Focal Point Ireland: national report for 2019 - harms and harm reduction

Health Research Board. Irish Focal Point to the European Monitoring Centre for Drugs and Drug Addiction

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T0. Summary

This report summarises the most recently available data with regard to drug-related harms and drug-related harm interventions in the Republic of Ireland.

Ireland maintains a special register that is a complete census of all drug-induced deaths. Established in 2005, the National Drug-Related Death Index (NDRDI), which is maintained by the Health Research Board (HRB), is an epidemiological database that records cases of deaths by drug poisoning, and deaths among drug users in Ireland, extending back to 1998.

Data on drug-related acute emergencies in the Irish context refer to all admissions to acute general hospitals with non-fatal overdoses and are extracted from the Hospital In-Patient Enquiry (HIPE) scheme. Data for the year 2017 are included in this report.

Incidences of newly diagnosed HIV, hepatitis B virus (HBV), and hepatitis C virus (HCV) cases are notified to the Health Protection Surveillance Centre (HPSC). Notification data for 2018 are included in this report.

There were 235 drug-induced deaths in 2017; the comparable figure for 2016 was 221. The majority of those who died were male, aged in their late thirties. Opioids were the most common drug group associated with most drug-induced deaths, as per the EMCDDA Filter D inclusion criteria.

There were 4,692 overdose cases discharged from Irish hospitals in 2017. The number of overdose cases in 2017 was the highest recorded since 2008, with trends indicating a general increase since 2015. Among the overdose cases in 2017, opiates were used in 15% (686) of the cases, cocaine in 3.6% (168), cannabis in 1.8% (84), and LSD in 0.2% (10) of cases. There were no overdose cases involving other hallucinogenic substances.

Recent trends indicate that the number of cases of HBV and HCV diagnosed and notified in the Republic of Ireland is stabilising rather than continuing to decline. Of the acute HBV cases notified in 2018, none was an injecting drug user. The proportion of HCV cases attributed to injecting drug use has decreased from 88% in 2011 to 67% in 2018, but risk factor data were not available for a significant number of cases.

Although there has been an overall increase in the total number of HIV notifications in Ireland between 2004 and 2018, the number of people who inject drugs (PWID) among HIV notifications has shown an overall decrease during this time. An increase in the number of PWID among HIV notifications in 2014/15 was due to an outbreak of HIV among homeless drug users in Dublin. The outbreak was declared over in February 2016. Key control measures implemented included raising awareness among clinicians, addiction services and PWID; intensive case finding and contact tracing; early treatment of HIV infection in those most at risk; greater promotion of needle exchange; increased access to methadone treatment; frontline worker training; and raising awareness about safe injecting and safe sex. Leaflets were distributed in hostels and settings in Dublin where patients/clients attended.

Harm reduction services available in Ireland include needle exchange from fixed sites, mobile units, and outreach work provided by regional authorities and community-based organisations. In addition, there are pharmacies providing needle exchange in each Regional Drug and Alcohol Task Force (RDTF) area within Ireland. At the end of 2018, there were 96 pharmacies providing needle exchange.

The Misuse of Drugs (Supervised Injecting Facilities) Act 2017 was signed into Irish law on 16 May 2017. In the Introduction, the Act is summarised as: “An Act to provide for the establishment, licensing, operation and regulations of supervised injecting facilities for the purposes of reducing harm to people who inject drugs; to enhance the dignity, health and well-being of people who inject drugs in public places; to reduce the incidence of drug injection and drug-related litter in public places and thereby to enhance the public amenity for the wider community; and to provide for matters related thereto.” Following a procurement process, Merchants Quay Ireland (MQI) was selected as the preferred bidder to deliver the service. However, in July 2019, Dublin City Council

refused planning permission for the facility, citing the lack of a “robust” policing plan and the potential impact it could have on the local economy, particularly in relation to tourism. MQI intends to review the council’s decision before considering its next steps.

T1. National profile and trends

T1.1 Drug-related deaths

T1.1.1 Overdose deaths

In 2017, there were 235 deaths due to poisoning recorded in Ireland by the National Drug-Related Deaths Index (NDRDI), as per Selection D (also see ST 5 and ST 6). The comparable figure for 2016 was 221 (Table T1.1.1.1). It should be noted that annual data for 2016 were not previously reported, and reported data from prior years have been changed, as the NDRDI figures have been updated whenever new information has become available.

Table T1.1.1.1 Number of deaths due to poisoning in Ireland, NDRDI 2004 to 2017

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
127	164	188	207	215	214	174	227	185	225	225	236	221	235

Source: NDRDI, 2019

The mean age of those who died (40.7 years) was comparable with that recorded in 2016. The mean age is the highest ever recorded, driven by the increase in deaths in people aged 45 years and over. The majority of deaths were male (70.2%), which was similar to previous years. The NDRDI does not routinely report the intentionality of the death.

The overall trends in overdose deaths for the EMCDDA definition of Filter D remain the same, with opioids and benzodiazepines continuing to be associated with most poisoning deaths, as opioids were found in the toxicology of 87.3% of deaths (where toxicology was available) (see Section T1.1.2 below).

T1.1.2 Toxicology of overdose deaths

Toxicology was available for 213 deaths in 2017 (also see ST5). Not all deaths reported in Filter D have a toxicology result. Opioids were found in the post-mortem toxicology results of 88% (186/211) of these deaths. See Tables T1.1.4.1 and T1.1.4.2 in Section T1.1.4 of this workbook for more in-depth information on the drugs involved in polydrug deaths.

T1.1.3 Mortality cohort studies

There are no mortality cohort studies to report for 2018.

T1.1.4 Trends

After a period of sustained increase, since 2011 the number of deaths due to poisoning appears to have stabilised, but with a possible underlying trend upwards given that 235 is the second highest number of deaths ever recorded; comparable to 236 in 2015 (Table T1.1.1.1, and also please see Standard Table 6).

The majority of deaths involve opioids. This is not surprising given the high prevalence of problem opioid use in Ireland (also see TDI and Treatment workbook). The majority of opioid deaths involve heroin or methadone (either prescribed or street) or a combination of both. Prior to 2010, more deaths involved heroin, but since then more deaths have involved methadone. There has as yet been no in-depth analysis of why the numbers of methadone-related deaths have increased. The number of clients in opioid substitution treatment (OST) has increased steadily over the same

period, plateauing at a high level in 2015. For further details on the number of clients in OST, please see Section T2.2 in the Treatment workbook. However, studies have shown that retention in treatment has a protective effect (Cousins*, et al.* 2017, Cousins*, et al.* 2016). There was a recorded heroin drought in Ireland around 2010 (O'Keefe 2010, December 16) (Attewill 2011, 31 January) and this may have had some impact on the change in trends between heroin and methadone, but this cannot be confirmed.

There was an increase in the number of death where cocaine was implicated, rising to 53 deaths in 2017 compared to 42 deaths in 2016. There has been a steady increase since 2010 when only 21 deaths were reported. This trend corresponds to increasing trends in problem cocaine use seen in the drug treatment data over the past number of years. For further information please see the Treatment workbook.

Another significant factor in drug-related death (DRD) has been the increase in polydrug deaths (Figure 1.1.4.1). In 2017, the majority of poisoning deaths (187, 79.6%) involved more than one drug. The proportion of deaths which involved multiple drugs rose from 55.1% in 2004 to a peak of 83.6% in 2014, dropping only slightly to 79.6% in 2017.

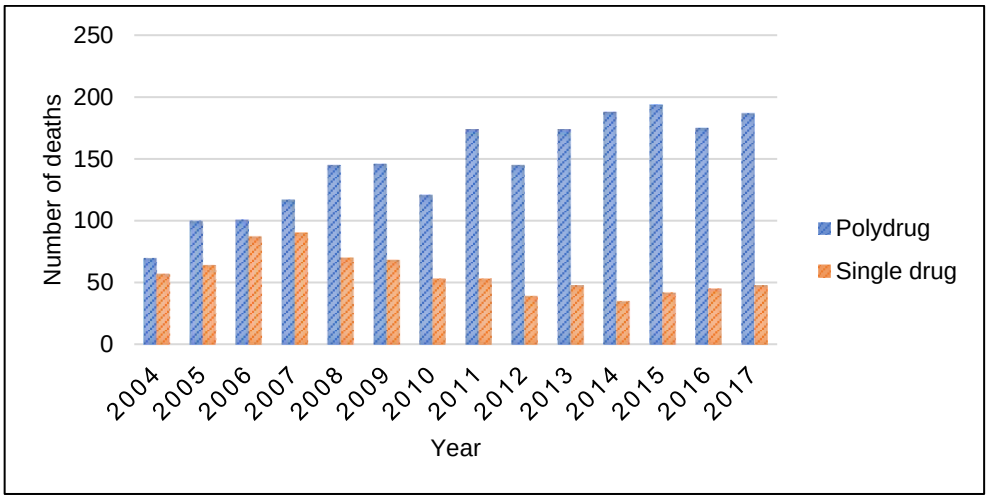


Figure 1.1.4.1 Trends in polydrug deaths, NDRDI 2004 to 2017
Source: NDRDI, 2019

Table 1.1.4.1 presents the proportion of deaths by drug which were polydrug poisoning deaths. For example, for deaths where heroin was implicated, 85.7% were polydrug deaths, e.g. heroin and additional drugs. All deaths (100%) where benzodiazepines were implicated were polydrug deaths.

Table T1.1.4.1 Main drugs and proportion which were polydrug deaths, NDRDI, 2017

Drug implicated	% polydrug
Heroin	85.7
Methadone	89.5
Other opioids	85.5
Cocaine	83.0
Amphetamines	75.0
MDMA	50.0
Non-opiate analgesics	100.0
Benzodiazepines	100.0
Other medication	100.0
Alcohol	100.0
Z-drugs	100.0

Source: NDRDI, 2019

In 2017, there were 77 heroin poisoning deaths, of which 66 (85.7%) were polydrug deaths. T1.1.4.2 shows the main drugs that were implicated along with heroin, i.e. part of the cause of death. Several different types of benzodiazepines (diazepam, flurazepam and others) were frequently part of the heroin polydrug deaths. Methadone was implicated in one-third (34.8%) of polydrug heroin deaths.

Table T1.1.4.2 Heroin polydrug deaths: main* drugs implicated, NDRDI, 2017

Drug implicated	No.	%
Other benzodiazepines	41	62.1
Diazepam	36	54.5
Methadone	23	34.8
Cocaine	17	25.8
Alcohol	17	25.8
Antiepileptics§	13	19.7
Antidepressants	12	18.2
Z-drugs	11	16.7
Non-opiate analgesics	8	12.1
Flurazepam	7	10.6

Source: NDRDI, 2019
*Not the full list of drugs implicated with heron
§Pregabalin is classified as an anti-epileptic in the NDRDI

Injecting is a significant factor for heroin-related deaths. In 2017, 13.6% (n=32) of those who died due to poisonings were injecting at the time of their death. The number and proportion of those who have died while injecting at the time of their death has decreased from a peak of 25.7% in 2009 to 13.7% in 2017. This could be related to the decrease in deaths where heroin was implicated.

The mean age of those who died in 2017 due to poisoning was 40.7 years, compared with 39.3 years in 2016. The mean age is the highest recorded, having increased from 31.7 years in 2004 to 40.7 years in 2017 (Figure 1.1.4.2). This is likely to reflect the ongoing trend of ageing drug users, both male and female.

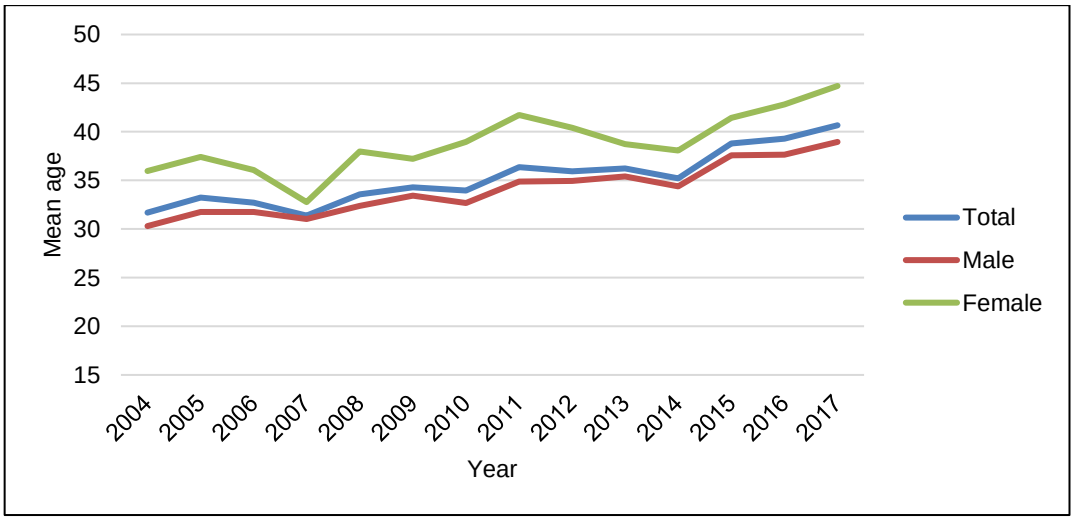


Figure 1.1.4.2 Trends in mean age, deaths owing to poisoning, NDRDI 2004 to 2017
Source: NDRDI, 2019

Data completeness/coverage; case ascertainment, changes in reporting

The NDRDI, the Irish Special Register for DRD has been in existence since 2007, utilising Filter D as a selector. Up to that point, DRDs were reported through the Central Statistics Office (CSO).

However, the NDRDI retrospectively collected data back to 1998. Therefore, the NDRDI data supersede any data previously reported between 1998 and 2007.

The NDRDI is a complete census of all drug-related deaths in Ireland, both direct drug deaths through overdose (known as poisoning) and deaths among drug users. Of note, it also collects data on additional deaths which do not meet the Filter D criteria but are of national importance, e.g. alcohol only and alcohol in combination with prescription drug overdose/poisonings deaths. The NDRDI is a national census, as it collects information from all closed coronial files, all deaths among hospital inpatients which meet the criteria, all deaths among those registered on OST and the CSO. All of these data sources are matched in order to avoid duplication and to ensure the greatest amount of information on each death. There has been no change in the process since the inception of the NDRDI.

T1.1.5 Additional information on drug-related deaths

Drug-related deaths and deaths among drug users in Ireland, 2004–2016
The latest figures from the NDRDI show that a total of 736 deaths in Ireland during 2016 were linked to drug use (Health Research Board 2019). The NDRDI reports on poisoning deaths (also known as overdose), which are due to the toxic effect of a drug or combination of drugs, and on non-poisonings, which are deaths as a result of trauma, such as hanging, or medical reasons, such as cardiac events, among people who use drugs.
Key findings of the report are:

- Prescription drugs contribute to the majority of poisonings and were implicated in 258, or three in every four, poisonings during 2016.
- Taking a cocktail of drugs (polydrugs) continues to be a significant factor in poisoning deaths.
- Alcohol remains the main drug implicated in poisoning deaths, alone or with other drugs.
- Hanging is the main cause of non-poisoning deaths.

In the 13-year period from 2004 to 2016 inclusive, a total of 8,207 drug-related deaths were recorded by the NDRDI (Table 1.1.5.1. Of these deaths, 4,597 (56%) were due to poisoning and 3,610 (44%) were non-poisoning deaths.

Table 1.1.5.1 Number of deaths, by year, NDRDI 2004–2016 (n=8207)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
All deaths (8211)	431	502	554	620	629	655	607	644	661	707	726	735	736
Poisonings (4597)	266	300	326	386	387	371	339	377	356	400	370	365	354
Non-poisonings (3610)	165	202	228	234	242	284	268	267	305	307	356	370	382

Source: NDRDI, 2019

There were 736 deaths in 2016, similar to the number reported in 2015 (735) (see Table 1.1.5.1). Many of these deaths were premature, with 50% of all those who died in 2016 aged 42 years or younger. Three in four (549) of all deaths in 2016 were male. In 2016 alone, 21,300 potential life years were lost because of drug-related deaths.

Deaths in 2016 among people who inject drugs
People who were injecting at the time of the incident that led to their death represented 5% (34 deaths) of all drug-related deaths in 2016. The majority were male; their deaths involved the use of opioids (85%) and two-thirds (65%) occurred in Dublin city.

Poisoning deaths in 2016

The annual number of poisoning deaths decreased slightly from 365 in 2015 to 354 in 2016 (see Table 1). As in previous years, the majority (69%) were male. The median age of those who died was 42 years. Key findings of poisoning deaths in 2016:

- The number of deaths involving alcohol increased by 18%, from 112 in 2015 to 132 in 2016. Alcohol was implicated in over one in every three poisoning deaths (37%) and alcohol alone was responsible for 16% of all poisoning deaths.
- Opioids were the main drug group implicated in poisonings; methadone was implicated in almost one-third (29%) of poisonings, while heroin-related deaths decreased for the third year in a row, from 96 deaths in 2014 to 72 in 2016.
- Prescription and/or over-the-counter drugs were implicated in 7 in every 10 (73%) poisoning deaths.
- Benzodiazepines were the most common prescription drug group implicated. Diazepam was the most common benzodiazepine-type drug and was implicated in one in four (96; 27%) of poisonings
- Methadone was the most common single prescription drug, implicated in 103 (29%) of poisonings.
- Pregabalin (an antiepileptic drug also prescribed for neuropathic pain and generalised anxiety disorders) was implicated in 65 deaths in 2016, an increase from 49 deaths in 2015, with a persistent rise from 14 deaths in 2013.
- Cocaine-related deaths decreased from 45 in 2015 to 41 in 2016.

