolol</b>	1	0	0	0	1	0	0	0
<b>Total number of cases</b>	<b>12</b>	<b>68</b>	<b>68</b>	<b>97</b>	<b>10</b>	<b>42</b>	<b>51</b>	<b>68</b>

Column totals may sum to more than 100% since more than one substance may be found in post mortem toxicology and/or implicated in a death

\* There is some ambiguity around the classification of MDPV as a methcathinone due to its chemical structure

\* The additional cases (8) currently not recorded on the database relating to deaths in the period up to the end of 2012 have been identified through networks with which the Programme is in contact, including the LTG (formerly London Toxicology Group) and other forensic providers; the SCDEA; Police forces; Drug and Alcohol Action Teams; and medical practitioners.

**Figure 8.2: Trends in UK ‘traditional’ and Novel Psychoactive Substances, NPSAD data, 2005-12**



During 2011-3, forensic toxicologists continued to report increased numbers of samples from seizures referred to them for analysis by law enforcement agencies positive for ‘legal highs’ derived from methcathinone, particularly mephedrone commonly known as “bubbles” and “meow-meow”. Many of these cases have now gone to inquest or through similar formal investigations by Procurators Fiscal in Scotland, and are being reported to NPSAD. This class of chemical remains present in the UK recreational drug scene, and its use is developing into one of a problematic nature in respect of injecting and dependence – evidenced by treatment presentations, etc. (National Treatment Agency, 2012). It is important, therefore, to be aware of this fact in terms of information and service provision, and prevention initiatives.

### Other NPS substances

A number of new chemical classes were represented in deaths occurring in 2012 (see Table 8.2). New molecules of particular interest are the following: indoles e.g. 5-IT 5-(2-Aminopropyl)indole), the synthetic cannabinoid AM2201, and the dietary supplement DNP (2,4-Dinitrophenol). Amongst existing categories already reported, new substances include: aminoindanes (5-IAI or 5-Iodo-2-aminoindane); amphetamine-type substances (MPA or *methiopropamine*); benzofuran 6-APB (6-(2-aminopropyl)benzofuran or 1-benzofuran-6-

ylpropan-2-amine); and the natural product mescaline. The amphetamine-type substances PMA (para-Methoxyamphetamine) and PMMA (para-Methoxy-N-methylamphetamine); the benzofuran APB; the synthetic ketamine derivative methoxetamine; and AMT ( $\alpha$ -Methyltryptamine) continue to cause fatalities. Of particular concern here is PMA with 17 deaths in 2012 and further cases already reported for 2013. Furthermore, deaths involving the benzodiazepine phenazepam continue to be reported. This medication is not licensed for use in the UK but is used legally in Eastern Europe and the Russian republics (Corkery *et al*, 2012). The Government has also announced its intention to control khat (*Catha edulis*) as a Class C drug (Home Office, 2013e).

Other chemical classes that appear to be emerging as substances that require monitoring in respect of their potential contribution to causing fatalities include synthetic cannabinoids (e.g. AM2201); indoles (e.g. 5-IT); and the NBOMe class (e.g. 25C-NBOMe and 25I-NBOMe). The latter two groups were made subject to 12-month Temporary Class Drug Orders in the UK on 4 June 2013 (Home Office, 2013d), and the Advisory Council on the Misuse of Drugs has recommended that benzofurans be made Class B drugs (ACMD, 2013a) and the NBOMe compounds be controlled as Class A drugs (ACMD, 2013b).

### **Blood-borne viruses**

In 2012, 43 cases from England were known to have been suffering from hepatitis: 35 hepatitis C; five hepatitis B; and three from unspecified hepatitis. In five cases hepatitis C was regarded as a contributory factor in death; hepatitis B in one case; and unspecified hepatitis in three cases. Eight cases suffering from HIV/AIDS were reported in England in respect of 2012 deaths. In only one case was this recorded as a contributory factor in the death.

### **Anthrax outbreak & necrotising fasciitis**

One 2012 death due to anthrax septicaemia was notified to NPSAD. There is an ongoing outbreak of anthrax among people who inject drugs in a number of countries in Europe with 14 cases now identified since early June 2012. The latest case in Scotland brings the total number affected in the UK to eight – five in England (Blackpool – two fatalities; Medway – one fatality; Oxford – one fatality; unknown – one case); two in Scotland (Lanarkshire – one fatality, unknown – one case); and one in Wales (Gwynedd – one case) (Health Protection Agency, 2012). The source is presumed to be contaminated heroin. It is unclear whether the British cases are linked to the European outbreak, which has affected drug users in Denmark, Germany and France. The Health Protection Agency continues to monitor the situation.

In May 2013 Scottish health officials in Lanarkshire issued an alert after the deaths of two injecting drug users who had contracted necrotising fasciitis, there was also a possible case in a patient with a history of injecting drug use (BBC News Glasgow and West Scotland, 2013; NHS Lanarkshire Press Release, 2013).

## Conclusions

Opiates, mainly heroin/morphine and methadone, still account for the majority of drug-related deaths in the UK. There is evidence both from NPSAD data and other authoritative sources that the role of heroin/morphine decreased in 2010 and 2011 but increased in 2012. However, deaths involving methadone fell back slightly during the past year.

The increase in cases involving stimulants (such as cocaine, amphetamines, and ecstasy-type drugs) following a decline in 2009 and stabilisation in 2010 may well be due to the growing use in recent years of so-called 'legal highs' such as ketamine, the piperazines, GHB/GBL, and more recently the methcathinones such as mephedrone. Whilst these are still available their popularity has declined slightly, in part as a consequence of them having been brought under the control of the Misuse of Drugs Act 1971. However, these substances are still popular on the UK recreational drug scene and may be causing problems in terms of dependency. Indeed, there appears to have been a slight increase in deaths involving amphetamines and ecstasy-type substances. At the same time, other novel substances – principally other methcathinones and related molecules as well as those from other chemical classes – have tightened their grip on the recreational drug scene in Western Europe but especially the British Isles.

As noted in previous reports, the rate at which these new substances have emerged continues to increase. In the past, the market for new psychoactive substances to explore evolved steadily over much longer periods of time. It is now difficult to gauge with any certainty what will be the next 'big thing' that will capture the attention of the experimenter or regular recreational drug user. The range of drug classes now on offer, both diverted pharmaceutical products such as phenazepam and synthetic opioids, misused prescription drugs (such as gabapentin, pregabalin and venlafaxine), and synthetic substances is also growing. Several new classes were present in the post mortem toxicology and cause of death in 2011 and 2012 cases. These trends appear to have continued into 2013. New classes of chemicals continue to be reported by UK and international early warning systems.

It is important, however, not to overlook the fact that opiates/opioids still account for the majority of drug-related deaths in England and other parts of the UK. Together with hypnotics/sedatives (chiefly benzodiazepines such as diazepam and temazepam) the involvement of methadone in deaths has grown in recent years.

As reported in the last two years, the injection of heroin contaminated with anthrax or botulism is a continuing and serious risk factor for adverse health consequences and death at present. As heroin can be stockpiled for several years before being released onto the market it is important that vigilance is maintained by heroin users and those who treat them for any signs of infection, thereby preventing premature death.

## Chapter 9: Other issues

This chapter looks at other Information reported about the decedents such as mental health issues; certain infections such as hepatitis or HIV/AIDS; and prison history. This information is derived only from those cases where such data has been reported, and as such the figures presented in this section should be regarded as the minimum. Section one looks at NPSAD cases in England for 2012, and for Wales, Northern Ireland and the Islands over a five year period from 2008-2012. Section 2 considers the same issues for England Drug Strategy cases for 2012, where such data is available. No such information was available for deaths in Scotland.

### Section One: NPSAD cases

#### Mental health issues

The abuse of drugs or addiction to them is a problem often linked to mental health issues. The terms 'dual diagnosis' and 'comorbidity' are used commonly and interchangeably to describe the co-occurrence in the same individual of a psychoactive substance use disorder and other psychiatric disorder or vice versa (World Health Organisation, 1994).

#### 9.1 England 2012

Of the NPSAD cases for England in 2012 reported to the Programme, 285 were noted as having some form of mental health problem. The demographic breakdown is: 178 males (62.5%) and 107 females (37.5%), with the majority (52.6%) aged between 35-54 years. Where drug use status was known (n = 186), the majority were confirmed drug addicts or users (102/186, 54.8%) (Table 9.1.1).

Of these 285 cases reported with diagnosed mental health issues, 172 suffered from depression; 55 had an anxiety disorder; 21 suffered from psychosis (including schizophrenia); 16 had a personality disorder; 14 had bipolar disorder; five had an eating disorder; whilst 72 were listed as suffering from other unspecified mental health issues (Tables 9.1.2 and 9.1.3).

Among the decedents who were suffering from depression, 50 cases (29.1%) were deemed to have committed suicide, and amongst those listed with depression, the most commonly implicated drugs were anti-depressants (65/172, 37.8%). The principal substances implicated in the deaths for each mental health issue are summarised in Table 9.1.3.