Polydrug poisonings in 2016

Taking a cocktail of drugs (polydrugs) can increase the risk of fatal overdose. The majority of poisoning deaths (62%) in 2016 involved polydrugs, with an average of four different drugs taken.

- 58% (77) of deaths where alcohol was implicated involved other drugs, mainly opiates.
- 88% (91) of deaths where methadone was implicated involved other drugs, mainly benzodiazepines.
- 81% (58) of deaths where heroin was implicated involved other drugs, mainly benzodiazepines.
- All diazepam-related deaths (96) involved other drugs.

Non-poisoning deaths in 2016

The number of non-poisoning deaths increased slightly, with 382 deaths in 2016 compared with 370 in 2015. Non-poisoning deaths are categorised as being due to either trauma (172 deaths) or medical causes (210 deaths). The main causes of non-poisoning deaths categorised as trauma were hanging (93; 24%), and those categorised as medical were cardiac events (56; 15%). Three in every four (75%) people who died as a result of hanging had a history of mental health problems. The median age for deaths due to medical causes has increased from 38 years in 2004 to 46 years in 2016, which may indicate an ageing cohort of people who use drugs in Ireland.

T1.2 Drug related acute emergencies

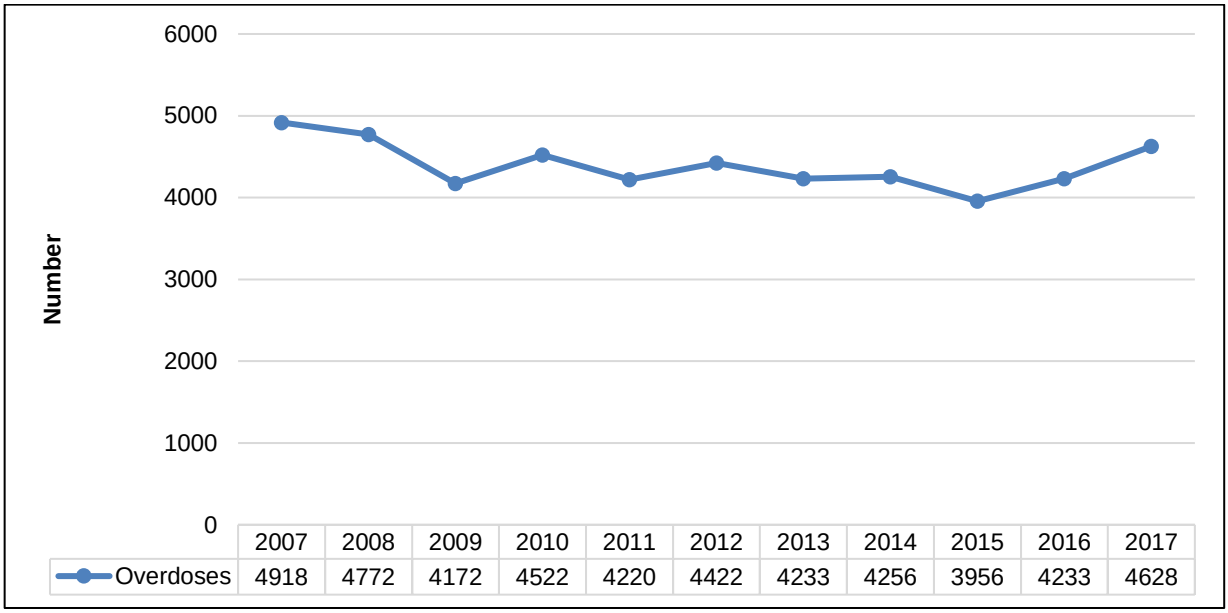
T1.2.1 Drug-related acute emergencies

Monitoring of drug-related acute emergencies in the Irish context refers to all admissions for non-fatal overdoses to acute general hospitals in Ireland. A description of the main monitoring systems and sources of data are included at the end of this report.

Drug-related emergencies – non-fatal overdoses

Data extracted from the HIPE scheme were analysed to determine trends in non-fatal overdoses in patients discharged from Irish hospitals in 2017. There were 4,692 overdose cases in that year; of these cases, 64 died in hospital. Only discharged cases are included in this analysis. The number of

overdose cases in 2017 was the highest recorded since 2008, with trends indicating a general increase since 2015 (Figure T1.2.1.1).

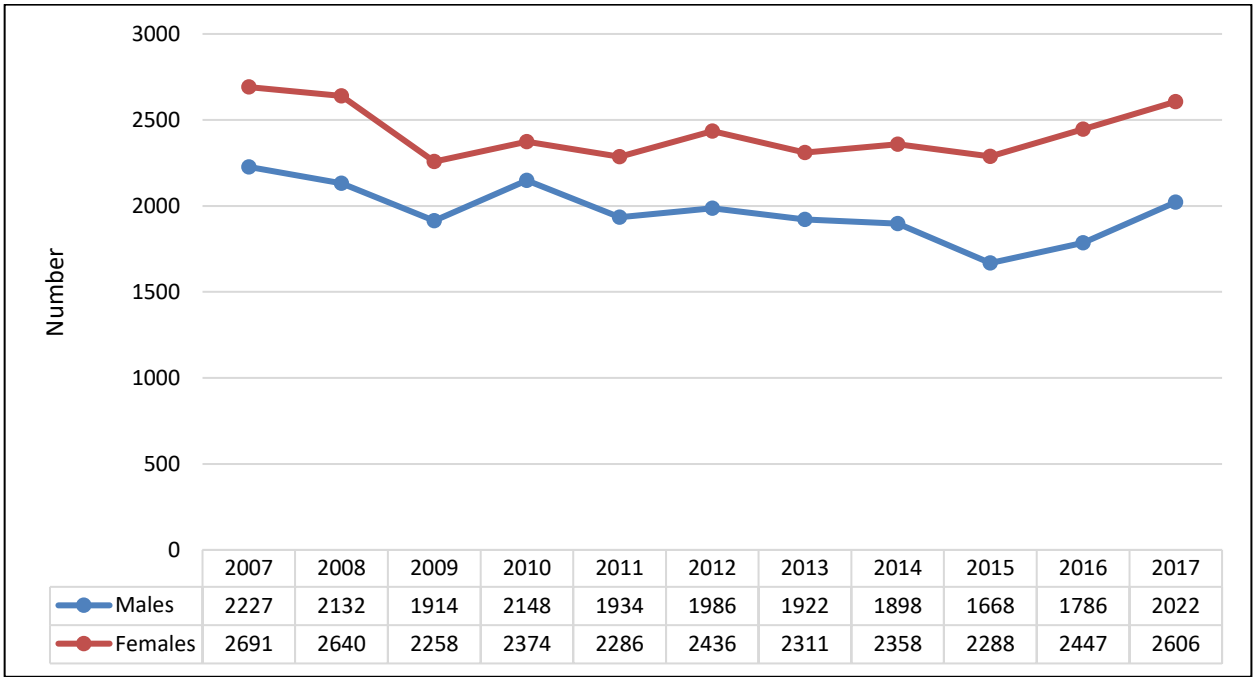


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Overdoses	4918	4772	4172	4522	4220	4422	4233	4256	3956	4233	4628

Figure T1.2.1.1 Number of overdose cases admitted to Irish hospitals, by year, 2007–2017
Source: HIPE, Healthcare Pricing Office, 2019

Gender

Between 2007 and 2017, there were more overdose cases among women than men, with women accounting for 2,606 (56%) of all non-fatal overdose cases in 2017 (Figure T1.2.1.2).

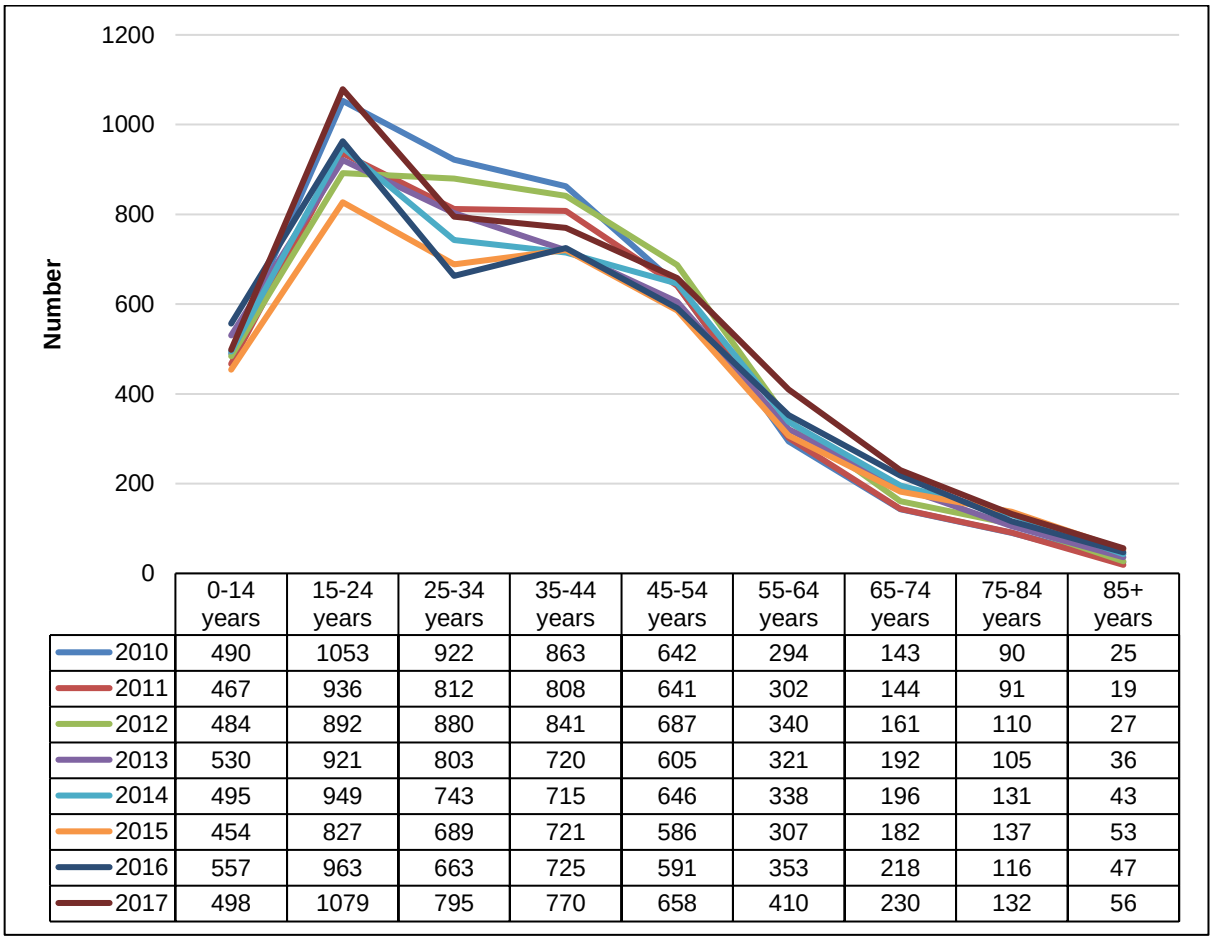


	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Males	2227	2132	1914	2148	1934	1986	1922	1898	1668	1786	2022
Females	2691	2640	2258	2374	2286	2436	2311	2358	2288	2447	2606

Figure T1.2.1.2 Number of overdose cases admitted to Irish hospitals, by year and gender, 2007–2017
Source: HIPE, Healthcare Pricing Office, 2019

Age group

Between 2015 and 2017, there was an increase in the number of non-fatal overdose cases among those aged 24 years or less, and in adults aged 55–74 years. As noted in previous annual reports, the incidence of overdose cases peaked in the 15–24 age group, and thereafter decreased with age (Figure T1.2.1.3). In 2017, 34% of cases were under 25 years of age.



	0-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85+ years
2010	490	1053	922	863	642	294	143	90	25
2011	467	936	812	808	641	302	144	91	19
2012	484	892	880	841	687	340	161	110	27
2013	530	921	803	720	605	321	192	105	36
2014	495	949	743	715	646	338	196	131	43
2015	454	827	689	721	586	307	182	137	53
2016	557	963	663	725	591	353	218	116	47
2017	498	1079	795	770	658	410	230	132	56

Figure T1.2.1.3 Non-fatal overdose cases admitted to Irish hospitals, by year and age group, 2010–2017
Source: HIPE, Healthcare Pricing Office, 2019

T1.2.2 Toxicology of drug-related acute emergencies

Drugs involved

Table T1.2.2.1 presents the positive findings per category of drugs and other substances involved in all cases of overdose in 2017.

Non-opioid analgesics were present in 1,620 of cases. Paracetamol is included in this drug category and was present in 1,317 of cases. Benzodiazepines and psychotropic agents were taken in 994 and 1,187 of cases, respectively. There was evidence of alcohol consumption in 346 of cases. Cases involving alcohol are included in this analysis only when alcohol was used in conjunction with another substance.

Table T1.2.2.1 Categories of drugs involved in non-fatal overdose cases admitted to Irish hospitals, 2017*

Drug category	Count
Non-opioid analgesics	1620
Paracetamol (4-Aminophenol derivatives)	*1317*
Benzodiazepines	994
Psychotropic agents	1187
Anti-epileptic/sedative/anti-Parkinson agents	2216
Narcotics and hallucinogens	872
Alcohol**	346
Systemic and haematological agents	203
Cardiovascular agents	142
Autonomic nervous system agents	129
Anaesthetics	28
Hormones	130

Drug category	Count
Systemic antibiotics	65
Gastrointestinal agents	93
Other chemicals and noxious substances	346
Diuretics	47
Muscle and respiratory agents	34
Topical agents	43
Anti-infectives/anti-parasitics	28
Other gases and vapours	39
Other and unspecified drugs	993

Source: HIPE, Healthcare Pricing Office, 2019
*The sum of positive findings is greater than the total number of cases, because some cases involved more than one drug or substance.
** Alcohol was only included for cases where any code from any of the other drug categories in this table was also reported.

Overdoses involving narcotics or hallucinogens

Figure T1.2.2.1 shows positive findings of illicit substances among overdose cases in 2017. Opiates were used in 15% (686) of the cases, cocaine in 3.6% (168), cannabis in 1.8% (84) and LSD in 0.2% (10) of cases. There were no overdose cases involving other hallucinogenic substances.

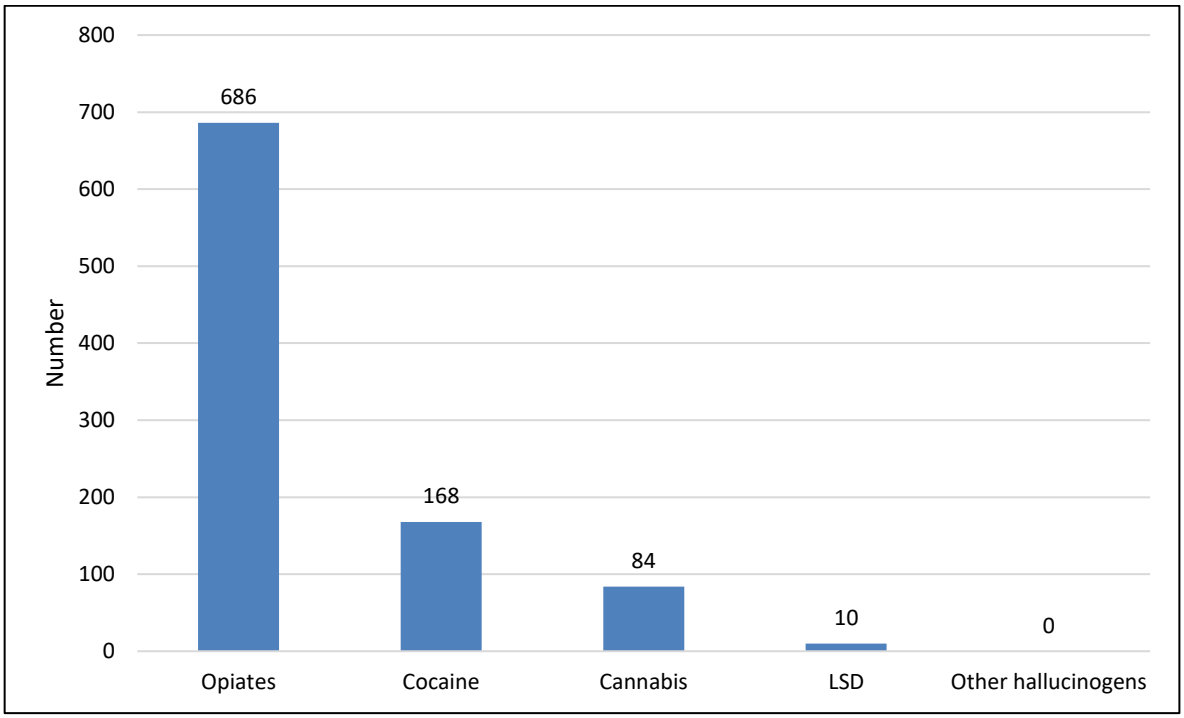


Figure T1.2.2.1 Narcotics and hallucinogens involved in overdose cases admitted to Irish hospitals, 2017
Source: HIPE, Healthcare Pricing Office, 2019

Overdoses classified by intent

In 2017, for 64% (2,997) of cases, the overdose was classified as intentional (Figure T1.2.2.2). For 439 cases, classification of intent was not clear.