Of these cases the drug use status of 201 was given; 82 were known drug addicts and died from drug poisoning. As to manner of death the most frequent was accidental (56/82, 68.3%); followed by intentional (14/82, 17.1%); and poisoning of undetermined intent (12/82, 14.6%). Of the 95 individuals who were confirmed as non-drug users and who died of drug poisoning, intentional self-poisoning was the most frequent underlying cause of death (38/95, 40.0%); followed by accidental (33/95, 34.7%); and undetermined poisoning (24/95, 25.3%).

**Table 9.1.1: Demography of cases with mental health issues, England 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>285 (100.0)</b>
<b>Gender</b>	Male	178 (62.5)
	Female	107 (37.5)
<b>Age group</b>	15-24	15 (5.3)
	25-34	53 (18.6)
	35-44	82 (28.8)
	45-54	68 (23.9)
	55-64	49 (17.2)
	65 & older	18 (6.3)
<b>Drug addict status</b>	Yes	102 (35.8)
	No	99 (34.7)
	Not known	84 (29.5)

**Table 9.1.2: Epidemiology according to mental issues cases, England 2012**

Specific mental issue (Total)	Gender (n, %)		Age group at death (n, %)						Drug use/addiction history (n, %)		
	M	F	15-24	25-34	35-44	45-54	55-64	65+	Yes	No	Not known
<b>Anxiety Disorder (55)</b>	31 (56.4)	24 (43.6)	2 (3.6)	10 (18.2)	17 (30.9)	12 (21.8)	11 (20.0)	3 (5.5)	25 (45.5)	15 (27.3)	15 (27.3)
<b>Bipolar Disorder (14)</b>	7 (50.0)	7 (50.0)	0 (0.0)	3 (21.4)	3 (21.4)	5 (35.7)	2 (14.3)	1 (7.1)	2 (14.3)	7 (50.0)	5 (35.7)
<b>Depression (172)</b>	104 (60.5)	68 (39.5)	8 (4.7)	36 (20.9)	48 (27.9)	39 (22.7)	29 (16.9)	12 (7.0)	64 (37.2)	61 (35.5)	47.0 (27.3)
<b>Eating Disorder (5)</b>	1 (20.0)	4 (80.0)	1 (20.0)	1 (20.0)	3 (60.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (40.0)	1 (20.0)	2 (40.0)
<b>Other mental issues (72)</b>	48 (66.7)	24 (33.3)	7 (9.7)	9 (12.5)	22 (30.6)	20 (27.8)	9 (12.5)	5 (6.9)	22 (30.6)	25 (34.7)	25 (34.7)
<b>Personality Disorder (16)</b>	7 (43.8)	9 (56.3)	0 (0.0)	2 (12.5)	8 (50.0)	2 (12.5)	4 (25.0)	0 (0.0)	9 (56.3)	3 (18.8)	4 (25.0)
<b>Psychosis (21)</b>	17 (81.0)	4 (19.0)	2 (9.5)	3 (14.3)	6 (28.6)	4 (19.0)	6 (28.6)	0 (0.0)	10 (47.6)	5 (23.8)	6 (28.6)

**Table 9.1.3: Psychoactive substances implicated alone and in combination in cases diagnosed with specific mental health problems, England 2012**

Psychoactive substance implicated alone and in combination	Mental health problem (n, %)						
	Anxiety disorder n=55	Bipolar Disorder n=14	Depression n=172	Eating disorder n=5	Personality disorder n=16	Psychosis n=21	Other mental health issues n=72
<b>Alcohol in combination</b>	22 (40.0)	1 (7.1)	44 (25.6)	0 (0.0)	5 (31.3)	1 (4.8)	20 (27.8)
<b>Amphetamines</b>	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	1 (6.3)	1 (4.8)	1 (1.4)
<b>Anti-depressants</b>	20 (36.4)	0 (0.0)	65 (37.8)	2 (40.0)	4 (25.0)	4 (19.0)	27 (37.5)
<b>Anti-epileptics</b>	1 (1.8)	2 (14.3)	2 (1.2)	0 (0.0)	1 (6.3)	0 (0.0)	1 (1.4)
<b>Anti-Parkinson's</b>	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)	0 (0.0)
<b>Anti-psychotics</b>	4 (7.3)	4 (28.6)	9 (5.2)	0 (0.0)	1 (6.3)	5 (23.8)	6 (8.3)
<b>Cannabis</b>	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	1 (6.3)	1 (4.8)	0 (0.0)
<b>Cocaine</b>	3 (5.5)	0 (0.0)	6 (3.5)	0 (0.0)	1 (6.3)	1 (4.8)	4 (5.6)
<b>Ecstasy-type drug</b>	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	1 (4.8)	0 (0.0)
<b>GHB/GBL</b>	0 (0.0)	0 (0.0)	2 (1.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
<b>Heroin/morphine</b>	19 (34.5)	2 (14.3)	35 (20.3)	1 (20.0)	5 (31.3)	4 (19.0)	11 (15.3)
<b>Hypnotics/sedatives</b>	10 (18.2)	4 (28.6)	26 (15.1)	1 (20.0)	1 (6.3)	4 (19.0)	16 (22.2)
<b>Methadone</b>	6 (10.9)	0 (0.0)	13 (7.6)	0 (0.0)	2 (12.5)	2 (9.5)	7 (9.7)
<b>Other opiates/opioid analgesics</b>	19 (34.5)	4 (28.6)	51 (29.7)	1 (20.0)	7 (43.8)	4 (19.0)	27 (37.5)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death. The case total sums to greater than the total number of cases since an individual may have more than one disorder. Cells highlighted in:   show the drug most frequently implicated for each mental health problem.

## 9.2 Wales 2008-2012

Among the deaths that occurred in Wales reported to the Programme for 2008-2012, 52 were reported as having some type of mental illness. The majority were male (38/52 = 73.1%); and aged between 25-44 years (39/52, 75.0%). Where the ethnicity was reported, all individuals were White (30/30, 100%). Where drug use status was known (n = 38), 65.8% (25/38) were reported to have either historically used or been addicted to drugs (Table 9.2.1).

Among all individuals reported as diagnosed with some form of mental health issue and who were known drug users or addicts, accidental poisoning was the most common underlying cause of their deaths (17/20, 85.0%). Conversely in individuals without past drug use history, the majority of their deaths were as a result of intentional self-poisoning (7/10, 70.0%).

Among individuals reported as suffering from some form of mental health issue, 30 cases were listed as suffering from depression; eight from psychosis; two from anxiety disorders; two from bipolar disorders; one from a personality disorder; and 15 cases were reported to be diagnosed with unspecified mental health issues. The principal substances implicated in deaths for each mental health issue are summarised in Table 9.2.2.

In those with a diagnosis of depression the most common implicated drugs were anti-depressants (11/30, 36.7%), and other opiates/opioid analgesics (11/30, 36.7%). Among those diagnosed with depression, 46.7% (14/30) were deemed to have committed suicide. Among those diagnosed as suffering from psychosis (schizophrenia or other unspecified psychosis) the principal implicated substance was alcohol in combination with other drugs (4/8, 50%). In individuals with unspecified mental health issues, the most frequently implicated drugs were heroin/morphine (6/15, 40.0%), and alcohol in combination with other drugs (6/15, 40.0%).

**Table 9.2.1: Demography of those with mental health issues, Wales 2008-2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>52 (100.0)</b>
<b>Gender</b>	Male	38 (73.1)
	Female	14 (26.9)
<b>Age group</b>	15-24	1 (1.9)
	25-34	14 (26.9)
	35-44	25 (48.1)
	45-54	4 (7.7)
	55-64	4 (7.7)
	65 & older	4 (7.7)
<b>Drug addict status</b>	Yes	25 (48.1)
	No	13 (25.0)
	Not known	14 (26.9)

**Table 9.2.2: Psychoactive substances implicated alone and in combination in percentage of cases diagnosed with specific mental health problems, Wales 2008-2012**

Psychoactive substance implicated alone and in combination	Mental health diagnosis (n, %)					
	Anxiety disorder n=2	Bipolar Disorder n=2	Depression n=30	Personality disorder n=1	Psychosis n=8	Other mental issues n=15
<b>Alcohol in combination</b>	0 (0.0)	1 (50.0)	7 (23.3)	0 (0.0)	4 (50.0)	6 (40.0)
<b>Amphetamines</b>	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)
<b>Anti-depressants</b>	0 (0.0)	2 (100.0)	11 (36.7)	0 (0.0)	0 (0.0)	1 (6.7)
<b>Anti-epileptics</b>	0 (0.0)	0 (0.0)	1 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)
<b>Anti-psychotics</b>	0 (0.0)	1 (50.0)	1 (3.3)	0 (0.0)	1 (12.5)	1 (6.7)
<b>Cocaine</b>	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)
<b>Heroin/morphine</b>	0 (0.0)	0 (0.0)	7 (23.3)	1 (100.0)	3 (37.5)	6 (40.0)
<b>Hypnotics/sedatives</b>	0 (0.0)	1 (50.0)	3 (10.0)	0 (0.0)	2 (25.0)	2 (13.3)
<b>Methadone</b>	1 (50.0)	0 (0.0)	7 (23.3)	0 (0.0)	1 (12.5)	4 (26.7)
<b>Other opiates/opioid analgesics</b>	1 (50.0)	0 (0.0)	11 (36.7)	0 (0.0)	0 (0.0)	4 (26.7)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death. The case total sums to greater than the total number of cases since an individual may have more than one disorder.  
Cells highlighted in:  indicate the drug most frequently implicated for each mental health problem.