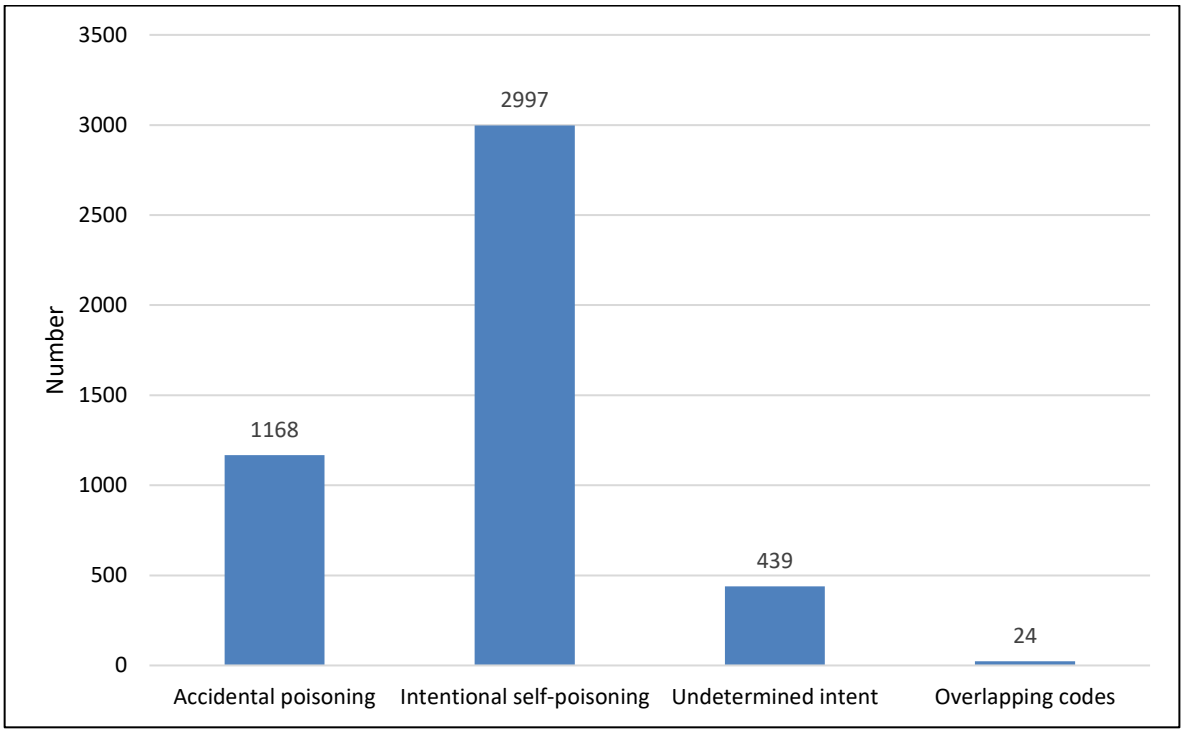


Figure T1.2.2.2 Overdose cases admitted to Irish hospitals, classified by intent, 2017
Source: HIPE, Healthcare Pricing Office, 2019

Table T1.2.2.2 presents the positive findings per category of drugs and other substances involved in cases of intentional self-poisoning (n=2,997) in 2016. Non-opioid analgesics were involved in 1,341 of cases, benzodiazepines in 769, and psychotropic agents in 939 of cases.

Table T1.2.2.2 Categories of drugs involved in intentional self-poisoning cases admitted to Irish hospitals, 2017*

Drug category	Count
Non-opioid analgesics	1341
Benzodiazepines	769
Psychotropic agents	939
Anti-epileptic/sedative/anti-Parkinson agents	1678
Narcotics and hallucinogens	494
Alcohol**	264
Systemic and haematological agents	127
Cardiovascular agents	87
Autonomic nervous system agents	92
Anaesthetics	9
Hormones	75
Systemic antibiotics	47
Gastrointestinal agents	67
Other chemicals and noxious substances	117
Diuretics	15
Muscle and respiratory agents	23
Topical agents	9
Anti-infectives/anti-parasitics	21
Other gases and vapours	11
Other and unspecified drugs	559

Source: HIPE, Healthcare Pricing Office, 2019
*Some discharges may be included in more than one drug category; therefore, the total count in this table exceeds the total number of discharges.
** Alcohol was only included for cases where any code from any of the other drug categories in this table was also reported.
~ denotes five or fewer discharges reported to HIPE.

T1.2.3 Explanations of short term (5 years) and long term trends in the number and nature of drug-induced emergencies

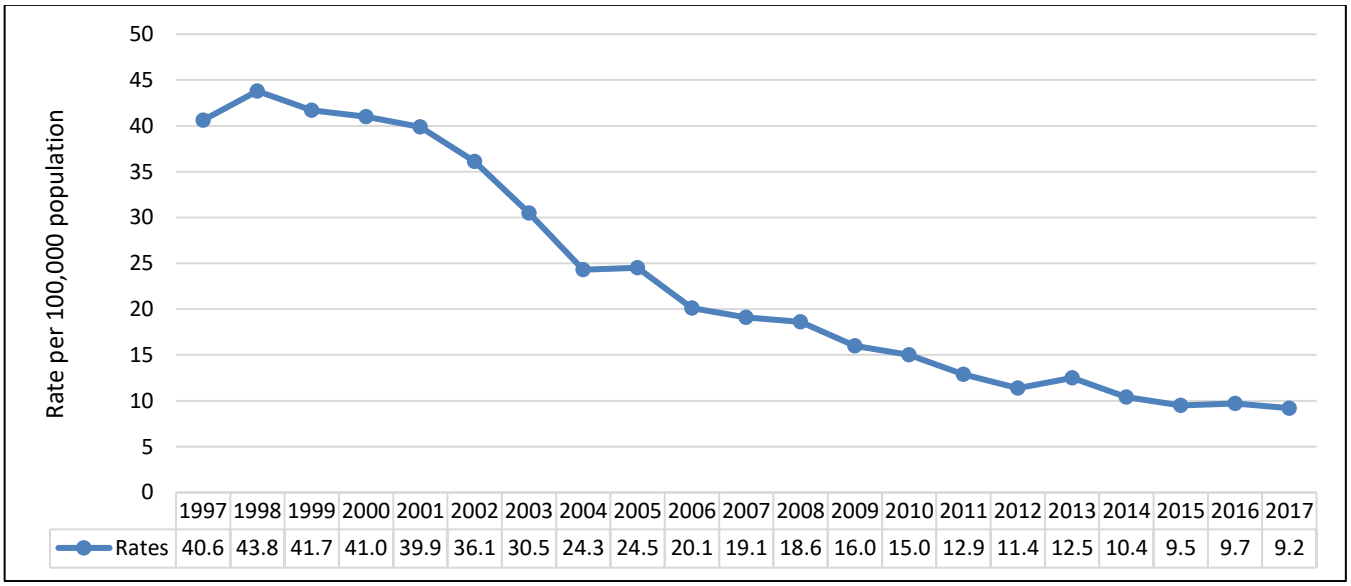
See section T1.2.1 for information regarding trends in drug-related acute emergencies in the Republic of Ireland.

T1.2.4 Additional information on drug-related acute emergencies

Trends in alcohol and drug admission to psychiatric facilities

Activities of Irish psychiatric units and hospitals 2017 (Daly and Craig 2018), the annual report published by the Mental Health Information Systems Unit of the Health Research Board (HRB), shows that the number of new admissions to inpatient care for alcohol disorders has continued to stabilise.

In 2017, some 1,147 cases were admitted to psychiatric facilities with an alcohol disorder, of whom 437 were treated for the first time. Figure T1.2.4.1 presents the rates of psychiatric first admission between 1997 and 2017 for cases with an alcohol disorder diagnosis. The admission rate in 2017 was similar to the previous year, while trends over time indicate an overall decline in first admissions. One-third of cases hospitalised for an alcohol disorder in 2017 stayed just under one week, while 31% of cases were hospitalised for between one and three months, similar to previous years.



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Rates	40.6	43.8	41.7	41.0	39.9	36.1	30.5	24.3	24.5	20.1	19.1	18.6	16.0	15.0	12.9	11.4	12.5	10.4	9.5	9.7	9.2

Figure T1.2.4.1 Rates of psychiatric first admission of cases with a diagnosis of an alcohol disorder per 100,000 of the population in Ireland, 1997–2017
Source: Daly and Craig, 2019

In 2017, some 896 cases were admitted to psychiatric facilities with a drug disorder. Of these cases, 414 were treated for the first time. Figure T1.2.4.2 presents the rates of psychiatric first admission between 1997 and 2017 of cases with a drug disorder diagnosis. Although the rate decreased slightly in 2017, there has been an overall increase in the rate of first admission with a drug disorder since 2011. It should be noted that the report does not present data on drug use and psychiatric comorbidity, so it is not possible to determine whether or not these admissions were appropriate.

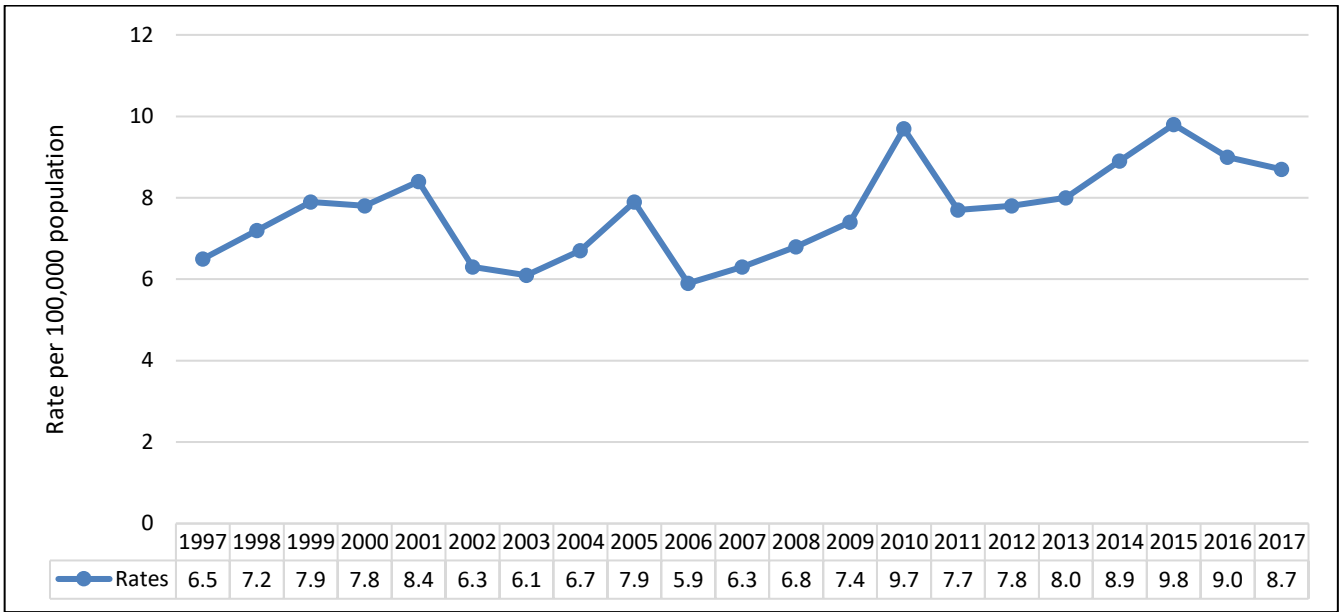


Figure T1.2.4.2 Rates of psychiatric first admission of cases with a diagnosis of a drug disorder per 100,000 of the population in Ireland, 1997–2017
Source: Daly and Craig, 2019

Other notable statistics on admissions for a drug disorder in 2017 include the following:

- Less than one-half of cases hospitalised for a drug disorder stayed under one week (46%), while 99% were discharged within three months. It should be noted that admissions and discharges represent episodes or events and not persons.
- Some 13% of first-time admissions were involuntary.
- Similar to previous years, the rate of first-time admissions was higher for men (13.7 per 100,000) than for women (3.8 per 100,000).

T1.3 Drug related infectious diseases

T1.3.1 Main drug-related infectious diseases among drug users – HIV, HBV, HCV

HIV notifications, 2018
According to data compiled by the HPSC, at the end of 2018, some 525 people were newly diagnosed with HIV in Ireland, a notification rate of 11.0 per 100,000 population. This marks an increase of 5.6% compared with 2017 (n=497) (see Figure T1.3.1.1).

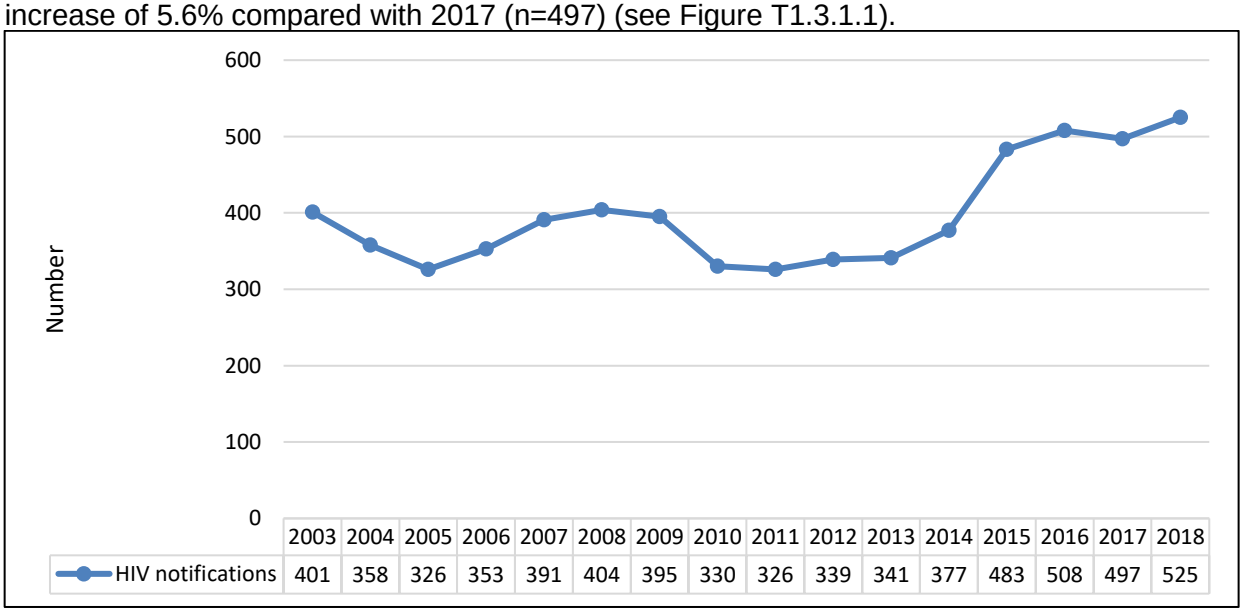


Figure T1.3.1.1 Number of new HIV notifications reported in Ireland, by year of notification, 2003–2018
Source: Health Service Executive (HSE) and HPSC, 2019

Of HIV notifications in 2018:

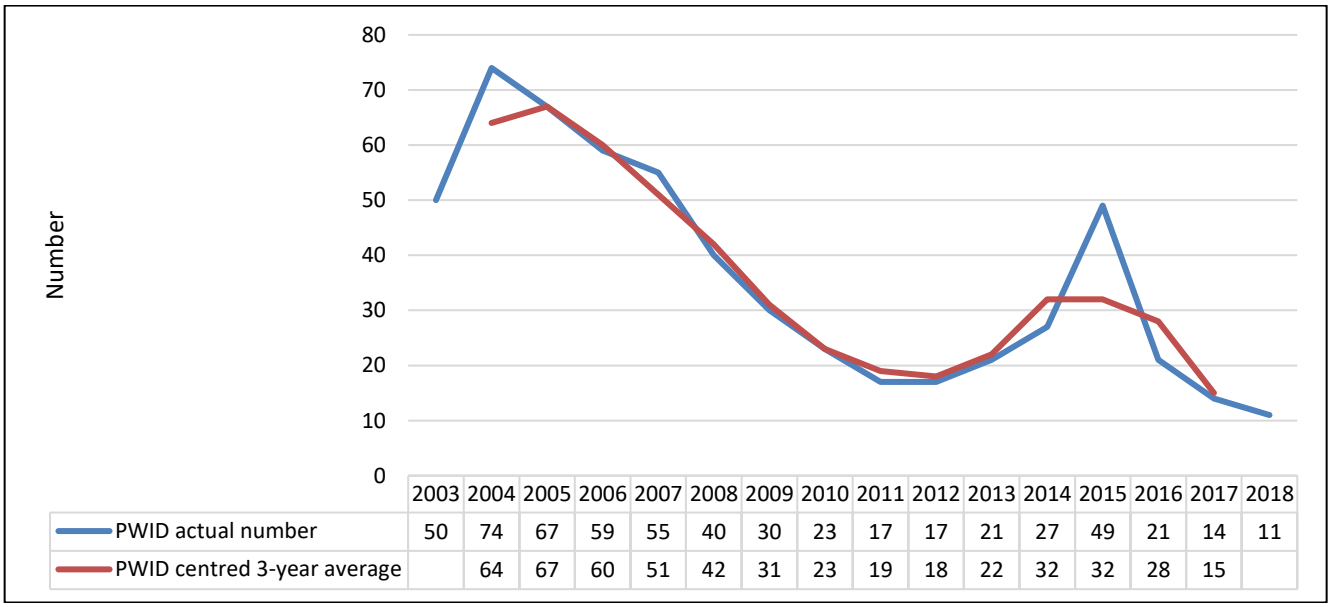
- 316 were male and 82 were female.
- 256 were men who have sex with men.
- For 24% (126) of HIV notifications in 2018, there was no reported risk factor, although this is likely to change as more data become available.