### 9.3 Northern Ireland 2008-2012

Among the deaths that occurred in Northern Ireland reported to the Programme between 2008 and 2012, 188 were reported as having a mental illness. The majority of were male (60.1%); White (86.7%); and aged 35-54 years (52.1%). When drug use status was known (81/188), 46.9% were known drug addicts or users (Table 9.3.2).

Among the 188 individuals reported as suffering from some form of mental health issues, 144 cases were diagnosed with depression; 50 with anxiety disorders; 22 with psychosis (including schizophrenia and other unspecified psychosis); eight with personality disorders; four with bipolar disorders; and 21 cases were diagnosed with other unspecified mental health issues (Table 9.3.1).

The most frequently implicated drugs in the deaths of those diagnosed with depression were other opiates/opioid analgesics (72/144, 50.0%); anti-depressants (69/144, 47.9%); and hypnotics/sedatives (68/144, 47.2%). In those diagnosed as suffering from an anxiety disorder, the principal implicated substances were hypnotics/sedatives (27/50 cases, 54.0%); other opiates/opioid analgesics (26/50 cases, 52.0%); and anti-depressants (21/50 cases, 42.0%). Of the cases diagnosed with psychosis, the substances most commonly implicated were hypnotics/sedatives (16/22, 72.7%); other opiates/opioid analgesics (13/22, 59.1%); and alcohol in combination with other substances (13/22, 59.1%). The principal substances implicated in deaths for the above and other mental health issues are summarised in Table 9.3.3.

Of the individuals reported to the Programme as diagnosed with some form of mental health issue, among those who were known drug users or addicts the most frequent manner of death was accidental (14/33, 42.4%); followed by poisoning of undetermined intent (13/33, 39.4%); and intentional self-poisoning (6/33, 18.2%). In contrast, among those who were reported as neither being addicted to nor using drugs, the most common manner of poisoning was undetermined (20/41, 48.8%); followed by accidental (12/41, 29.3%); and intentional self-poisoning (9/41, 22.0%).

**Table 9.3.1: Epidemiology of mental issues cases, Northern Ireland 2008-2012**

Specific mental issue (Total cases)	Gender (n, %)		Age group at death (n, %)						Drug use/addiction history (n, %)		
	M	F	15-24	25-34	35-44	45-54	55-64	65+	Yes	No	Not known
<b>Anxiety disorder (50)</b>	26 (52.0)	24 (48.0)	4 (8.0)	10 (20.0)	17 (34.0)	10 (20.0)	5 (10.0)	4 (8.0)	6 (12.0)	10 (20.0)	34 (68.0)
<b>Bipolar disorder (4)</b>	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	1 (25.0)	2 (50.0)	1 (25.0)	0 (0.0)	1 (25.0)	1 (25.0)	2 (50.0)
<b>Depression (144)</b>	79 (54.9)	65 (45.1)	9 (6.3)	30 (20.8)	41 (28.5)	35 (24.3)	19 (13.2)	10 (6.9)	26 (18.1)	37 (25.7)	81 (56.3)
<b>Eating disorder (5)</b>	0 (0.0)	5 (100.0)	0 (0.0)	1 (20.0)	2 (40.0)	2 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	4 (80.0)
<b>Personality disorder (8)</b>	5 (62.5)	3 (37.5)	0 (0.0)	1 (12.5)	2 (25.0)	3 (37.5)	2 (25.0)	0 (0.0)	3 (37.5)	1 (12.5)	4 (50.0)
<b>Psychosis (22)</b>	20 (90.9)	2 (9.1)	1 (4.5)	7 (31.8)	7 (31.8)	6 (27.3)	1 (4.5)	0 (0.0)	4 (18.2)	6 (27.3)	12 (54.5)
<b>Other mental issues (21)</b>	15 (71.4)	6 (28.6)	2 (9.5)	4 (19.0)	4 (19.0)	4 (19.0)	6 (28.6)	1 (4.8)	7 (33.3)	2 (9.5)	12 (57.1)

**Table 9.3.2: Demography of those with mental health issues, Northern Ireland 2008-2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>188 (100.0)</b>
<b>Gender</b>	Male	113 (60.1)
	Female	75 (39.9)
<b>Age group</b>	15-24	13 (6.9)
	25-34	39 (20.7)
	35-44	56 (29.8)
	45-54	42 (22.3)
	55-64	27 (14.4)
	65 & older	11 (5.9)
<b>Drug addict status</b>	Yes	38 (20.2)
	No	43 (22.9)
	Not known	107 (56.9)

**Table 9.3.3: Psychoactive substances implicated alone and in combination in percentage of cases diagnosed with specific mental health problems, Northern Ireland 2008-2012**

Psychoactive substance implicated alone and in combination	Mental health problems (n, %)						
	Anxiety disorder n=50	Bipolar Disorder n=4	Depression n=144	Eating disorder n=5	Personality disorder n=8	Psychosis n=22	Other mental issues n=21
<b>Alcohol in combination</b>	15 (30.0)	0 (0.0)	50 (34.7)	1 (20.0)	2 (25.0)	13 (59.1)	8 (38.1)
<b>Amphetamines</b>	1 (2.0)	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
<b>Anti-depressants</b>	21 (42.0)	2 (50.0)	69 (47.9)	4 (80.0)	3 (37.5)	6 (27.3)	9 (42.9)
<b>Anti-epileptics</b>	2 (4.0)	0 (0.0)	3 (2.1)	0 (0.0)	0 (0.0)	1 (4.5)	0 (0.0)
<b>Anti-Parkinson's</b>	1 (2.0)	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
<b>Anti-psychotics</b>	13 (26.0)	2 (50.0)	23 (16.0)	0 (0.0)	1 (12.5)	7 (31.8)	5 (23.8)
<b>Cocaine</b>	2 (4.0)	0 (0.0)	3 (2.1)	0 (0.0)	0 (0.0)	1 (4.5)	0 (0.0)
<b>Ecstasy-type drug</b>	2 (4.0)	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (4.8)
<b>Heroin/morphine</b>	12 (24.0)	0 (0.0)	21 (14.6)	1 (20.0)	1 (12.5)	4 (18.2)	3 (14.3)
<b>Hypnotics/sedatives</b>	27 (54.0)	3 (75.0)	68 (47.2)	2 (40.0)	4 (50.0)	16 (72.7)	9 (42.9)
<b>Methadone</b>	1 (2.0)	1 (25.0)	5 (3.5)	0 (0.0)	1 (12.5)	0 (0.0)	2 (9.5)
<b>Other opiates/opioid analgesics</b>	26 (52.0)	3 (75.0)	72 (50.0)	2 (40.0)	6 (75.0)	13 (59.1)	9 (42.9)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death. The case total sums to greater than the total number of cases since an individual may have more than one disorder. Cells highlighted in:  indicate the drug most frequently implicated for each mental health problem.

## 9.4 The Islands (Guernsey, Jersey and the Isle of Man), 2008-2012

Of the cases reported to the Programme for the Islands between 2008 and 2012, 19/42 (45.2%) were noted as having some form of mental health problem. These included bipolar disorder; depression; personality disorder; psychosis; and other unspecified mental health issues.

Among all cases diagnosed with mental health issues, 31.6% (6/19) were diagnosed with depression; 15.8% (3/19) were known to be psychotic; 10.5% (2/19) had a diagnosis of borderline personality disorder; 5.3% (1/19) were suffering from bipolar disorder; and 42.1% (8/19) of them were known to suffer from unspecified mental health issues. Drug addict status was known in 15 cases with mental health disorders, 46.7% (7/15) of which were known to have a history of dependence or drug use.

The majority (4/6) of those diagnosed with depression and all three who suffered from psychosis committed suicide (one of these also had a diagnosis of borderline personality disorder).

Table 9.4 shows the principal psychoactive substances implicated in death. In people suffering from depression they were anti-depressants (5/6), followed by other opiates and opioid analgesics (4/6). In the deaths of those listed with psychosis the main substances implicated were other opiates and opioid analgesics (2/3). In cases suffering from personality disorders the only substances implicated were anti-depressants (1/2), and heroin/morphine (1/2). Among individuals with other mental issues, alcohol in combination with other drugs was the main substance implicated (3/8).

**Table 9.4: Psychoactive substances implicated alone and in combination in percentage of cases diagnosed with specific mental health problems**

Psychoactive substance implicated alone and in combination	Depression n=6 (n, %)	Psychosis n=3 (n, %)	Personality disorders n=2 (n, %)	Other mental issues n=8 (n, %)
Alcohol in combination	1 (16.7)	0 (0.0)	0 (0.0)	3 (37.5)
Anti-depressants	5 (83.3)	1 (33.3)	1 (50.0)	2 (25.0)
Anti-psychotics	0 (0.0)	0 (0.0)	0 (0.0)	1 (12.5)
Heroin/morphine	2 (33.3)	0 (0.0)	1 (50.0)	2 (25.0)
Hypnotic/sedatives	1 (16.7)	1 (33.3)	0 (0.0)	2 (25.0)
Methadone	0 (0.0)	0 (0.0)	0 (0.0)	1 (12.5)
Other opiates/opioid analgesics	4 (66.7)	2 (66.7)	0 (0.0)	2 (25.0)

Note: Bipolar disorder is not reported in the table because of the absence of substances implicated in the death. Column totals may sum to more than 100% since more than one substance may be implicated in a death. Cells highlighted in:   show the drug most frequently implicated per mental health issue.

## Prison

### 9.5 England 2012

In 2012, 15 individuals reported to the Programme were noted as having been in prison at some point in their lives, 11 of whom died as a result of accidental poisoning. The majority were male (14/15, 93.3%); White (11/15, 73.3%); unemployed (9/15, 60%); with 73.3% (11/15) of them known drug users. When reported, the most common causes of detention were drug-related offences such as dealing.

The principal substances implicated in death, alone or in combination, were: heroin/morphine (8/15, 53.3%); other opiates/opioid analgesics (6/15, 40.0%); methadone (5/15, 33.3%); and alcohol in combination with other drugs (5/15 cases, 33.3%) (Table 9.5).

**Table 9.5: Psychoactive substances implicated in cases with prison history, England 2012**

Drug category	Number (%) of cases where substance implicated
<b>TOTAL</b>	<b>15 (100.0)</b>
<b>Alcohol in combination</b>	5 (33.3)
<b>Amphetamines</b>	2 (13.3)
<b>Anti-depressants</b>	3 (20.0)
<b>Anti-epileptics</b>	1 (6.7)
<b>Anti-psychotics</b>	1 (6.7)
<b>Cocaine</b>	2 (13.3)
<b>Heroin/morphine</b>	8 (53.3)
<b>Hypnotic/sedatives</b>	4 (26.7)
<b>Methadone</b>	5 (33.3)
<b>Other opiates/opioid analgesics</b>	6 (40.0)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death

### 9.6 Wales 2008-2012

Between 2008-12, 11 individuals reported to the Programme had been in prison at some point during their life, all of whom had died as a result of accidental poisoning. The majority were male (10/11); White (8/11); unemployed (10/11); and with a history of drug addiction or use (6/11). Where known, the most common reasons for detention were drug-related offences such as drug dealing.

The substance most frequently implicated was heroin/morphine (10/11) (Table 9.6).

**Table 9.6: Psychoactive substances implicated in cases with prison history, Wales 2008-2012**

Drug category	Number (%) of cases where substance implicated
<b>TOTAL</b>	<b>11 (100.0)</b>
Alcohol in combination	1 (9.1)
Amphetamines	1 (9.1)
Anti-depressants	1 (9.1)
Cocaine	1 (9.1)
Heroin/morphine	10 (90.9)
Hypnotic/sedatives	3 (27.3)
Methadone	4 (36.4)
Note: column totals may sum to more than 100% since more than one substance may be implicated in a death	

### 9.7 Northern Ireland 2008-2012

Between 2008-2012, 10 of the individuals who died in Northern Ireland and were reported to the Programme had been in prison at some point in their life. All were male; the majority were White (8/10); five were unemployed; and six were known drug users or addicts.

Half of those with prison history had heroin/morphine implicated in their deaths; with hypnotics/sedatives and other opiates/opioid analgesics involved in 4/10 cases (Table 4.4).

The most frequent underlying cause of death in individuals with prison history was accidental poisoning (5/10).

**Table 9.7: Psychoactive substances implicated in cases with prison history, Northern Ireland 2008-2012**

Drug category	Number (%) of cases where substance implicated
<b>TOTAL</b>	<b>10 (100.0)</b>
Alcohol in combination	2 (20.0)
Amphetamines	1 (10.0)
Anti-depressants	2 (20.0)
Heroin/morphine	5 (50.0)
Hypnotic/sedatives	4 (40.0)
Other opiates/opioid analgesics	4 (40.0)
Note: column totals may sum to more than 100% since more than one substance may be implicated in a death	

### 9.8 Islands 2008-2012

In the Islands between 2008 and 2012, details of only two individuals were provided with information on their prison history. Both cases were male and from Jersey. One had been released a matter of hours prior to his death, and other opiates/opioid analgesics were a contributing factor. The other individual was a suspected drug dealer known to police due to heavy alcohol use. The principal substance implicated in his death was heroin/morphine.

## Hepatitis and HIV/AIDS

### 9.9 England 2012

In 2012, a total of 43 cases were identified as being infected with hepatitis: 35 cases with hepatitis C; five cases with hepatitis B; and three cases with unspecified chronic hepatitis.

The majority of individuals infected with hepatitis C were male (29/35, 82.9%). Addict status was known in 29 cases, all but one of which had a history of dependence or drug use. The main underlying cause of death for this group was accidental poisoning (20/35, 57.1%), whilst for 5/35 cases (14.3%), hepatitis C was reported as a contributing factor in their deaths. The principal substances implicated in death were alcohol in combination (15/35, 42.9%); methadone (13/35, 37.1%); and heroin/morphine (11, 31.4%). Hepatitis C can be contracted through the use of contaminated needles, and among the individuals who were diagnosed with hepatitis C, of those with known drug use status (29/35), all but one were known to use drugs. Among these 28 drug users, 11 cases (39.3%) were known to be injecting. Table 9.9.1 summarises the drugs implicated in the deaths of all those reported as infected with some form of hepatitis.

**Table 9.9.1: Psychoactive substances implicated in cases with hepatitis C, hepatitis B and other hepatitis, England 2012**

Drug category	Hepatitis C (n, %)	Hepatitis B (n, %)	Other hepatitis unspecified (n, %)
<b>TOTAL</b>	<b>35 (100.0)</b>	<b>5 (100.0)</b>	<b>3 (100.0)</b>
Alcohol in combination	15 (42.9)	3 (60.0)	2 (66.7)
Amphetamines	2 (5.7)	0 (0.0)	0 (0.0)
Anti-depressants	4 (11.4)	0 (0.0)	1 (33.3)
Anti-psychotics	2 (5.7)	0 (0.0)	0 (0.0)
Cocaine	6 (17.1)	2 (40.0)	0 (0.0)
Ecstasy-type drug	1 (2.9)	0 (0.0)	0 (0.0)
Heroin/morphine	11 (31.4)	2 (40.0)	2 (66.7)
Hypnotics/sedatives	5 (14.3)	2 (40.0)	1 (33.3)
Methadone	13 (37.1)	3 (60.0)	1 (33.3)
Other opiates/opioid analgesics	10 (28.6)	1 (20.0)	0 (0.0)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death

A total of 8 individuals who died in England in 2012 were reported to NPSAD as suffering from HIV/AIDS. All were male, and where the addict status was known (7/8), the majority of cases (6/8) were reported to have a past drug addict history. Half of the known drug users used intravenous (IV) drugs. The main underlying cause of death was accidental poisoning (3/8, 37.5%), and the principal substances implicated in death were: heroin/morphine (3/8); other opiates/opioid analgesics (3/8); and alcohol in combination with other drugs (3/8) (Table 9.9.2).

**Table 9.9.2: Psychoactive substances implicated in cases with HIV/AIDS, England 2012**

Drug category	Number of cases where substance implicated (%)
<b>TOTAL</b>	<b>8 (100.0)</b>
Alcohol in combination	3 (37.5)
Amphetamines	1 (12.5)
Anti-psychotics	1 (12.5)
Cocaine	2 (25.0)
Heroin/morphine	3 (37.5)
Methadone	2 (25.0)
Other opiates/opioid analgesics	3 (37.5)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death

## 9.10 Wales 2008-2012

Between 2008-2012, a total of 8 cases were reported as having been positive for hepatitis C, two of whom were known to be using IV drugs.

The majority were male (5/8); all were White; most were unemployed (7/8); and with previous drug use or addiction (7/8). The main underlying cause of death for this group was accidental poisoning (7/8). Substances implicated in the deaths, either alone or in combination, were heroin/morphine (4/8); methadone (3/8); hypnotic/sedatives (3/8); alcohol in combination with other drugs (3/8); and anti-depressants (1/8).

## 9.11 Northern Ireland 2008-2012

Between 2008-2012 a total of three individuals were described as having contracted hepatitis C, two of whom were confirmed to be IV users of drugs. All were male; drug addicts; and died as a result of accidental poisoning. Heroin/morphine was implicated in combination with other drugs in all three deaths.

There was one case, a male, reported between 2008-12 as suffering from HIV/AIDS. Death resulted from poisoning of undetermined intent, and it was not known if he was a user of IV drugs.

## 9.12 The Islands 2008-2012

Only one case from Jersey between 2008-12 was identified as being infected with hepatitis C, who had also contracted HIV and developed AIDS. It was not known if this female case used IV drugs, but death resulted from intentional self-poisoning.