In 2018, some 11 HIV notifications were PWID (see Table T1.3.1.1). This compares with 14 notifications in 2017 and 21 notifications in 2016. The figure for 2018 is the lowest number of PWID among HIV notifications since data have been routinely collected (see Figure T1.3.1.2).

Table T1.3.1.1 New HIV notifications reported to the HPSC by risk factor status, 2018

Risk factor status	n (%)
Total number of cases	525
Cases *with* reported risk factor data	399 (76)
Of which:	
Male	316 (79)
Female	82 (21)
Gender unknown	1 (0.2)
Injecting drug users	11 (3)
Men who have sex with men	256 (64)
Recipient blood/blood products	9 (2)
Other risk factors	132 (126 hetero, 6 other) (33)
No known risk factor identified	0 (0)
Cases *without* reported risk factor data	126 (24)

Source: HSE and HPSC, 2019



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PWID actual number	50	74	67	59	55	40	30	23	17	17	21	27	49	21	14	11
PWID centred 3-year average		64	67	60	51	42	31	23	19	18	22	32	32	28	15	

Figure T1.3.1.2 Number and rolling average number of PWID among HIV notifications reported in Ireland, by year of notification, 2003–2018
Source: HSE and HPSC, 2019

Of the PWID among HIV notifications in 2018, all were male, with a median age of 47. No subjects were under 25 years of age. The majority (64%) resided in Dublin, Kildare or Wicklow (see Table T1.3.1.2).

Table T1.3.1.2 Characteristics of new HIV notifications who reported injecting drug use as a risk factor, 2018

Risk factor status	n (%)
Total number of cases	11
Of which:	
Male	11 (100)
Female	0 (0)
Gender unknown	0 (0)
Mean age	43 years
Median age	47 years
Under 25 years	0 (0)
25–34 years	3 (27)
Age unknown	0 (0)
Place of residence	
Dublin, Kildare or Wicklow	7 (64)
Elsewhere in Ireland	4 (36)

Source: HSE and HPSC, 2019

The increased number of PWID among HIV notifications in 2014/15 was due to an outbreak of HIV among homeless drug users in Dublin (See 2016 Harms and Harm Reduction workbook, Section T1.3.6). The outbreak was declared over in February 2016. Key control measures implemented included raising awareness among clinicians, addiction services and PWID; intensive case finding and contact tracing; early treatment of HIV infection in those most at risk; greater promotion of needle exchange; increased access to methadone treatment; frontline worker training; and raising awareness about safe injecting and safe sex. Leaflets were distributed in hostels and settings in Dublin where patients/clients attended.

HBV notifications, 2018

There were 496 notifications of HBV in 2018, a decrease of 6% on 2017, when there were 530 notifications. The notification rate for 2018 was 10.4 per 100,000 population. HBV notifications halved between 2008 (n=897 21.2/100,000 population) and 2014 (n=442, 9.3/100,000 population), but recent trends suggest that the number of cases diagnosed and notified is stabilising rather than continuing to decline (see Figure T1.3.1.3).

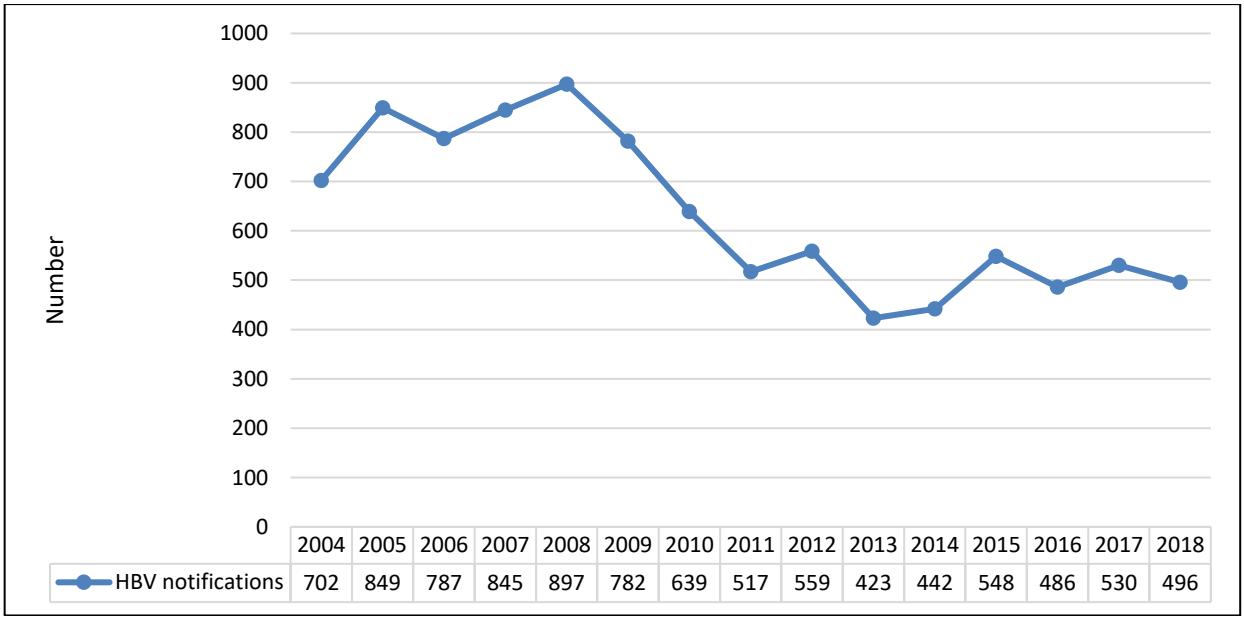


Figure T1.3.1.3 Number of HBV notifications reported in Ireland, by year of notification, 2004–2018

Source: HSE and HPSC, 2019

Ninety-eight per cent (n=486) of the 496 HBV notifications in 2018 contained information on acute/chronic status. Of these, 95% (n=463) were chronically infected (long-term infection) and 4.7% (n=23) were acutely infected (recent infection).

Risk factor data were available for 91% (n=21) of the acute cases notified in 2018. Of these acute cases, none was an injecting drug user (Table T1.3.1.3).

Table T1.3.1.3 Acute and chronic new HBV cases reported to the HPSC, 2018

Hepatitis B status	Acute	Chronic	Unknown
	n (%)	n (%)	n (%)
Total no. of cases	23	463	10
% of cases by status	(5)	(93)	(2)
Cases with reported risk factor	21	73	2
% of cases with risk factor data	(91)	(16)	(20)
Of which:			
Injecting drug users	0 (0)	5 (7)	0 (0)
Cases without reported risk factor data	2	390	8
% of cases without risk factor data	(9)	(84)	(80)

Source: HSE and HPSC, 2019
Note on acute cases: Enhanced data collection is mostly carried out for acute cases, most of whom acquired hepatitis B by sexual contact.
Note on chronic cases: Most chronic cases are from endemic countries and were likely to have been infected in their countries of birth.

HCV notifications, 2018

There were 587 HCV notifications in the Republic of Ireland in 2018, a decrease of 3.2% on 2017 when there were 607 notifications. The notification rate for 2018 was 12.3 per 100,000 population. There has been a downward trend in HCV notifications since peak numbers (n=1,538) were recorded in 2007, although recent trends indicate that the rate of decline is slowing (see Figure T1.3.1.4). While notifications continued to decline slightly in 2018, trends in notifications of HCV are difficult to interpret as acute and chronic infections are frequently asymptomatic, and most cases diagnosed and notified are identified as a result of screening in key risk groups. Therefore, notification patterns are highly influenced by testing practices, which may vary over time and may not reflect incidence very well.

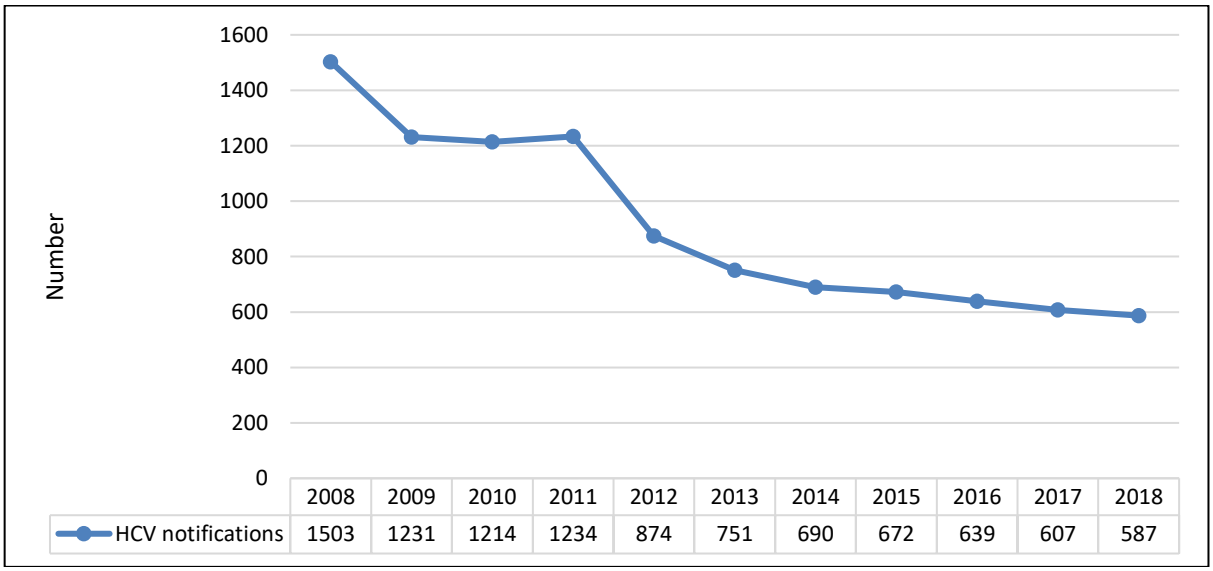


Figure T1.3.1.4 Number of HCV notifications reported in Ireland, by year of notification, 2008–2018
Source: HSE and HPSC, 2019

Information on the most likely risk factor was available for 47% (n=275) of cases in 2018 (see Table T1.3.1.4). One hundred and eighty-three cases with risk factor data were PWID and eight were infected through contaminated blood products. No risk factors were identified for 29 cases, for whom risk factor data were available despite public health follow-up.

Table T1.3.1.4 New HCV cases reported to the HPSC, by risk factor status, 2018

Risk factor status	n (%)
Total number of cases	587
Cases *with* reported risk factor data	275 (47)
Of which:	
Injecting drug users	183 (67)
Recipient blood/blood products	8 (3)
Other risk factors	55 (20)
No known risk factor identified	29 (10)
Cases *without* reported risk factor data	312 (53)

Source: HSE and HPSC, 2019

The proportion of cases attributed to injecting drug use has decreased from 88% in 2011 to 67% in 2018, but risk factor data were not available for a significant number of cases. Hence, this finding is difficult to interpret. Data for 2018 will improve as further validation work is carried out.

Of the PWID among HCV notifications in 2018, some 128 were male and 53 were female, with a median age of 40. Eleven subjects were under 25 years of age. The majority (78%) resided in Dublin, Kildare or Wicklow (Table T1.3.1.5).

Table T1.3.1.5 Characteristics of new HCV notifications who reported injecting drug use as a risk factor, 2018

Known injector cases	n (%)
Total no. of known injector cases*	183
Gender	
Male	128 (70)
Female	53 (29)
Gender not known	2
Age	
Mean age	40.45
Median age	40
Under 25 years	11 (6)
25–34 years	37 (20)
Over 34 years	135 (74)
Age not known	0
Place of residence	
Dublin, Kildare or Wicklow	143 (78)
Elsewhere in Ireland	40 (22)

Source: HSE and HPSC, 2019

T1.3.2 Notifications of drug-related infectious diseases

No new information

T1.3.3 Prevalence data of drug-related infectious diseases outside the routine monitoring

Estimates of the prevalence of HIV in drug users in Ireland from published studies

A 2018 report by the Health Service Executive (HSE), national Focal Point and other experts examined HIV prevalence studies that have been carried out among PWID living in Ireland over a 20-year period from 1997 to 2017 (Health Protection Surveillance Centre 2018). Depending on the population and setting chosen, the HIV prevalence rate in these studies varied from 1% to 19%. It is evident that certain areas within Dublin's inner city have very high rates (19%) of HIV among PWID (Long*, et al.* 2006). The most recent peer-reviewed study indicated a prevalence rate of 8% (Murtagh*, et al.* 2017). However, although it is clear that HIV prevalence among PWID has been measured by a number of studies in Ireland, there is a lack of recent and nationally representative data.

Prevalence of HBV infection among PWID

Estimates of the prevalence of HBV in drug users in Ireland from published studies

Results from studies in the inner city areas of Dublin indicated a high prevalence of HBV in early heroin injectors. A small cohort (n=82) of inner-city heroin injectors in Dublin was recruited for a study in 1985 and followed for 25 years (O'Kelly, Fergus Desmond and O'Kelly 2012). Over 70% ultimately tested positive for HBV antibodies (current or past infection). However, this was a particularly high-risk cohort; nine per cent of 15–24-year-olds in this region of Dublin were estimated to be using heroin in 1981 (O'Kelly, FD*, et al.* 1988). Estimates from other studies in drug users in prison and treatment settings, carried out between 1997 and 2002, found a HBV core antibody prevalence of between 14 and 28% (Health Protection Surveillance Centre 2018). However, as the vast majority of people infected with HBV as adults clear the infection and develop lifelong immunity, high antibody prevalence in early cohorts of drug users in Dublin did not translate to high prevalence of chronic infection. Where markers of current infection (hepatitis B surface antigen or DNA results) were reported, the prevalence ranged from 1 to 5% (Health Protection Surveillance Centre 2018). The low prevalence of chronic HBV reported in studies of blood-borne viruses in addiction treatment settings supports the data from statutory notifications, indicating a low prevalence of chronic HBV infection in PWID in Ireland.

Prevalence of HCV infection among PWID

Global, regional and country-level estimates of HCV infection among PWID

The World Health Organization has set a goal to eliminate HCV as a global public health threat by 2030. Targets include reducing new HCV infections by 80% and the number of HCV deaths by 65%, and increasing HCV diagnoses from 20 to 90% and eligible people receiving HCV treatment from <5 to 80% (World Health Organization 2017). Unsafe injecting drug use is the main route of HCV transmission in developed countries (Nelson*, et al.* 2011). Consequently, PWID represent a priority population for HCV elimination, given the high prevalence and incidence in this group.

There are no previous global estimates of HCV prevalence among people with recent injecting drug use. Data on these are needed in order to monitor the progress of global HCV elimination efforts and to identify high-burden settings that should be targeted. A 2019 study estimated the prevalence and number of people with recent injecting drug use living with HCV, and the proportion of people with recent injecting drug use among all people living with HCV infection, at global, regional and country levels (Grebely*, et al.* 2019).

In this research, published in the journal *Addiction*, data from a global systematic review of injecting drug use and HCV antibody prevalence among people with recent (previous year) injecting drug use were used to estimate the prevalence of people with recent injecting drug use living with HCV. These data were then combined with a systematic review of global HCV prevalence to estimate the proportion of people with recent injecting drug use among all people living with HCV.