## Section 2: Drug Strategy cases, England 2012

This section discusses other issues of the English cases reported to NPSAD meeting the definition used by the Government for monitoring its Drug Strategy (DS), covering information such as mental health issues; hepatitis or HIV/AIDS infection; and previous prison history. The figures presented here are to be regarded as the minimum due to the nature of the reporting system.

### 9.13 Mental Health Issues

The abuse of drugs or the addiction to them is a problem often linked to mental health issues, and of the DS cases reported to the Programme, 145 were noted as having some form of mental health issue. Among people listed as suffering from some form of mental illness, males accounted for 62.1%; and the majority were aged 35-54 years (56.6%). Of the 104 cases with drug use status provided to the Programme, the majority (59/104, 56.7%) were known drug addicts or users (Table 9.13.1)

Of the DS cases reported as diagnosed with mental health issues, 87 were suffering from depression; 37 had an anxiety disorder (including post-traumatic stress disorder and obsessive compulsive disorder); 14 were psychotic (including schizophrenia); 11 were diagnosed with a personality disorder; 11 had bipolar disorder; three had an eating behaviour disorder; two were reported as having a behavioural disorder; and 40 were diagnosed with other unspecified mental issues (Table 9.13.2).

Amongst those who were diagnosed with some form of mental illness and who were also known drug users, the most frequent manner of poisoning was accidental (46/55, 83.6%), followed by undetermined (5/55, 9.1%), and intentional (4/55, 7.3%). In contrast, those individuals who were confirmed as non-drug users, the proportions of their deaths attributed to the different manners of poisonings greatly contrasted those of the known drug users, with just 48.9% (22/45) of their deaths resulting from accidental poisoning, followed by intentional (14/45, 31.1%) and undetermined (9/45, 20.0%) (Figure 9.13.3).

Of those listed with depression, the most common implicated drugs were other opiates/opioid analgesics (38/87, 43.7%) and heroin/morphine (31/87, 35.6%). Suicide accounted for 18.4% (16/87) of the deaths of those diagnosed with depression. In people with a diagnosis of anxiety, the principal implicated substance was heroin/morphine (18/37, 48.6%). The principal substances implicated for the other mental health issues are summarised in Table 9.13.4.

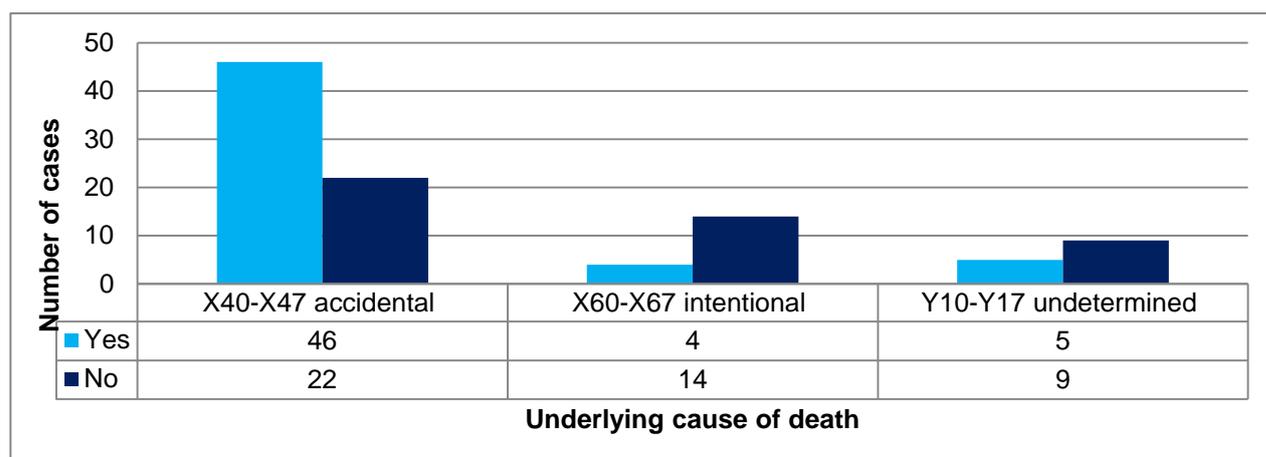
**Table 9.13.1: Demographic details of mental issues cases, DS England 2012**

Variable	Category	Number (%)
<b>TOTAL</b>		<b>145 (100.0)</b>
<b>Gender</b>	Male	90 (62.1)
	Female	55 (37.9)
<b>Age group</b>	15-24	5 (3.4)
	25-34	28 (19.3)
	35-44	44 (30.3)
	45-54	38 (26.2)
	55-64	24 (16.6)
	65 & older	6 (4.1)
<b>Drug addict status</b>	Yes	59 (40.7)
	No	45 (31.0)
	Not known	41 (28.3)

**Table 9.13.2: Epidemiology according to mental issues cases, DS England 2012**

Specific mental issue (Total cases)	Gender (n, %)		Age group at death (n, %)						Drug use/addiction history (n, %)		
	M	F	15-24	25-34	35-44	45-54	55-64	65+	Yes	No	Not known
<b>Anxiety Disorder (37)</b>	20 (54.1)	17 (45.9)	1 (2.7)	6 (16.2)	13 (35.1)	8 (21.6)	7 (18.9)	2 (5.4)	18 (48.6)	9 (24.3)	10 (27.0)
<b>Behavioural disorder (2)</b>	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)
<b>Bipolar Disorder (5)</b>	4 (80.0)	1 (20.0)	0 (0.0)	1 (20.0)	2 (40.0)	2 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (40.0)	3 (60.0)
<b>Depression (87)</b>	49 (56.3)	38 (43.7)	4 (4.6)	16 (18.4)	24 (27.6)	21 (24.1)	16 (18.4)	6 (6.9)	37 (42.5)	29 (33.3)	21 (24.1)
<b>Eating Disorder (3)</b>	1 (33.3)	2 (66.7)	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)
<b>Other mental issues (40)</b>	26 (65.0)	14 (35.0)	0 (0.0)	10 (25.0)	11 (27.5)	13 (32.5)	5 (12.5)	1 (2.5)	15 (37.5)	11 (27.5)	14 (35.0)
<b>Personality Disorder (11)</b>	6 (54.5)	5 (45.5)	0 (0.0)	2 (18.2)	5 (45.5)	1 (9.1)	3 (27.3)	0 (0.0)	5 (45.5)	3 (27.3)	3 (27.3)
<b>Psychosis (14)</b>	11 (78.6)	3 (21.4)	1 (7.1)	1 (7.1)	5 (35.7)	4 (28.6)	3 (21.4)	0 (0.0)	7 (50.0)	4 (28.6)	3 (21.4)

**Figure 9.13.3: Manner of death of cases with mental health issues and known drug use status, DS England 2012**



**Table 9.13.4: Psychoactive substances implicated alone and in combination in percentage of cases diagnosed with specific mental health problems, DS England 2012**

Psychoactive substance implicated alone and in combination	Mental health problem (n, %)							
	Anxiety (37)	Behaviour disorder (2)	Bipolar disorder (5)	Depression (87)	Eating disorder (3)	Personality disorder (11)	Psychosis (14)	Other mental issues (40)
<b>Alcohol in combination</b>	15 (40.5)	1 (50.0)	0 (0.0)	25 (28.7)	1 (33.3)	4 (36.4)	1 (7.1)	16 (40.0)
<b>Amphetamines</b>	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)	1 (9.1)	1 (7.1)	0 (0.0)
<b>Anti-depressants</b>	12 (32.4)	0 (0.0)	1 (20.0)	20 (23.0)	1 (33.3)	2 (18.2)	4 (28.6)	14 (35.0)
<b>Anti-epileptics</b>	1 (2.7)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)	1 (9.1)	0 (0.0)	0 (0.0)
<b>Anti-Parkinson's</b>	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)	0 (0.0)
<b>Anti-psychotics</b>	5 (13.5)	0 (0.0)	2 (40.0)	4 (4.6)	0 (0.0)	1 (9.1)	4 (28.6)	4 (10.0)
<b>Cannabis</b>	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (9.1)	1 (7.1)	0 (0.0)
<b>Cocaine</b>	3 (8.1)	0 (0.0)	0 (0.0)	4 (4.6)	0 (0.0)	1 (9.1)	1 (7.1)	3 (7.5)
<b>Ecstasy-type drug</b>	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)	2 (5.0)
<b>GHB/GBL</b>	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.5)
<b>Heroin/morphine</b>	18 (48.6)	1 (50.0)	2 (40.0)	31 (35.6)	1 (33.3)	5 (45.5)	4 (28.6)	13 (32.5)
<b>Hypnotics/sedatives</b>	10 (27.0)	0 (0.0)	2 (40.0)	19 (21.8)	1 (33.3)	1 (9.1)	4 (28.6)	16 (40.0)
<b>Methadone</b>	5 (13.5)	1 (50.0)	0 (0.0)	13 (14.9)	0 (0.0)	2 (18.2)	3 (21.4)	4 (10.0)
<b>Other opiates/opioid analgesics</b>	17 (45.9)	2 (100.0)	2 (40.0)	38 (43.7)	1 (33.3)	5 (45.5)	4 (28.6)	18 (45.0)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death. The case total sums to greater than the total number of cases since an individual may have more than one disorder. Cells highlighted in:  indicate the drug most frequently implicated for each mental health problem.