Results – global and regional estimates
Globally, it was estimated that in 2015, some 39.2% (95% CI: 31.6–47.0) of people with recent injecting drug use had HCV viraemic infection, representing 6.1 million subjects (95% CI: 3.4–9.2) with recent injecting drug use living with HCV infection. Of the 71.1 million (95% CI: 62.4–79.4) people living with HCV infection, it was estimated that 8.5% (95% CI: 4.6–13.1) were recent injecting drug users, with the greatest proportion in North America (30.5%), Latin America (22%), and Eastern Europe (17.9%).

Results – European and Irish estimates
Global, Eastern/Western European and Irish estimates are shown in Table T1.3.3.1. For the Republic of Ireland, it was estimated that in 2015, some 56% (95% CI: 52.5–59.4) of subjects with a history of recent injecting drug use had HCV infection, representing 5,000 (95% CI: 3500–6000) individuals. Of the total number of people with HCV infection in Ireland in that year (n=29 500, 95% CI: 20 000–42 500), it was estimated that 16.2% (95% CI: 10.0–28.9) were individuals who had recently injected drugs.

Table T1.3.3.1 Global, European and Irish estimates of the prevalence of HCV viraemic infection among people with recent injecting drug use, the number of people with recent injecting drug use living with HCV viraemic infection, the total population living with HCV viraemic infection, and the proportion of people with recent injecting drug use among the total population with HCV viraemic infection

	Prevalence of HCV viraemic infection among people with recent injecting drug use (%)	Number of people with recent injecting drug use living with HCV viraemic infection (n)	Total population living with HCV viraemic infection (n)	Proportion of people with recent injecting drug use among the total population with HCV viraemic infection (%)
Global	39.2 (31.6–47.0)	6,063,500 (3,434,500–9,246,000)	71,146,000 (62,472,000–79,404,000)	8.5 (4.6–13.1)
Eastern Europe	48.6 (42.0–55.2)	1,466,500 (699,500–2,377,000)	8,181,000 (6,304,000–8,250,000)	17.9 (8.2–30.9)
Western Europe	39.9 (35.7–44.1)	402,500 (264,500–557,000)	2,347,000 (1,969,000–3,289,000)	17.2 (9.9–30.4)
Republic of Ireland	56.0 (52.5–59.4)	5,000 (3,500–6,000)	29,500 (20,000–42,500)	16.2 (10.0–28.9)

Source: (Grebely, *et al.* 2019)

Conclusions

The authors noted that there were wide variations among regions and countries with regard to HCV prevalence among recent injecting drug users and the proportion of injecting drug users among the total population with HCV infection. They suggest the research highlights that concerted efforts will be required in countries with large numbers of people infected with HCV in order to achieve global HCV elimination among PWID.

T1.3.4 Drug-related infectious diseases – behavioural data
No new information

T1.3.5 Other drug-related infectious diseases
No new information

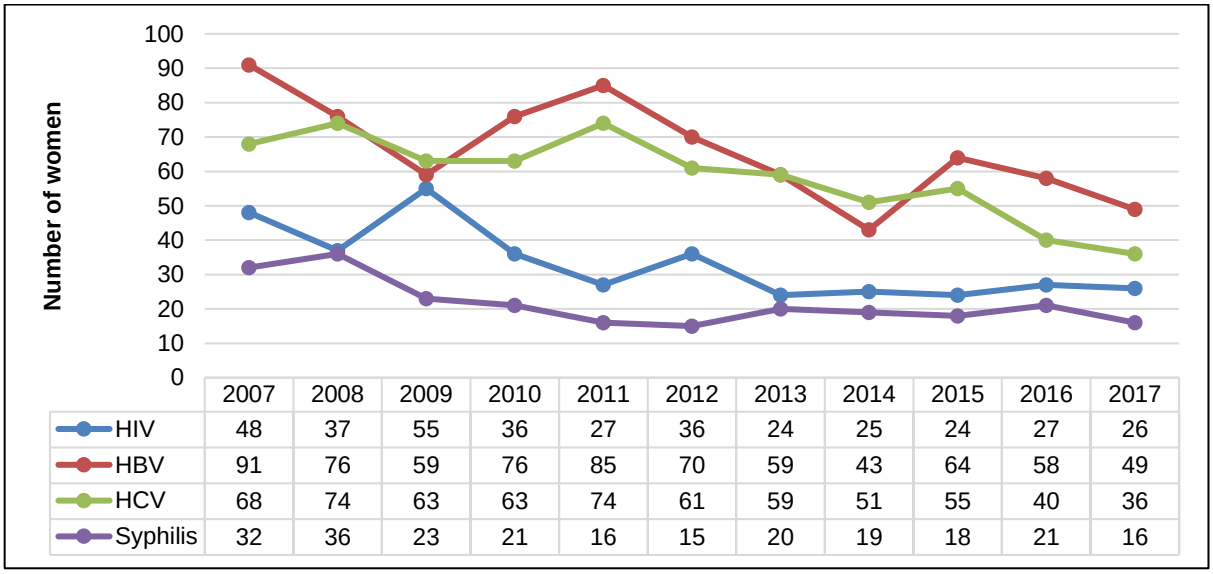
T1.3.6 Additional information on drug-related infectious diseases
The DOVE Clinic in the Rotunda Hospital, Dublin was established to meet the specific needs of pregnant women who have, or are at risk of, blood-borne or sexually transmitted bacterial or viral

infections in pregnancy (The Rotunda Hospital 2018). Exposure may also occur through illicit drug use. Figures from the clinic for 2017 were published in the hospital's annual report in 2018.

Figure T1.3.6.1 shows the number of women who booked into the DOVE Clinic for antenatal care each year during the period 2007–2017. It also shows the diagnosis of these women.

During 2017, some 123 women booked into the DOVE Clinic for antenatal care. Of these:

- 26 (21%) women were positive for HIV infection.
- 49 (40%) women were positive for HBV surface antigen.
- 36 (29%) women were positive for HCV antibody.
- 16 (13%) women had positive treponemal serology (syphilis).



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
HIV	48	37	55	36	27	36	24	25	24	27	26
HBV	91	76	59	76	85	70	59	43	64	58	49
HCV	68	74	63	63	74	61	59	51	55	40	36
Syphilis	32	36	23	21	16	15	20	19	18	21	16

FigureT1.3.6.1 DOVE Clinic bookings, by year, 2007–2017
Source: The Rotunda Hospital, 2018

It should be noted that these numbers refer to patients who booked for care during 2017. Table T1.3.6.1 summarises the outcome of patients who actually delivered during 2017. Of these patients, 23 were HIV positive, 49 were HBV positive, and 38 were HCV positive. During 2017, some 100 women were referred to the Drug Liaison Midwife (DLM) service, including 56 women who had a history of opiate addiction and were engaged in a methadone maintenance programme. There was a total of 62 deliveries to mothers under the DLM service in 2017.

Table T1.3.6.1 Deliveries to mothers attending the DOVE Clinic who were positive for HIV, HBV, HCV or syphilis, or who were attending the drug liaison midwife, 2017

Mother's status	HIV-positive	HBV-positive	HCV-positive	Syphilis-positive	DLM
Total mothers delivered	23	49	38	21	62
Total mothers delivered <500 g (including miscarriage)	2	0	0	0	0
Total mothers delivered ≥500 g	21	49	38	21	62
Live infants	21	49	39**	21	61
Miscarriage	2	0	0	0	0

Mother's status	HIV-positive	HBV-positive	HCV-positive	Syphilis-positive	DLM
Stillbirth	0	0	0	1	1
Infants <37 weeks' gestation	3	0	7	3	12
Infants ≥37 weeks' gestation	18	49	32	18	50
Caesarean section	8	15	14	11	15
HIV, HBV, HCV or syphilis-positive infants	0	0*	0*	0	–
Maternal median age	33	31	33	33	–

Source: The Rotunda Hospital, 2018
*Including three sets of twins.
**Including one set of twins.
DLM = drug liaison midwife.

T1.4 Other drug-related health harms

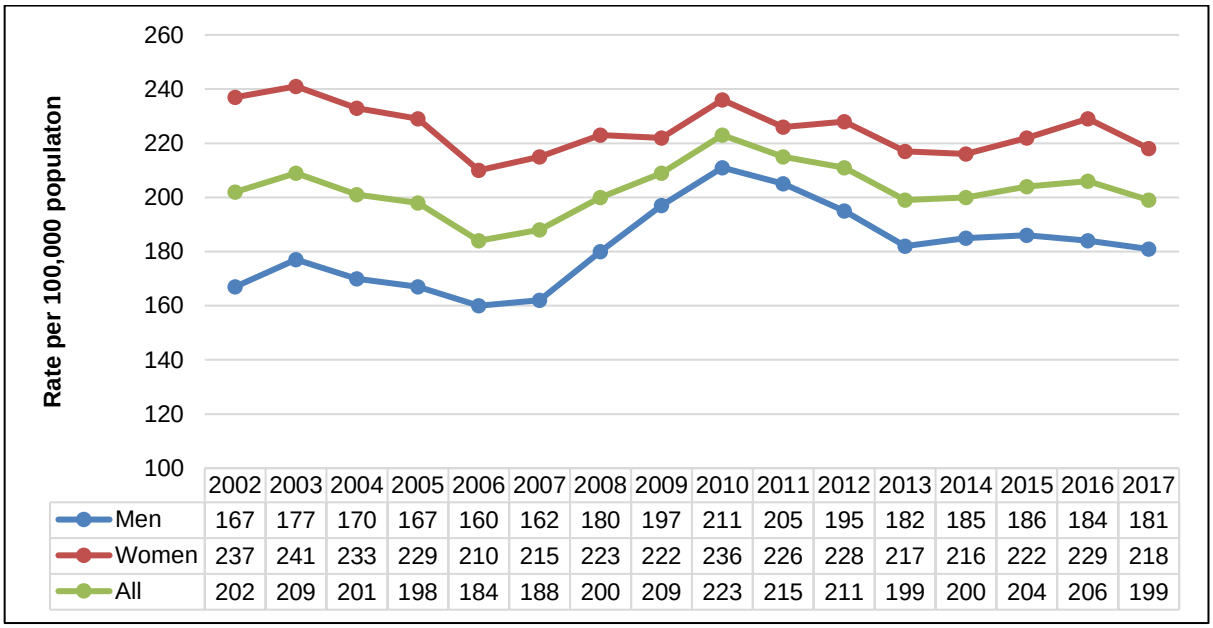
T1.4.1 Other drug-related health harms

National Self-harm Registry Ireland Annual Report, 2017

The 16th annual report from National Self-Harm Registry Ireland was published in 2018 (Griffin*, et al.* 2018). The report contains information relating to every recorded presentation of deliberate self-harm to acute hospital emergency departments in Ireland in 2017 and complete national coverage of cases treated. All individuals who were alive on admission to hospital following deliberate self-harm were included, along with the methods of deliberate self-harm that were used. Accidental overdoses of medication, street drugs or alcohol were not included.

Rates of self-harm

There were 11,600 recorded presentations of deliberate self-harm in 2017, involving 9,103 individuals. Taking the population into account, the age standardised rate of individuals presenting to hospital in the Republic of Ireland following self-harm was 199 per 100,000 population. This was 3% lower than the rate recorded in 2016 (206 per 100,000 population). In recent years, there have been successive decreases in the self-harm rate between 2011 and 2013. Nevertheless, the rate in 2017 was still 6% higher than in 2007, the year before the economic recession (Figure T.4.1.1).



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Men	167	177	170	167	160	162	180	197	211	205	195	182	185	186	184	181
Women	237	241	233	229	210	215	223	222	236	226	228	217	216	222	229	218
All	202	209	201	198	184	188	200	209	223	215	211	199	200	204	206	199

Figure T1.4.1.1 Person-based rate of deliberate self-harm from 2002 to 2017 by gender
Source: National Suicide Research Foundation, 2018
'All' in the legend refers to the rate for both men and women per 100,000 population

In 2017, the national male rate of self-harm was 181 per 100,000 population, 2% lower than in 2016. The female rate was 218 per 100,000 population, which was 4% lower than in 2016. With regard to age, the peak rate for men occurred in the 20–24-year-old age group at 505 per 100,000 population. The peak rate for women occurred among 15–19-year-olds at 758 per 100,000 population.

Self-harm and drug and alcohol use

Intentional drug overdose was the most common form of deliberate self-harm reported in 2017, occurring in 7,531 (64.9%) episodes. As observed in 2016, overdose rates were higher among women (70.3%) than among men (58.1%). Minor tranquillisers and major tranquillisers were involved in 34% and 9% of drug overdose acts, respectively. In total, 33% of male and 47% of female overdose cases involved analgesic drugs, most commonly paracetamol, which was involved in 29% of all drug overdose acts. In 67% of cases, the total number of tablets taken was known, with an average of 29 tablets taken in episodes of self-harm that involved a drug overdose.

There was a 7% increase (n=583) in the number of presentations involving street drugs (cannabis, ecstasy and cocaine) in 2017 compared with 2016 (n=547). The 2017 levels are the highest recorded since 2008 and the second highest ever recorded by the registry. Alcohol was involved in 31% of all self-harm presentations, and was significantly more frequently involved in male episodes of self-harm than in female episodes (33% versus 29%, respectively). The authors reported that, as in previous years, alcohol continued to be one of the factors associated with the higher rate of self-harm presentations on Sundays, Mondays and public holidays, and in the hours around midnight.

The authors concluded that these findings underline the need for ongoing efforts to:

- Reduce access to minor tranquillisers and other frequently used drugs, including paracetamol
- Intensify national strategies to increase awareness of mental health issues, and
- Intensify further strategies to reduce access to alcohol.

Maternal smoking, illicit drug use, alcohol consumption and neonatal outcomes

Smoking is an important modifiable risk factor in pregnancy, and common outcomes associated with maternal smoking include low birthweight, preterm birth, foetal growth restriction, and small for

gestational age (SGA) (Ventura SJ*, et al.* 2013). Other modifiable maternal lifestyle behaviours linked to these factors include alcohol consumption during pregnancy and illicit drug abuse. However, there is limited information available regarding how these modifiable risk factors interact in restricting foetal growth.

A recent Irish study aimed to examine the combined effect of maternal cigarette smoking, illicit drug use and alcohol consumption on neonatal outcomes (Reynolds*, et al.* 2019). This research, published in the *Journal of Public Health*, retrospectively analysed the clinical and sociodemographic details of 40,156 women who delivered a singleton baby between the years of 2011 and 2015 at the Coombe Women and Infants University Hospital.

Results

It was found that compared with women who had never smoked, smokers who did not engage in alcohol or drug use had an odds ratio (OR) of 3.2 (95% CI: 3.1–3.5) of delivering a baby who was SGA. Smokers who used illicit drugs in isolation or in combination with alcohol during pregnancy had higher ORs for SGA (1.4, 95% CI: 1.1–1.7, p=0.006 and 1.8, 95% CI: 1.2–2.7, p=0.007, respectively) compared with women who smoked but who did not engage in alcohol or drug use during pregnancy. These women also delivered babies with lower mean birthweights (125 g, p<0.001 and 181.4 g, p=0.003) and head circumferences (0.4 cm, p<0.001 and 0.3 cm, p=0.048). Women who smoked and used alcohol, but did not use illicit drugs, were not associated with adverse outcomes beyond those associated with smoking in isolation.

Conclusions

The authors noted that there is evidence that almost one-half of women who smoke before pregnancy stop smoking in early pregnancy without professional support, but that the number of women who succeed in stopping for the duration of the pregnancy after they present for obstetric care is as low as 1% (Crozier*, et al.* 2009). As these findings suggest that illicit drug use combined with maternal smoking during pregnancy increases the risk of adverse neonatal outcomes above those of smoking in isolation, the authors concluded that some pregnant women may require additional support in addressing not only their nicotine addiction but also other addictive behaviours.

Profiles of Irish psychiatric inpatients with no fixed abode

Recent research has shown that the number of emergency hospitalisations among those experiencing homelessness in Ireland has increased significantly between 2009 and 2019 (Homeless Agency 2008). The profile of those using emergency department services suggests that they are, in the main, chronically or episodically homeless and thus represent a relatively small proportion of the overall homeless population. Nevertheless, these subjects are heavy users of various costly services. Furthermore, a number of Irish studies have suggested that homeless people exhibit relatively high levels of mental health difficulties and may be over-represented in psychiatric settings (Homeless Agency 2008) (Keogh*, et al.* 2015).

Recent Irish research aimed to examine the profile of psychiatric admissions for subjects with no fixed abode (Daly*, et al.* 2019). In this study, published in the *Irish Medical Journal,* the authors retrospectively evaluated the HRB's National Psychiatric Inpatient Reporting System (NPIRS) data to develop an overview of admissions with no fixed abode recorded for the years 2007–2016 (n=2,176).

Results

It was found that in the 10-year period covered by the study, there was a 44% increase in annual admissions with no fixed abode, from 188 in 2007 to 271 in 2016. The analysis demonstrated that the characteristics of this cohort remained largely unchanged in the 10 years under evaluation;

almost three-quarters (1,598; 73.4%) were male, almost one-half (1,068; 49.1%) were under 35 years of age, and three-quarters (1,638; 75.2%) were under 45 years of age. Other characteristics of psychiatric inpatients with no fixed abode included the following:

- Three-quarters (1,643; 75.5%) were single, and a similar proportion were unemployed (1,640; 75.4%).
- 621 (28.5%) had a diagnosis of schizophrenia, 258 (11.9%) had a depressive disorder, and 212 (9.7%) had a personality/behavioural disorder.
- 257 (11.8%) had an alcohol disorder, while 333 (15.3%) had other drug disorders.

Conclusions

The authors noted that these characteristics are consistent with the single 'chronically homeless' people described in the literature. In addition, it was observed that the prevalence of schizophrenia and alcohol and drug disorders differed from the national profile of psychiatric admissions (Daly and Craig 2016). The authors concluded that there is a need to use routinely collected data to help understand and address the needs of specific homeless subgroups, particularly those on institutional circuits that include psychiatric inpatient facilities.

Adolescent addiction service report, 2018

The HSE Adolescent Addiction Service (AAS) provides support and treatment in relation to alcohol and drug use for young people and families from the Dublin suburbs of Ballyfermot, Clondalkin, Palmerstown, Lucan and Inchicore. Services provided include advice, assessment, counselling, family therapy, professional consultations, and medications if required. In 2018, the AAS published a report detailing referrals for 2017 (Adolescent addiction service 2018).

Referrals

In 2017, the AAS worked with 44 young people and their families; the mean age of the young people was 15.5 years (range: 14–18 years). This figure includes new referrals, re-referrals and continuances. The majority (84%) were male and 9% were non-Irish nationals. In terms of referral areas, the greatest numbers of referrals were from Clondalkin (48%), followed by Lucan (23%), Ballyfermot (20%), Inchicore (7%) and Palmerstown (2%).

Drug and alcohol use

Cannabis/weed continued to be the main substance used by clients at 97%, while 95% used alcohol (see Figure T.4.1.2). Other substances used included cocaine (48%), benzodiazepines (46%), amphetamines (39%), LSD (7%), ketamine (7%) and opiates (4%) (including heroin and Solpadeine). Solvents and head shop-type products did not feature among young people's substance use in 2017. The report noted that the biggest change concerning secondary drug use was related to a 35% increase in alcohol use; cocaine use increased by 19%, benzodiazepines by 13% and amphetamines by 8%.

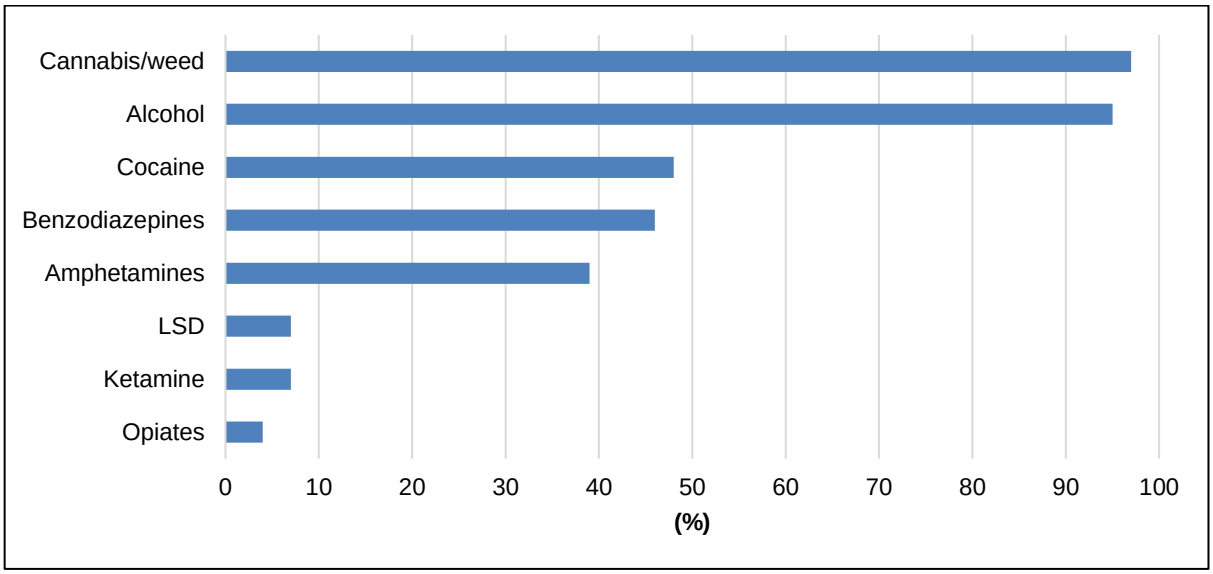


Figure T.4.1.2 Main substances used by AAS clients, 2017
Source: HSE AAS, 2018

Other issues

Other issues presented related to indebtedness (30%) and absconding (40%), resulting in two young people accessing out-of-hours services. Additionally, seven young people had social work involvement and four had residential care placements. Hospital admission was high, at 14%, and 14% of people had a history of self-harm. Of those who exited treatment, 58% had a planned discharge, 27% declined further treatment, and 15% moved out of the community or returned to their community of origin. Of those who had planned discharges, fewer than 5% had onward referrals to residential treatment or long-term residential aftercare. The majority of young people (82%) were seen by a family therapist only, with 18% having a psychiatric assessment.

Conclusions

The AAS report authors noted that, as in previous years, most young people had established patterns of substance use prior to referral (range: 1 month to 4 years) and, as a consequence, some struggled to maintain a drug-free status. Nevertheless, most achieved stability and several remained abstinent. The authors concluded that there is a need for parents and non-parental adults to identify young people within risk groups at an early stage and to elevate concern for them.

T1.5 Harm reduction interventions

T1.5.1 Drug policy and main harm reduction objectives

Strategic aims and objectives of the current national drugs strategy with regard to harm reduction interventions are (Department of Community 2009):

- To enable people with drug misuse problems to access treatment and other supports and to reintegrate into society
- To reduce the risk behaviour associated with drug misuse
- To reduce the harm caused by drug misuse to individuals, families and communities
- To encourage and enable those dependent on drugs to avail of treatment, with the aim of reducing dependency and improving overall health and social well-being, with the ultimate aim of leading a drug-free lifestyle

- To minimise the harm to those who continue to engage in drug-taking activities that put them at risk.

For further details on the national drugs strategy, see Section T1.1 of the Policy workbook.

T1.5.2 Organisation of harm reduction services

The Northern Area Health Board (NAHB), the South Western Area Health Board (SWAHB) and the East Coast Area Health Board (ECAHB) offer harm reduction programmes, including needle exchange from fixed sites, mobile units and outreach work. Outreach workers frequently practise 'backpacking' – a process whereby staff, in the absence of a local clinic or mobile unit, carry supplies of drug-taking paraphernalia for distribution to known drug misusers (Moore*, et al.* 2004).

Additional support services operate from other sites in the greater Dublin area, run in partnership with the Eastern Regional Health Authority (ERHA), in addition to a number of (Dublin-based or national) community-based organisations (CBOs) such as Merchants Quay Ireland (MQI) and the Ana Liffey Drug Project (ALDP). Some of these services are seasonal or simply on a fixed-time, once-per-week basis. Harm reduction services report initiatives including free needle exchange; supplying alcohol wipes, sterile water, citric acid filters, spoons and condoms; and providing methadone and naloxone therapy, as well as rehabilitation, education and community/family support. In addition, there are pharmacies providing needle exchange in each Regional Drug and Alcohol Task Force (RDTF) area within Ireland.

T1.5.3 Provision of harm reduction services

Table T1.5.3.1 Equipment and paraphernalia available for drug users in Ireland, 2019

Type of equipment	routinely available	often available, but not routinely	rarely available, available in limited number of settings	equipment not made available	information not known
Pads to disinfect the skin	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Dry wipes	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Water for dissolving drugs	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Sterile mixing containers	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Filters	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Citric/ascorbic acid	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Bleach	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Condoms	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Lubricants	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
Low dead-space syringes	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.	✓
HIV home testing kits	Click here to enter text.	Click here to enter text.	Click here to enter text.	✓	Click here to enter text.
Non-injecting paraphernalia: foil, pipes, straws	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.
List of specialist referral services: e.g. drug treatment; HIV, HCV, STI testing and treatment	✓	Click here to enter text.	Click here to enter text.	Click here to enter text.	Click here to enter text.

Harm reduction services: Infectious disease testing

Guidelines on testing for blood-borne viruses and immunisation in Ireland

The latest clinical guidelines for patients on opium substitution treatment (OST) were published in 2017 (Health Service Executive 2016). These recommend that all patients attending OST services be screened for hepatitis A, HBV, HCV and HIV, even if they are not injecting drug users, and that all patients be vaccinated against hepatitis A and B. Repeat testing is recommended for those who initially test negative for HIV if they report engaging in behaviours that would put them at ongoing risk of infection. The guidelines also recommend referral to specialist services and treatment, as clinically appropriate, for patients who test positive for hepatitis C or HIV. Although these replaced the Irish College of General Practitioners (ICGP) guidelines (Irish College of General Practitioners 2003), the earlier guidelines also recommended testing for blood-borne viruses and hepatitis A and B vaccination, and this has always been common practice in addiction services. The Immunisation Guidelines for Ireland also recommend vaccination against hepatitis A and B for non-immune PWID (National Immunisation Advisory Committee of the Royal College of Physicians of Ireland 2019).

Similar testing recommendations were made in the 2017 National Hepatitis C Screening Guidelines (Department of Health 2017), which include a recommendation to offer hepatitis C testing to all those who have ever injected any illicit drugs and to retest those who test negative every 6–12 months if they remain at risk of infection. These guidelines also recommend testing drug users who have never injected, if there is a possibility of transmission of HCV by the route of administration, and offering testing to all prison inmates on entry to prison or on request.

The Healthcare Standards for Irish Prisons recommend screening for HIV and hepatitis for all inmates who volunteer a background history of risk factors for these diseases (Irish Prison Service 2011). Immunisation against hepatitis A and hepatitis B is recommended for all prison inmates (National Immunisation Advisory Committee of the Royal College of Physicians of Ireland 2019). The prison healthcare standards are currently being revised. In practice, blood-borne virus testing and hepatitis A and B vaccination are offered to all inmates on committal regardless of declared risk factors, or at other times if requested.

As a consequence of these policies and guidelines, testing for blood-borne viruses, particularly HCV, has been reported to be high (93–95%) for patients in OST in studies published in recent years (Keegan*, et al.* 2017) (Murtagh*, et al.* 2017) (Murphy*, et al.* 2018). However, uptake of testing may be lower in some settings. Cullen *et al*. reported that just over three-quarters (77%) of clients attending 25 general practices for OST had been tested for HCV (Cullen*, et al.* 2007), but data for this study were collected in 2002 and testing may have improved since then. Routine reporting of blood-borne virus screening uptake and results is not possible for most addiction treatment clinics in Ireland, as most services are not computerised. Even in some that are, laboratory results are often scanned rather than entered into the system in an extractable format.

Studies reporting information on HBV immunisation status indicate that vaccination coverage is not as high as would be expected given the recommendations to vaccinate prisoners and PWID. Only 37% of prison inmates reported receiving at least one dose of HBV vaccine in a 2011 prison study. However, prisoners with a history of injecting drug use were more likely to have been vaccinated, with more than half (54%) reporting having been at least partially vaccinated (Drummond*, et al.* 2014). Similar results were reported in a study of OST clients attending level 1 and level 2 general practitioners (GPs) (GPs with training in substance misuse who can prescribe OST), with just under half (49%) of patients having received at least one dose of hepatitis B vaccine and only 23% being fully immunised (Cullen*, et al.* 2007).

Immunisation levels may be higher in patients attending OST clinics. In an older study of a sample of clients attending 21 OST clinics in the greater Dublin area, 81% of those who were not infected with hepatitis B had received at least one dose of vaccine and 69% had been fully vaccinated. Of the remaining 19%, 4% had been offered immunisation and had refused and 15% had no evidence of vaccination or past infection (Grogan*, et al.* 2005).

There is no adult register for recording HBV vaccine uptake, and information on vaccination may not be recorded systematically in medical notes. In some studies, data on HBV vaccination status are self-reported and may not be accurate. Anecdotally, the practice in OST settings is to vaccinate, and it is likely that the actual vaccination coverage is higher than what is reported here. However, HBV

vaccination levels could be optimised by ensuring that an accelerated schedule is used, and also by offering vaccination in needle exchange and other non-OST settings.

The *National Sexual Health Strategy 2015-2020* recommended that national HIV testing guidelines should be developed (Department of Health 2015), and the HSE Sexual Health and Crisis Pregnancy Programme (SHCPP) has established a working group to develop these guidelines. They will be guided by the updated HIV and hepatitis testing guidelines which are currently being prepared by the European Centre for Disease Prevention and Control (ECDC). Current guidance from the EMCDDA and ECDC recommends regularly offering hepatitis B, hepatitis C and HIV tests to PWID at least once every 6 to 12 months (European Centre for Disease Prevention and Control (ECDC) and European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) 2011).

Harm reduction services: Needle exchange

There are three models of needle exchange programmes in use in Ireland:

- Pharmacy – 96 sites in regions outside Dublin, Kildare and Wicklow
- Static – 24 sites, mainly in Dublin city
- Outreach – 14 sites, mainly in counties Dublin, Kildare, Laois, Offaly, Waterford and Wicklow.

Information on the number of syringes exchanged in Ireland in 2018 is discussed in the following sections.

Pharmacy-based needle exchange: Overview and syringes exchanged

Pharmacy-based needle exchange: Overview

The current national drug strategy aims to reduce harms arising from substance misuse and to reduce the prevalence of blood-borne viruses among PWID through the expansion of needle exchange provision to include community pharmacy-based programmes (Department of Community 2009).

In October 2011, the HSE rolled out the national Pharmacy Needle Exchange Programme, which is a partnership initiative between the Elton John AIDS Foundation, the Irish Pharmacy Union and the HSE. Once pharmacies have signed a service level agreement with the HSE, their contact details are passed on to the relevant HSE services so that they can promote access to sterile injecting equipment at the participating pharmacies and accept referrals for investigation and treatment. There are pharmacies providing needle exchange in each RDTF area, apart from those covering counties Dublin, Kildare and Wicklow, which are served by a mix of static and outreach needle exchange programmes. At the end of 2018, there were 96 pharmacies providing needle exchange in the Republic of Ireland (Table T1.5.3.2).

Table T1.5.3.2 Number of pharmacies providing needle exchange in Ireland by RDTF area, 2011–2018

RDTF area	2011	2012	2013	2014	2015	2016	2017	2018
Midland (Longford, Laois, Offaly, Westmeath)	5	13	15	16	17	18	18	17
North Eastern (Meath, Louth, Cavan, Monaghan)	3	9	16	21	22	21	21	16
North-West (Sligo, Leitrim, West Cavan, Donegal)	3	4	7	6	6	6	6	5
Southern (Cork and Kerry)	8	10	16	21	19	21	21	16
South-East (Carlow, Kilkenny, Waterford, Wexford, South Tipperary)	13	21	22	24	17	17	16	14

Western (Galway, Mayo, Roscommon)	5	2	10	13	11	12	13	13
Mid-West (Clare, Limerick, North Tipperary)	5	8	13	14	15	16	16	15
Total	**42**	**67**	**99**	**115**	**107**	**111**	**111**	**96**

Source: Unpublished data from HSE, 2019

Pharmacy-based needle exchange: Number of syringes exchanged

Figure T1.5.3.1 shows the number of individual syringes provided, from pharmacy-based sites for the year 2018, by month. There was a total of 278,437 individual syringes exchanged in 2018. The average number of syringes provided each month was 23,203. At the time of publication, there were no data available on the number of unique individuals attending pharmacy-based sites.