## 9.14 Prison

Of the Drug strategy (DS) cases reported to the Programme for 2012, 15 had previously been in prison. The majority were male (14/15, 93.3%); White (12/15, 80.0%); unemployed (10/15, 66.7%); and with past drug-addict history (11/15, 73.3%). When reported, the most common causes of detention were drug possession and dealing.

The substances most frequently implicated in death either alone or in combination, were: heroin/morphine (8/15, 53.3%); alcohol (6/15, 40.0%); and other opiates/opioid analgesics (6/15, 40.0%) (Table 9.14).

The primary underlying cause of death in individuals with prison history was accidental poisoning (12/15, 80.0%).

**Table 9.14 Psychoactive substances implicated in cases with prison history, DS England 2012**

Drug category	Number (%) of cases where substance implicated
<b>TOTAL</b>	<b>15 (100.0)</b>
<b>Alcohol in combination</b>	6 (40.0)
<b>Amphetamines</b>	2 (13.3)
<b>Anti-depressants</b>	2 (13.3)
<b>Anti-epileptics</b>	1 (6.7)
<b>Anti-psychotics</b>	1 (6.7)
<b>Cocaine</b>	2 (13.3)
<b>Heroin/morphine</b>	8 (53.3)
<b>Hypnotic/sedatives</b>	5 (33.3)
<b>Methadone</b>	5 (33.3)
<b>Other opiates/opioid analgesics</b>	6 (40.0)
Note: column totals may sum to more than 100% since more than one substance may be implicated in a death	

## 9.15 Hepatitis and HIV/AIDS

In 2012, a total of 38 DS cases were reported as infected with hepatitis: 30 with hepatitis C; five with hepatitis B; and three with unspecified chronic hepatitis. Of those infected with hepatitis C, the majority were male (25/30, 83.3%) and known drug users or addicts (23/30 cases, 76.7%).

The main underlying cause of death for this group was accidental poisoning (22/30, 73.3%). The principal substances implicated in death were heroin/morphine (14/30, 46.7%); methadone (14/30, 46.7%); and alcohol alone or in combination (14/30, 46.7%) (Table 9.15.1). In 9/35 cases (25.7%) hepatitis C was reported as a contributory factor of death. Hepatitis C is frequently associated with IV drug use, and among the individuals who had hepatitis C and whose drug use status was known, almost all were known to be drug users (23/24, 95.8%), and nine of these were known to use IV drugs. The implicated drugs data for the three different forms of hepatitis reported are summarised in Table 9.15.1.

**Table 9.15.1: Psychoactive substances implicated in cases with hepatitis C, hepatitis B and other hepatitis, DS England 2012**

Drug category	Hepatitis C (n, %)	Hepatitis B (n, %)	Other hepatitis unspecified (n, %)
<b>TOTAL</b>	<b>30 (100.0)</b>	<b>5 (100.0)</b>	<b>3 (100.0)</b>
<b>Alcohol in combination</b>	14 (46.7)	4 (80.0)	1 (33.3)
<b>Amphetamines</b>	2 (6.7)	0 (0.0)	0 (0.0)
<b>Anti-depressants</b>	4 (13.3)	1 (20.0)	0 (0.0)
<b>Anti-psychotics</b>	2 (6.7)	0 (0.0)	0 (0.0)
<b>Cocaine</b>	7 (23.3)	3 (60.0)	1 (33.3)
<b>Ecstasy-type drug</b>	1 (3.3)	0 (0.0)	0 (0.0)
<b>Heroin/morphine</b>	14 (46.7)	3 (60.0)	3 (100.0)
<b>Hypnotics/sedatives</b>	6 (20.0)	3 (60.0)	1 (33.3)
<b>Methadone</b>	14 (46.7)	3 (60.0)	1 (33.3)
<b>Other opiates/opioid analgesics</b>	11 (36.7)	2 (40.0)	0 (0.0)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death

A total of four DS cases for 2012 were reported as suffering from HIV/AIDS, all of whom were male and White, with three known to use drugs, with one of these known to use IV drugs. The substances implicated in their deaths are summarised in Table 9.15.2.

**Table 9.15.2: Psychoactive substances implicated in cases with HIV/AIDS, DS England 2012**

Drug category	Number of cases where substance implicated (%)
<b>TOTAL</b>	<b>4 (100.0)</b>
<b>Alcohol in combination</b>	3 (75.0)
<b>Anti-depressants</b>	2 (50.0)
<b>Anti-psychotics</b>	1 (25.0)
<b>Cocaine</b>	2 (50.0)
<b>Heroin/morphine</b>	2 (50.0)
<b>Hypnotic/sedatives</b>	2 (50.0)
<b>Methadone</b>	1 (25.0)
<b>Other opiates/opioid analgesics</b>	2 (50.0)

Note: column totals may sum to more than 100% since more than one substance may be implicated in a death

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## **Appendix 1: The National Programme on Substance Abuse Deaths (NPSAD)**

### **Aims and objectives**

The Programme's principal aim is to reduce and prevent drug-related deaths in the UK due to the misuse of drugs, both licit and illicit, by collecting, analysing, and disseminating information on the extent and nature of death.

The Programme's objectives are to:

- Collect and collate drug-related mortality data
- Develop and maintain a computerised surveillance system
- Identify substances implicated in drug-related deaths – including new drugs and new combinations
- Monitor and examine patterns and trends, e.g. geographic, demographic, substances implicated in death, method of death
- Act as an early warning system for new trends in mortality and drug misuse
- Use data as an indicator to estimate the prevalence of substance-related problems and assess the hazards associated with substance abuse
- Collaborate with relevant agencies in research on substance-related mortality locally, nationally and internationally
- Inform and facilitate discussion on the prevention of drug-related deaths, whether accidental or intentional
- Provide data for local and national drug abuse policy formulation and programme planning
- Disseminate information on drug-related mortality to the scientific community, clinicians, policy makers and other interested parties

### **Surveillance data management**

Data collated for this programme is stored on the NPSAD Coroners' database which was established in 1997. Its purpose is to provide information for the Programme's surveillance system of monitoring drug-related deaths reported by Coroners, procurators fiscal and other agencies.

### **Data collection**

All Coroners in the UK (see Appendix 3) are issued with copies of the standard data collection form (see Appendix 4). They are invited to complete the forms on all deaths that meet the criteria described in this report (see Appendix 2) and return them to the NPSAD team at St. George's, University of London for coding and entry onto the database.

Data submission is mostly directly on paper by Coroners or their staff. Forms are submitted when inquests are complete. Manual extraction of data by team members is undertaken at some Coroners' courts.

A monitoring process is undertaken to ascertain the quality of the information received from Coroners, as well as the extent to which all relevant cases are being identified and submitted. This assists in further improving the quality of the various outputs that the Programme seeks to provide.

## Data entry and coding

To enable comparison with various national and international datasets all causes of death have been coded according to the International Classification of Diseases (ICD-10). This is an international standard for the classification of diseases and health-related problems published by the World Health Organisation (1992). The online version (ICD-10 2010) has been employed for coding all substances implicated in death separately according to its therapeutic drug category, i.e. hypnotics/sedatives, anti-depressants, opiates, etc.

The 'intentionality' of deaths based on the Coroner's verdict and/or other additional information employing ICD-10 codes is inadequate for informing interested parties as to whether certain categories of drug-related deaths can be prevented.

Whilst the 'cause' of death (as given in the preceding section) is concerned with the disease or injury responsible for the lethal sequence of events, the 'manner' of death explains how the cause of death arose, i.e. a natural or violent death. The categories for 'manner of death' have been adopted from the UK practice (Explore Forensics <http://www.exploreforensics.co.uk/the-four-manners-of-death.html>) with the additional categories for those where intentionality is unclear or manner of death is impossible to determine: natural, accidental, suicidal, homicidal, undetermined, and unclassified/not specified. Verdicts of 'dependence on drugs' or 'non-dependent abuse of drugs' are regarded as 'accidental'. The 'manner of death' is derived from information such as the verdict or 'finding', history of drug misuse or dependence, post mortem drugs, and other information; and is based on the interpretation of the death by NPSAD and clinical presentation/profile of the individual case.

## Statistical analysis

Due to the nature of the information collected by the programme, i.e. drug-related deaths as reported by the Coroners, this is an observational study. Hence, statistical methods employed are based on proportions. The data were analysed using IBM® SPSS™ Statistics for Windows version 19.

## Data Storage

The anonymised data-set for Coroners is held on a SPSS database for analysis. All data held, whether electronic or paper, is stored securely and treated as confidential. Access is restricted to Programme staff; only aggregated and anonymised data are released to third parties.

## Quality Assurance of Data

The Programme has given consideration as to how it can ensure the quality, accuracy and comprehensiveness of the data collected in order to improve both the quality of information collected and to establish if all relevant cases are being identified and notified. Following a pilot phase in 2008-9, a programme of visits to a sample of geographically representative Coroners' areas in England and Wales was undertaken in 2009-10.