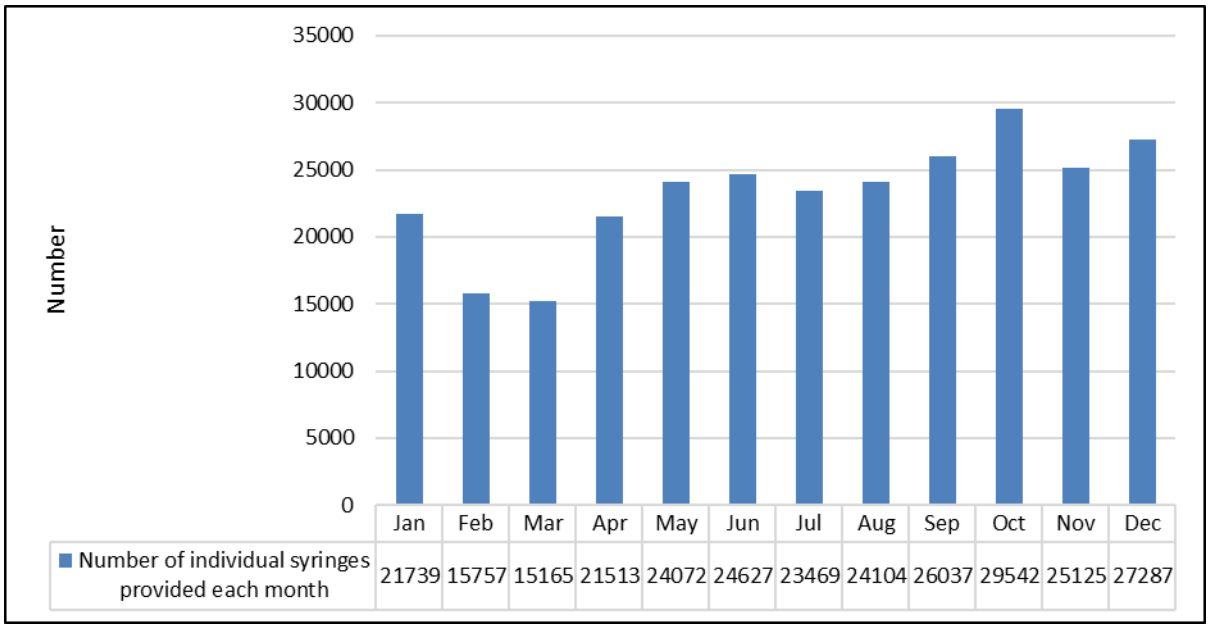


Figure T1.5.3.1 Number of individual syringes provided from pharmacy-based sites by month, 2018
Source: Unpublished data from HSE, 2019

Dublin areas 6 and 7 needle exchange: Number of syringes exchanged

Figure T1.5.3.2 shows the number individual syringes provided by static and outreach sites in Dublin areas 6 and 7, by location, for the year 2018. There were 49,381 individual syringes in total exchanged in 2018.

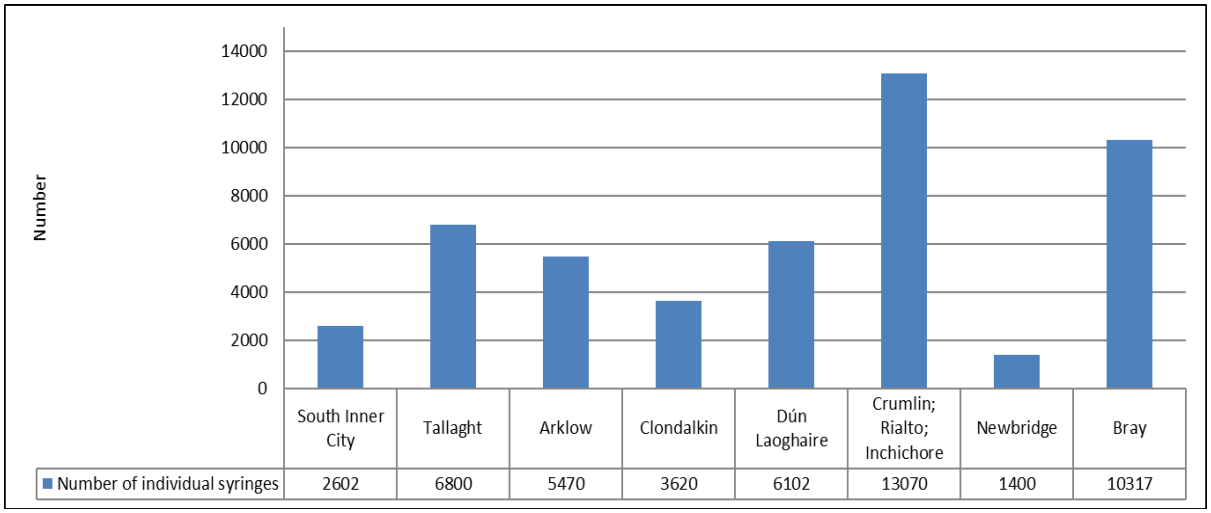
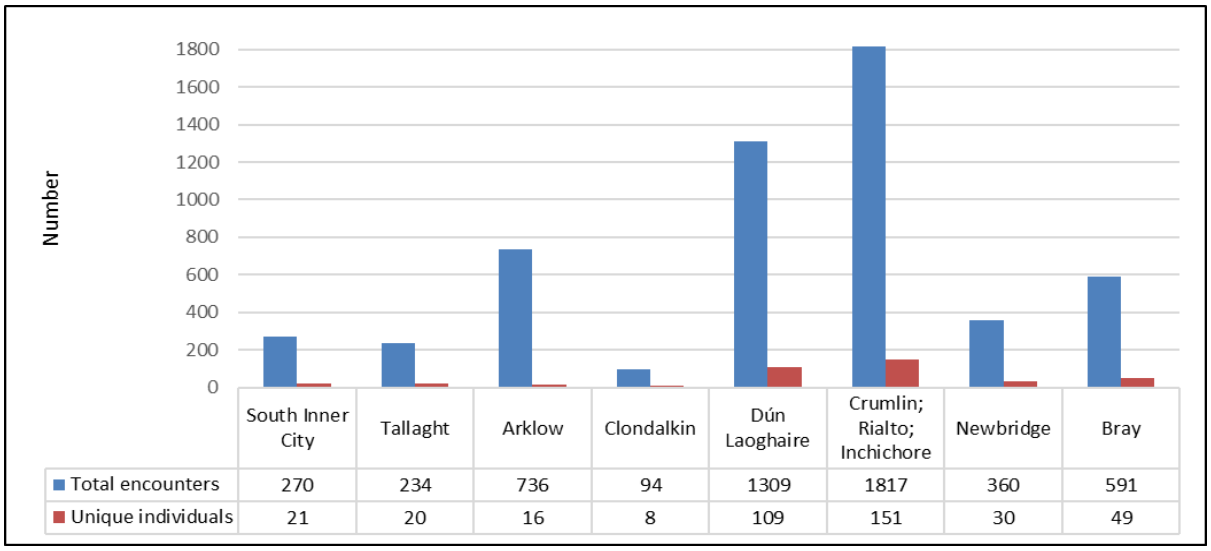


Figure T1.5.3.2 Number of individual syringes provided from static and outreach sites in Dublin areas 6 and 7, by location, 2018
Source: Unpublished data from HSE, 2019

Figure T1.5.3.3 shows the number of individuals who used needle exchange in Dublin areas 6 and 7 in 2018. Static and outreach sites reported a total of 5,411 encounters which involved 404 unique individuals.

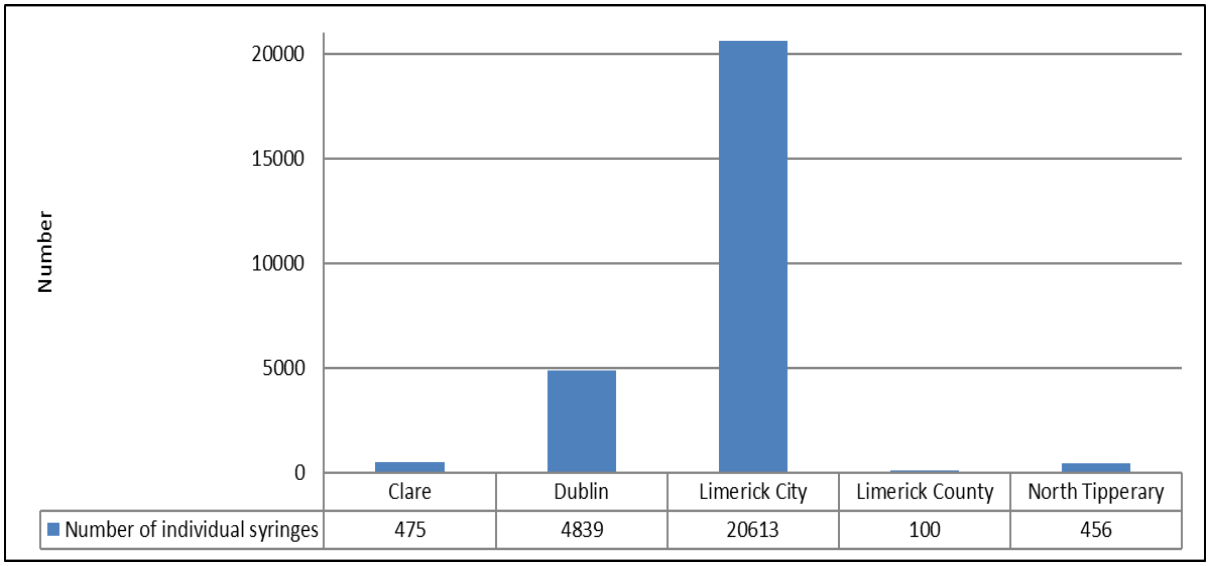


	South Inner City	Tallaght	Arklow	Clondalkin	Dún Laoghaire	Crumlin; Rialto; Inchichore	Newbridge	Bray
Total encounters	270	234	736	94	1309	1817	360	591
Unique individuals	21	20	16	8	109	151	30	49

Figure T1.5.3.3 Number of individuals attending static and outreach sites in Dublin areas 6 and 7, by location, 2018
Source: Unpublished data from HSE, 2019

Ana Liffey Drug Project (ALDP) needle exchange: Number of syringes exchanged

The ALDP provide needle exchange services in Limerick City and three counties to people affected by problem substance use. Figure T1.5.3.4 shows the number individual syringes provided by ALDP, by location, for the year 2018. A total of 26,483 individual syringes were provided by ALDP in 2018.



	Clare	Dublin	Limerick City	Limerick County	North Tipperary
Number of individual syringes	475	4839	20613	100	456

Figure T1.5.3.4 Number of individual syringes provided by ALDP according to location, 2018
Source: Unpublished data from ALDP, 2019

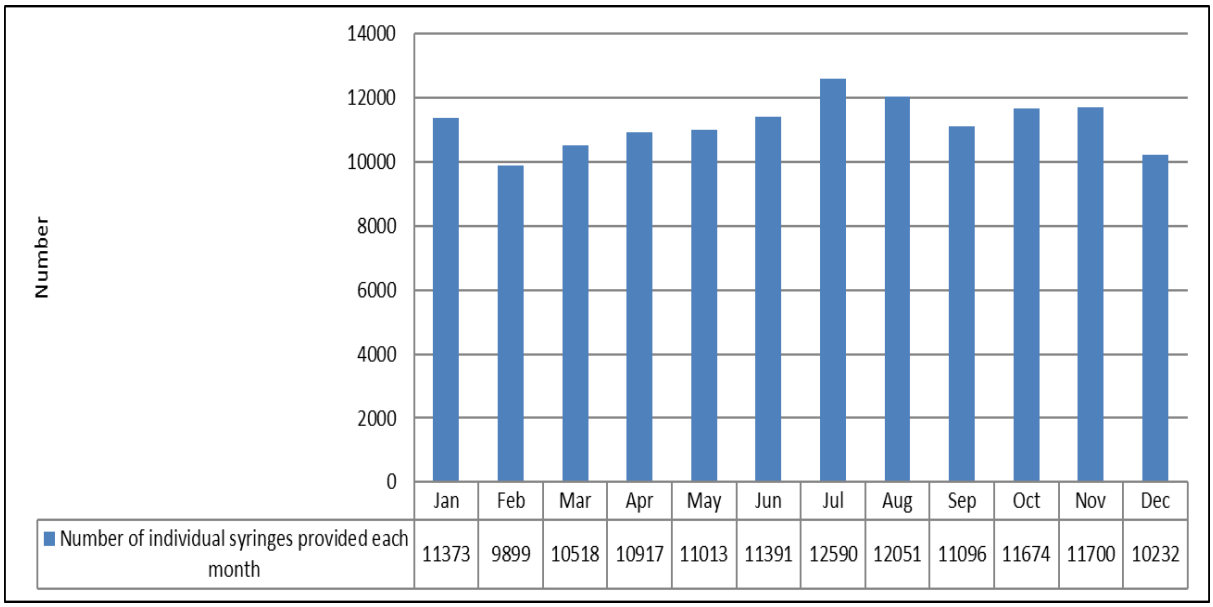


Figure T1.5.3.5 Number of individual syringes provided by MQI by month, 2018
Source: Unpublished data from MQI, 2019

Figure T1.5.3.6 shows the number of unique individuals who attended MQI needle exchange services in 2018. There was a total of 30,068 needle exchange visits in 2018. The average of number of visits each month in 2018 was 2,505.

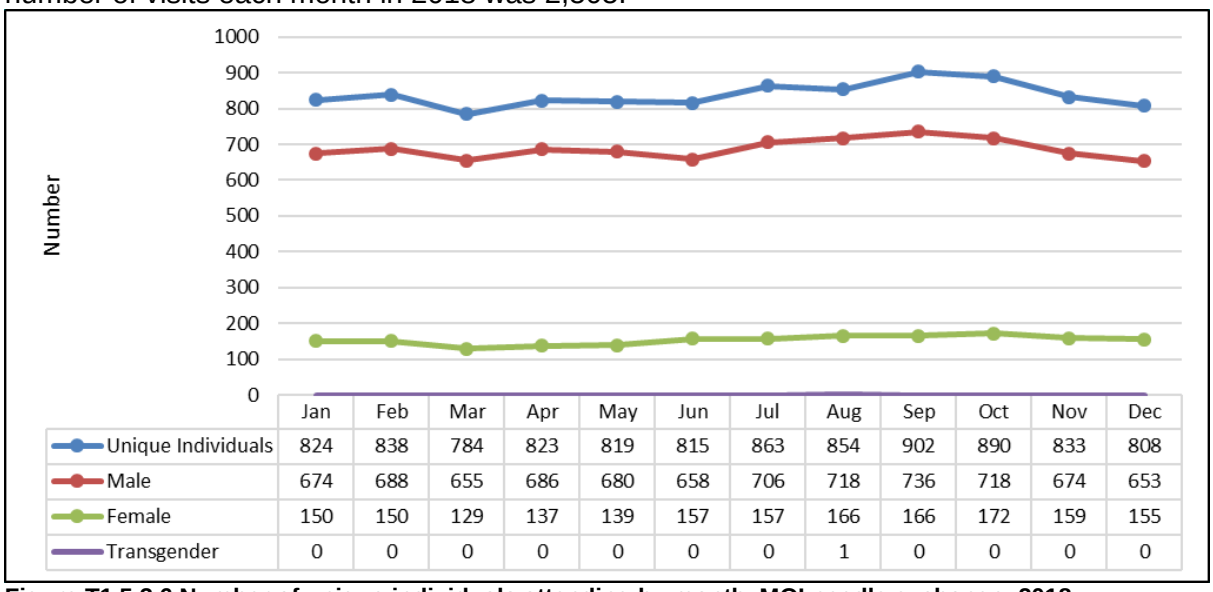


Figure T1.5.3.6 Number of unique individuals attending by month, MQI needle exchange, 2018
Source: Unpublished data from MQI, 2019

Needle exchange in Ireland: Total number of syringes exchanged

Table T1.5.3.3 shows the number of individual syringes exchanged from pharmacy, static, outreach and CBO sites in 2018. Using the most recent available data, there was a total of 488,755 individual syringes exchanged in the Republic of Ireland in 2018.

Table T1.5.3.3 Total number of individual syringes exchanged from pharmacy, static, outreach and CBO sites in 2018

Provider	Pharmacy	Dublin (static & outreach)	ALDP	MQI	Total
Number of individual syringes	278 437	49 381	26 483	134 454	488 755

Source: Unpublished data from the HSE, ALDP and MQI, 2019

Harm reduction services: Naloxone provision
Along with partners in the HSE, the National Family Support Network and the ALDP, MQI was involved in the national roll-out of the Naloxone Demonstration Project in 2015 (Merchants Quay Ireland 2017). Naloxone is an antidote for opioid overdose that reverses the depressant effects of opiates such as heroin.

The project has seen more than 1,600 kits issued, with 600 PWID and their family members, and another 800 community workers, trained on how administer it. To date, more than 400 drug users have been prescribed naloxone, and an external evaluation concluded that the scheme was a success. However, currently, only persons at risk of overdose (the patient) can be prescribed naloxone, and it has been suggested that training should be rolled out across all addiction service and homeless service providers in Ireland, and that naloxone should be available to staff in these projects and to outreach workers.

Work on this initiative is ongoing, and MQI hopes that eventually, all opiate drug users in Ireland will have access to naloxone provision.

Harm reduction services: Supervised injecting facilities
As reported on in the 2017 National Report, the Misuse of Drugs (Supervised Injecting Facilities) Act 2017 was signed into Irish law on 16 May 2017. In the Introduction, the Act is summarised as: "An Act to provide for the establishment, licensing, operation and regulations of supervised injecting facilities for the purposes of reducing harm to people who inject drugs; to enhance the dignity, health and well-being of people who inject drugs in public places; to reduce the incidence of drug injection and drug-related litter in public places and thereby to enhance the public amenity for the wider community; and to provide for matters related thereto." Following a procurement process, MQI was selected as the preferred bidder to deliver the service. However, in July 2019, Dublin City Council refused planning permission for the facility, citing the lack of a "robust" policing plan and the potential impact it could have on the local economy, particularly in relation to tourism. MQI intends to review the Council's decision before considering its next steps.