Such surveys help to establish the extent to which cases are being correctly identified. This makes it possible to extrapolate from the deaths notified by participating areas to the expected number of cases if all Coroners were reporting all cases, thereby providing a much more precise estimate of drug-related deaths (DRDs) for policy and intervention planning.

This activity also provides insights into the quality and accuracy of the information submitted to the Programme, and has provided a firm basis for a process of audit in the future, thereby ensuring the consistent validation of the Programme's surveillance work. This work also facilitates the drawing up of detailed guidance for Coroners and their staff in identifying and reporting relevant cases to NPSAD.

The methodology used for this study was to select and examine completed inquests for deaths, available in Coroners' offices, occurring in 2008. A statistically representative sample of 150 DRDs reported to the Programme was drawn for the quality assurance aspect based on cases reported by Coroners in England and Wales.

To ascertain the accuracy of case identification and reporting, a 10% sample of records was drawn randomly from files for all completed inquests (for whatever reason) for each selected Coroner's area. A total of 375 such completed inquests on all types of death in 2008 were examined.

Geographical representativeness was based on selecting one Coroner's area in each of the ten Strategic Health Authority (SHA) areas in England and two in Wales. For England there was a two-stage sampling process. In the first stage, three Coroners' areas from each SHA area was selected on the basis of the highest number of inquests completed. The second stage consisted of randomly selecting one of these three areas for investigation.

The key findings from this survey show that the information received by the Programme from Coroners is consistent with the Coronial inquest file papers. This exercise did not identify any 'false positives' i.e. any over-reporting.

In 2008 five cases, where one or more controlled drugs or psychoactive substances were mentioned, were not reported to NPSAD. An extrapolation of these five cases projects an increase of 50 in the number of reported cases from Coroners in England and Wales in 2008. The degree of under reporting in both the 2007 and 2008 cases is comparable (3.9% and 3.3% respectively). This underlines the consistency in reporting.

## Appendix 2: Definitions of drug-related death

### NPSAD definition

An NPSAD case is defined as a relevant death where any of the following criteria are met at a completed inquest, fatal accident inquiry or similar investigation:

- One or more psychoactive substances\* directly\*\* implicated in death;
- History of dependence or abuse of psychoactive drugs;
- Presence of Controlled Drugs\*\*\* at post mortem; or
- Cases of deaths directly due to drugs but with no inquest.

Alcohol is included only when implicated in combination with other qualifying drugs, as are solvents.

\* 'Psychoactive' substances are those having a direct effect on perception, mood, cognition, behaviour or motor function. Typically these include opiates and opioid analgesics, hypnotics, sedatives, anti-depressants, anti-epileptics, anti-psychotics, hallucinogens, and stimulants (such as amphetamines and cocaine) and "legal highs".

\*\* 'Directly implicated' means that drugs were considered by the Coroner or other person investigating the death to have been instrumental in the coming about of the deceased's death (e.g. through poisoning or intoxication), or causing their powers of reasoning and/or perception to be so affected as to induce them to take risks which they would not have done had they been sober (e.g. thinking they could fly).

\*\*\* 'Controlled Drugs' are those drugs specifically classified by the Misuse of Drugs Act 1971 as amended by subsequent legislation. Controlled drugs include opioids, cocaine, amphetamines, cannabis, GHB, hallucinogens and most benzodiazepines.

### Who is a drug abuser/dependent?

A drug abuser/dependent case is defined as one with a history of substance abuse where one or more of the following criteria are met:

- Reported as a known illicit drug user by the Coroner, based on evidence obtained at inquest;
- Prescribed substitute medication for drug dependence;
- Presence of an illicit drug at post mortem, where not prescribed; or
- Presence of any additional information on the Coroner's report suggestive of a history of drug abuse, and where such a history fulfils ICD-10 criteria: (F11-F16 and F19, using the 4-code subdivisions of .0 (acute intoxication), .1 (harmful use), and .2 (dependence syndrome).

### "Drug misuse" definition

Cause of death categories included in the headline indicator of 'drug misuse' deaths used to monitor progress against the Government's drug strategy are defined in terms of ICD-10 codes and Controlled Drug Status. The relevant codes from ICD-10 are given in brackets.

The definition comprises two types of deaths:

a) deaths where the underlying cause of death has been coded to the following categories of mental and behavioural disorders due to psychoactive substance use (excluding alcohol, tobacco and volatile solvents):

- (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 controlled under the Misuse of Drugs Act 1971 was mentioned on the death record:

- (i) Accidental poisoning by drugs, medicaments and biological substances (X40–X44);
- (ii) Intentional self-poisoning by drugs, medicaments and biological substances (X60–X64);
- (iii) Poisoning by drugs, medicaments and biological substances, undetermined intent (Y10–14);
- (iv) Assault by drugs, medicaments and biological substances (X85); and
- (v) Mental and behavioural disorders due to use of volatile solvents (F18)

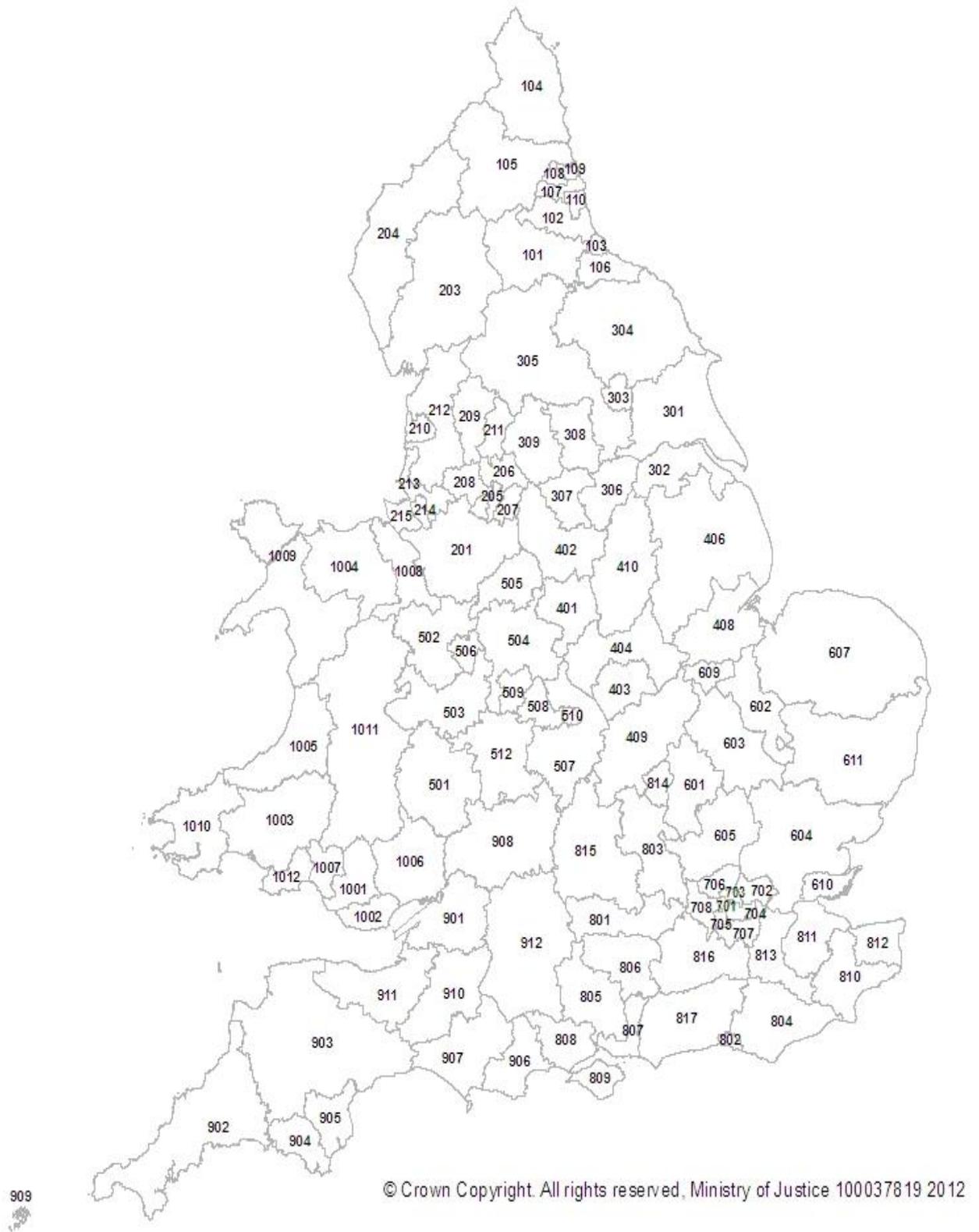
#### Notes:

1. Deaths coded to opiate abuse which resulted from the injection of contaminated heroin have been *included* in the indicator. This differs from the approach taken in Scotland, where these deaths have been *excluded*. This is because the General Register Office for Scotland (GROS) is able to identify deaths which occurred as a result of the use of contaminated heroin, whereas in England and Wales, these deaths cannot be readily identified. In practice, in England and Wales, they will only be included where the drug was mentioned on the death record and the death was coded to one of the ICD codes on the ONS database of drug-related poisonings and not to an infection code.
2. Specific rules were adopted for dealing with compound analgesics which contain relatively small quantities of drugs listed under the Misuse of Drugs Act, the major ones being dextropropoxyphene, dihydrocodeine and codeine. Where these drugs are mentioned on a death record, they have been excluded if they are part of a compound analgesic (such as *co-proxamol*, *co-dydramol* or *co-codamol*) or cold remedy. Dextropropoxyphene has been excluded on all occasions, whether or not paracetamol or a compound analgesic was mentioned. This is because dextropropoxyphene is rarely, if ever, available other than as part of a paracetamol compound. However, codeine or dihydrocodeine mentioned **alone** were included in the indicator. This is because they are routinely available and known to be abused in this form. This approach is taken by both the Office for National Statistics and the General Register Office for Scotland.
3. Drugs controlled under the Misuse of Drugs Act 1971 include class A, B and C drugs.

#### Definition used by SCDEA

Deaths reported to the SCDEA by Scottish police forces are those which meet the definition used by the Association of Chief Police Officers (Scotland) – “where there is prima facie evidence of a fatal overdose of controlled drugs. Such evidence would be recent drug misuse, for example controlled drugs and/or a hypodermic syringe found in close proximity to the body and/or the person is known to the police as a drug misuser although not necessarily a notified addict.” Thus, most suicides in Scotland will be excluded.

### Appendix 3: Coroners' jurisdictions in England and Wales, 2012



## Key to jurisdictions

### North East

- 101 – Darlington and South Durham
- 102 – North Durham
- 103 – Hartlepool
- 104 – North Northumberland
- 105 – South Northumberland
- 106 – Teesside
- 107 – Gateshead and South Tyneside
- 108 – Newcastle upon Tyne
- 109 – North Tyneside
- 110 – Sunderland

### North West

- 201 – Cheshire
- 203 – South and East Cumbria
- 204 – North and West Cumbria
- 205 – Manchester (city)
- 206 – Manchester North Coroners
- 207 – Manchester South
- 208 – Manchester West
- 209 – Blackburn, Hyndburn and Ribble Valley
- 210 – Blackpool and Fylde
- 211 – East Lancashire
- 212 – Preston and West Lancashire
- 213 – Sefton, Knowsley and St Helens
- 214 – Liverpool
- 215 – Wirral

### Yorkshire and the Humber

- 301 – East Riding and Hull
- 302 – North Lincolnshire and Grimsby
- 303 – York City
- 304 – North Yorkshire - East
- 305 – North Yorkshire - West
- 306 – South Yorkshire - East
- 307 – South Yorkshire - West
- 308 – West Yorkshire - East
- 309 – West Yorkshire - West

### East Midlands

- 401 – Derby and South Derbyshire
- 402 – North Derbyshire
- 403 – Leicester and South Leicestershire
- 404 – North Leicestershire and Rutland
- 406 – Central Lincolnshire
- 408 – South Lincolnshire
- 409 – Northamptonshire
- 410 – Nottinghamshire

### West Midlands

- 501 – Herefordshire
- 502 – North Shropshire
- 503 – South Shropshire
- 504 – Staffordshire South
- 505 – Stoke-on-Trent and North Staffordshire
- 506 – Telford and Wrekin
- 507 – Warwickshire
- 508 – Birmingham and Solihull
- 509 – Black Country
- 510 – Coventry

512 – Worcestershire

**East of England**

601 – Bedfordshire and Luton  
602 – North and East Cambridgeshire  
603 – South and West Cambridgeshire  
604 – Essex and Thurrock  
605 – Hertfordshire  
607 – Norfolk  
609 – Peterborough  
610 – Southend on Sea  
611 – Suffolk

**London**

701 – City of London [not visible]  
702 – East London  
703 – Inner London North  
704 – Inner London South  
705 – Inner London West  
706 – North London  
707 – South London  
708 – West London

**South East**

801 – Berkshire  
802 – Brighton and Hove  
803 – Buckinghamshire  
804 – East Sussex  
805 – Central Hampshire  
806 – North East Hampshire  
807 – Portsmouth and South East Hampshire  
808 – Southampton and New Forest  
809 – Isle of Wight  
810 – Central and South East Kent  
811 – Mid Kent and Medway  
812 – North East Kent  
813 – North West Kent  
814 – Milton Keynes  
815 – Oxfordshire  
816 – Surrey  
817 – West Sussex

**South West**

901 – Avon  
902 – Cornwall  
903 – Exeter and Greater Devon  
904 – Plymouth and South West Devon  
905 – Torbay and South Devon  
906 – Bournemouth and Eastern Dorset  
907 – Western Dorset  
908 – Gloucestershire  
909 – Isles of Scilly  
910 – Eastern Somerset  
911 – Western Somerset  
912 – Wiltshire and Swindon

**Wales**

- 1001 – Bridgend and Glamorgan Valleys
- 1002 – Cardiff and Vale of Glamorgan
- 1003 – Carmarthenshire
- 1004 – Central North Wales
- 1005 – Ceredigion
- 1006 – Gwent
- 1007 – Neath and Port Talbot
- 1008 – North East Wales
- 1009 – North West Wales
- 1010 – Pembrokeshire
- 1011 – Powys
- 1012 – City and County of Swansea

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<http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2/>

**Northern Ireland**

Comprising the whole of Northern Ireland

**Scotland Police Force areas**

- Argyll & Clyde
- Central Scotland Police
- Dumfries & Galloway Constabulary
- Fife Constabulary
- Grampian Police
- Lothian & Borders Police
- Northern Constabulary
- Strathclyde Police
- Tayside Police

**The Islands Jurisdictions**

Guernsey, Jersey and the Isle of Man

## Appendix 4: NPSAD data collection form

The National Programme on Substance Abuse Deaths (NPSAD)

### NOTIFICATION OF DRUG-RELATED DEATHS

#### Section I Demographic information

Deceased forename(s): \_\_\_\_\_ Gender:  Male  Female

Family name: \_\_\_\_\_ Other names known by: \_\_\_\_\_

Date of birth: \_\_\_\_/\_\_\_\_/\_\_\_\_ Place of birth: \_\_\_\_\_

Usual address: \_\_\_\_\_

Postcode: \_\_\_\_\_

#### Ethnicity (tick one only)

- White  Pakistani  Black African  Other, specify \_\_\_\_\_  
 Chinese  Bangladeshi  Black Caribbean  Not known  
 Indian  Black other, specify \_\_\_\_\_

#### Occupational status (tick one only)

- Employed (manual)  Unemployed  Retired  
 Employed (non-manual)  Childcare/houseperson  Student/pupil  
 Self employed  Invalidity/sickness  Other, specify \_\_\_\_\_  
 Not known

#### Living arrangements (tick one only)

- Alone  Self and children  No fixed abode  
 With partner  With parent(s)  Other, specify \_\_\_\_\_  
 With partner & children  With friend(s)  Not known

#### Section II Details of death

Date of death: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### Place of death: (tick one only)

- Home  Residential premises (.e. hotel)  In custody  
 Place of work  Street or highway  Place of recreation/sport  
 Treatment centre  Educational establishment  Hospital  
 Other place, specify \_\_\_\_\_

#### Cause(s) of death (as given on the death certificate)

- 1(a) \_\_\_\_\_  
(b) \_\_\_\_\_  
(c) \_\_\_\_\_  
2 \_\_\_\_\_

## The National Programme on Substance Abuse Deaths (NPSAD)

### Toxicology

Please list drugs and alcohol present at post mortem (in order of importance, if known)

	Drug/alcohol	Level				Drug/alcohol	Level		
		B	T	U			B	T	U
1					4				
2					5				
3					6				

B = Blood; T = Tissues; U = Urine

### Section III Coroner's verdict

### Section IV Background information

**Recent history of drug use and other relevant information:** e.g. evidence of injecting drug use; evidence of 'crack' use; recently released from prison or discharged from treatment programme; psychiatric history; known to alcohol/drug services; length of use; poly-substance user; known health problems associated with substance misuse; last 24 hours of life (if known), time police summoned, any drugs paraphernalia, etc.:

Was the deceased on prescribed psychoactive medication?  Yes  No  Not known

If yes, please list drugs:

1 \_\_\_\_\_ 2 \_\_\_\_\_  
3 \_\_\_\_\_ 4 \_\_\_\_\_  
5 \_\_\_\_\_ 6 \_\_\_\_\_

Was the deceased a drug addict or known drug abuser?  Yes  No  Not known

### Section V Coroner's details

Coroner's name: \_\_\_\_\_ Date inquest completed: \_\_\_\_/\_\_\_\_/\_\_\_\_

Jurisdiction: \_\_\_\_\_ Office: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Please send completed form to:

**National Programme on Substance Abuse Deaths (NPSAD)  
International Centre for Drug Policy  
St George's, University of London  
FREEPOST LON 10141,  
London SW17 0BR**

For general enquiries: Tel 020 8725 5522  
Email [icdp@sgul.ac.uk](mailto:icdp@sgul.ac.uk)

**This form is available electronically**