Harm reduction services: Vaccination
See the section on Guidelines for testing for blood-borne viruses and immunisation in Ireland (above) for information regarding vaccination for blood-borne viruses in Ireland.

Harm reduction services: Community-based organisations (CBOs)

Merchants Quay Ireland annual review, 2017
Merchants Quay Ireland (MQI) is a national voluntary agency providing services for homeless people and drug users. There are 22 MQI locations in 12 counties in the Republic of Ireland (see Figure T1.5.3.7). In September 2018, MQI published its annual review for 2017 (Merchants Quay Ireland 2018). MQI aims to offer accessible, high-quality and effective services to people dealing with homelessness and addiction in order to meet their complex needs in a non-judgemental and compassionate way. This section highlights services provided by MQI to drug users in Ireland in 2017.

Figure T1.5.3.7 MQI locations in Ireland
Source: MQI annual review, 2017

(1) Dublin; (2) Shelton Abbey, Co. Wicklow; (3) St Francis Farm, Co. Carlow; (4) Cork Prison; (5) Limerick Prison; (6) Co. Offaly; (7) Co. Westmeath; (8) Portlaoise, Co. Laois; (9) Co. Longford; (10) Castlerea Prison, Co. Roscommon; (11) Loughran House, Co. Cavan; (12) Leixlip, Co. Kildare.

MQI drug services

Health Promotion Unit

This unit provides drug users with information about the risks associated with drug use and the means to minimise such risks. MQI offers drug users a pathway into treatment and the possibility of living a life without drugs. The main focus is on reducing the harms associated with injecting drug use; fostering the motivation to become abstinent; and giving advice on HIV, hepatitis B virus and hepatitis C virus infection prevention. In 2017, some 2,583 individuals used the service (an increase of 3% on 2016), of which 443 were new clients.

As part of the MQI health promotion remit, a total of 2,691 safer injecting workshops were undertaken with injecting drug users in 2017, an increase of 26% on 2016. There were 25,358 needle exchange visits, an increase of 3% on 2016.

Community benzodiazepine detoxification

In response to a need identified in 2017, MQI undertook to facilitate community benzodiazepine detoxifications in collaboration with Granby MQI GP Services. A total of 45 clients accessed this programme in 2017. MQI notes that many of these clients have since moved on to become drug free, have gained employment, and/or have accessed education programmes in addition to accessing residential rehabilitation programmes.

Community Engagement Team

The Community Engagement Team works to cultivate and strengthen relationships between MQI and the local community. The team picks up and safely disposes of drug-related litter, as well as offering some of the most vulnerable people (who are rough sleeping or reluctant to engage with services) street-based advice and referral into the services they need. A total of 11,951 items of drug-related litter were disposed of by this team in 2017.

Drug Rehabilitation Scheme – Riverbank Centre, Dublin

As part of its Community Employment Scheme, MQI provides a stabilisation programme which seeks to establish a regular pattern of discipline and daily attendance in order to help clients stabilise and reduce their drug use and to prepare them for mainstream training and employment. In 2017, some 26 individuals participated in the programme; most were between 18 and 39 years of

age. Links with the Education and Training Boards facilitate the accredited educational component of this programme, which helps people gain momentum into education and employment.

Family Support Group
MQI offers one-to-one advice and support to family members regarding the realities of drug use and how they can best cope and provide optimum support to drug users. MQI also runs a Family Support Group (FSG), which meets every week and provides a forum where parents, as well as other close relatives and friends of drug users, are offered support and advice on a range of issues. Participants provide support for each other, and the group is continually open to new members. The weekly FSG is linked to the National Family Support Network, which offers an opportunity to raise issues at a national level. MQI's FSG in Dublin worked with more than 40 individuals throughout 2017.

MQI Midlands services
Drug and Alcohol Treatment Supports Project
The MQI's Drug and Alcohol Treatment Supports (DATS) team provides a community-based drug and alcohol treatment support service for individuals over 18 years of age and their families in the Midlands area (Counties Longford, Westmeath, Laois and Offaly). Each county has a dedicated drug and alcohol worker to coordinate the care of individuals and families experiencing problems due to drug and/or alcohol use. In 2017, the team based in the Midlands provided support to 460 people, with a total of 4,906 interventions carried out.

Drug Rehabilitation Scheme – Athlone
Supported by the Athlone Community Taskforce, the Adult Education Centre, the Probation Service, the Longford and Westmeath Education and Training Board, and South Westmeath Employment, Education and Training Services, this programme allows clients to participate in activities and educational qualifications at an appropriate level on the National Framework of Qualifications. The scheme also provides individuals with addiction and other rehabilitation supports; for example, crisis intervention supports, group work, and key working. In 2017, some 22 participants were engaged with this programme.

MQI rehabilitation and detoxification treatment services
St Francis Farm Residential Rehab Programme and Detox Services
The St Francis Farm (SFF) Rehabilitation Service offers a 13-bed therapeutic facility with a 14-week rehabilitation programme set on a working farm in Co Carlow. At SFF, MQI provides a safe environment where service users can explore the reasons for their drug use, adjust to life without drugs, learn effective coping mechanisms, and make positive choices about their future. There were 52 clients admitted to the SFF Rehabilitation Service during 2017, of whom 27 completed the programme.

The 10-bed residential detoxification service at SFF delivers methadone and combined methadone/benzodiazepine detoxifications for both men and women. The detoxification activity programme includes individual care planning, therapeutic group work, psychoeducational workshops, fitness training, and farm-work activities. There were 65 clients admitted for detoxification service during 2017, of whom 56 completed the programme.

MQI prison-based services
Addiction counselling service and Mountjoy Drug Treatment Programme
MQI, in partnership with the Irish Prison Service, delivers a national prison-based addiction counselling service (ACS) aimed at prisoners with drug and alcohol problems. This service provides structured assessments, one-to-one counselling, therapeutic group work, and multidisciplinary care, in addition to release-planning interventions with clearly defined treatment plans and goals. Services offered include:

- Brief interventions
- Motivational interviewing and motivational enhancement therapy
- A 12-step facilitation programme
- Relapse prevention and overdose reduction

- Cognitive behavioural therapy
- Harm reduction approaches, and
- Individual care planning and release planning.

In 2017, some 2,547 prisoners accessed the ACS, and the MQI team delivered 10,252 one-to-one counselling sessions. The MQI ACS also coordinated and contributed to the delivery of a structured, multiagency eight-week detoxification and drug treatment programme (DTP) in the Mountjoy Prison Medical Unit. During 2017, the DTP assisted 44 prisoners in detoxifying from methadone and benzodiazepines.

Ana Liffey Drug Project (ALDP)
The ALDP is a "low threshold – harm reduction" project working with people who are actively using drugs and experiencing associated problems. The ALDP has been offering harm reduction services to people in the North Inner-City area of Dublin since 1982, from two premises at 48 and 51 Middle Abbey Street. Across these two buildings, the ALDP offers a wide variety of low-threshold, harm reduction services that offer pathways for drug users out of their current circumstance, including addiction and homelessness.

The ALDP is committed to impacting positively on the neighbourhood and the wider community. Subsequently, it is active in managing antisocial behaviour in the area and, in return, receives ongoing support from the local business community.

The services offered in Dublin are:

- Open Access
- Assertive Outreach
- Needle and Syringe Programme
- Medical Services
- Stabilisation Group
- Detox Group
- Harm Reduction Group
- Treatment Options Group
- Assessment for Residential Treatment
- Key Working and Case Management, and
- Prison in-reach.

In Dublin, nursing services are provided on a drop-in basis. Services offered include blood-borne virus testing, wound care and compression bandaging. The ALDP also provides an in-reach nursing service to the residents of Crosscare Cedar House every Tuesday from 3.00 pm to 4.30 pm. In addition to providing nursing services on a daily basis, the ALDP works in partnership with Safetynet Primary Care to provide a GP clinic every Friday between 11.30 am and 1.30 pm.

The ALDP Mid-West region provides harm reduction services in Limerick City and in three counties to people affected by problem substance use, their families, and the wider community. The counties served are:

- Limerick
- Clare, and
- North Tipperary.

The services offered in the Mid-West region are:

- Open Access
- Assertive Outreach
- Needle and Syringe Programme
- Medical Services
- Harm Reduction Group

- Assessment for Residential Treatment
- Pre-entry to the Helping Women Recover Group
- Key Working and Case Management
- Prison in-reach

In the Mid-West region, the ALDP works in partnership with the Partnership for Health Equity to provide a GP clinic during open access service hours, which are on Wednesday afternoons from 2.00 pm to 5.00 pm. Any person can see the GP by either an appointment or simply on a drop-in basis. During appointments, GPs can attend to wound care, emergency health needs, or give antibiotics for infections. On Thursday afternoons from 2.00 pm to 5.00 pm, this service is also available at the St Vincent de Paul drop-in service, Ozanam House, Hartstonge Street, Limerick, and an ALDP Project Worker is also available to offer support.

The ALDP Online and Digital Services team also offers support and information to the general public and to drug users, as well as to other agencies that work with problem drug users.

Coolmine Therapeutic Community (CTC)
CTC is a drug and alcohol treatment centre providing community, day and residential services to men and women with problematic substance use and to their families in Ireland. Established in 1973, CTC was founded upon the philosophies of the therapeutic community (TC) approach to addiction treatment. The TC approach is primarily a self-help approach in which residents are responsible for their own recovery, with peers and staff acting as facilitators of change. Hence there is a deep commitment to 'community as method', where the primary therapy and the main agent for change is the community itself. The most common features of TCs include that they are operated by residents, they are based on a hierarchical structure according to seniority (length of time in the programme), and abstinence is the ultimate goal. Participants are expected to contribute to the general running of the community and to their own recovery by actively participating in educational activities, and in group and individual therapy.

CTC: Drop-in Facility
Coolmine House at Lord Edward Street, Dublin is open Monday to Friday, 9.00 am to 5.00 pm, with a drop-in service for treatment options, advice and practical support every Thursday morning. The outreach staff facilitate assessments, weekly groups offering ongoing assessment and support to those awaiting a place on a treatment programme, and pre-entry groups which familiarise clients with working in the group environment on which their treatment will be based.

Coolmine's Community Outreach Service works with community drug teams across Dublin to complete holistic assessments and identify treatment options. It also works closely with drug treatment centres, providing a community detoxification service with Trinity Court (National Drug Advisory and Treatment Centre) and carrying out on-site assessments for Cuan Dara (Cherry Orchard Hospital), St Michael's Ward (Beaumont Hospital) and the Lantern Project (Peter McVerry Trust), preparing clients to engage with a primary treatment programme once they have completed their detoxification.

CTC: Day Services
Welcome Stabilisation Programme
The Welcome Stabilisation Programme is for people who are not yet drug free and are looking for support to address their substance use. The programme runs from 10.30 am to 3.30 pm Monday to Friday, and finishes at 1.00 pm on Wednesdays. Clients engage in self-development workshops, one-to-one key working sessions, relapse prevention groups and various other therapeutic/educational programmes.

CTC: Drug Free Day Programme (DFDP)
The DFDP provides a supportive setting for clients to build self-confidence and the skills to maintain a drug-free life. It is a minimum of 10 months in duration: five months of primary treatment and five months of aftercare. Clients engage in open therapy groups, self-development workshops, one-to-

one key working sessions, relapse prevention groups and various other therapeutic/educational programmes.

CTC: Contingency Management (CM) Programme
The CM Programme consists of the reinforcement of desired behaviours. These are rewarded in the form of vouchers received for a combination of group attendance and drug-free urines. The programme is 12 weeks long, with participants attending three times per week. The content of the programme is three supervised urines per week with a brief intervention at every meeting and a weekly facilitated support group.

CTC: Family Support
There is weekly support group for family members and loved ones of those struggling with addiction. The group takes place in Coolmine House, 19 Lord Edward Street, on Thursdays from 6.45 pm to 8.30 pm. CTC also offers Community Reinforcement Approach Family Therapy (CRAFT) support groups. This programme provides tools to concerned significant others (i.e. family members, partners, etc.) to help motivate their loved ones with problematic substance use to access treatment.

CTC: Cannabis/Mental Health Programme
This programme supports clients to reduce or cease their cannabis use. It is a 12-week programme that runs on Tuesdays and Thursdays from 9.30 am to 1.00 pm. The groups involve the Reduce the Use Programme and relaxation. The programme also offers one-to-one key working sessions.

CTC: Community Addiction Team Dublin 15 (D15 CAT)
The new D15 CAT service provides focused care pathways specifically to the local community in Dublin 15 impacted by problem substance use. It includes treatment and rehabilitation support for adult men and women with problem substance use; contact and interventions to young people and adolescents at risk of experiencing problematic substance use; tailored support to members of ethnic and new communities impacted by problematic substance use; and integrated family work to deliver whole-family outcomes. Services include:

- Information and support
- Specific support for young people
- Cannabis programme
- Family support
- Alcohol programme
- Support for new community members
- Mindfulness Based Stress Reduction Programme, and
- Support for all problematic substance use.

CTC: Coolmine Lodge: Men's Residential
Coolmine Lodge is a therapeutic community which hosts a five-month residential treatment programme for men who are working towards an independent life free from addiction. Coolmine Lodge provides a supportive, peer-led environment where clients can build confidence, strength, resilience and hope for a positive future. The service can admit men who may be prescribed medication, or those detoxifying from methadone, following assessment.

CTC: Ashleigh House: Women and Children's Residential
Ashleigh House is a residential therapeutic community for women, expectant women and mothers with young children. The service can admit women who may be prescribed medication, or those detoxifying from methadone, following assessment. Ashleigh House is designed to help women in recovery develop the skills they need to live a drug-free, independent life.

CTC: Nursing Services
Medical support services at CTC include access to a nurse and visiting medical officer for:

- Primary care
- Referral and screening

- Advice and support with:
    - Medication
    - Dual diagnosis
    - Contraception
    - Blood-borne viruses (HBV, HCV and HIV)
    - Sexually transmitted diseases
    - Contraception
    - Pregnancy
- Medical supervision and support
- Residential methadone detoxification, and
- Community alcohol detoxification.

Tabor Group annual report, 2018

The Tabor Group is a provider of residential addiction treatment services in Ireland. It aims to offer hope, healing and recovery to clients suffering from addictions through integrated and caring services. In addition to three residential facilities, the organisation provides a continuing care programme to clients who have completed treatment in order to assist with their recovery. It also offers counselling to families whose loved ones are struggling with an addiction. In 2019, the Tabor Group published its annual report (Tabor Group 2019). This section highlights the services provided by the Tabor Group to individuals with a substance use addiction in 2018.

Tabor Lodge: residential addiction treatment centre

Tabor Lodge is a residential addiction treatment centre for the treatment of people addicted to alcohol, drugs, gambling and food. It is situated 15 miles south of Cork city. Tabor Lodge is guided by the Minnesota Model of addiction treatment in delivering its treatment programme. This model is characterised by the understanding that addiction is primarily a substance use disorder. The primary focus of the treatment programme is to educate clients on the dynamics of this disorder as they manifest in the life of the individual. Another important focus of the treatment programme is to assist clients in developing the skills necessary to manage their disorder while going forward in their lives.

A total of 222 clients (72% male) were admitted to Tabor Lodge for residential treatment of addiction in 2018, of whom 208 completed treatment. A breakdown of the specific drug of choice for admissions in 2018 is shown in Table T1.5.3.4. The clinical staff at Tabor Lodge have observed a changing profile of clients presenting for treatment in recent years, with mental health challenges and a history of childhood trauma becoming more evident. With this in mind, staff at Tabor Lodge have become more informed about childhood trauma as a contributing factor to the development of addiction, and as a hindering factor in efforts to manage addiction disorders. In 2017, Tabor Lodge responded to the greater prevalence of clients presenting for treatment with a history of childhood trauma by initiating a training programme. This is to ensure that the service at Tabor Lodge becomes more 'trauma informed' as an agency treating adults vulnerable to the ongoing debilitating impact of childhood trauma.

Table T1.5.3.4 Specific drug of choice for clients admitted to Tabor Lodge: residential addiction treatment centre in 2018

Drug of choice	Number of clients	Percentage of clients
Opiates	12	5%
Cocaine	29	13%
Cannabis	12	5%
Alcohol	148	67%
Stimulants	1	0.5%
Hypnotic and sedatives	10	5%
Other substances	2	1%

Source: Tabor Group, 2019

Fellowship House: men's residence extended treatment centre

The extended treatment programme for men is based on the Hazelden Minnesota Model and promotes 'total abstinence'. The aim is to build on and consolidate the work of recovery which has

already begun in primary treatment – even if that treatment was not in the recent past and the client is struggling to maintain sobriety.

In 2018, some 34 clients were admitted to Fellowship House for extended treatment; a total of 18 individuals completed the programme. A breakdown of the specific drug of choice for admissions to Fellowship House in 2018 is shown in Table T1.5.3.5. The 2018 annual report observed that cannabis and cocaine use remain high at 82%, and that 94% of clients reported alcohol as their specific drug of choice.

TableT1.5.3.5 Specific drug of choice for clients admitted to Fellowship House: men's residence extended treatment centre in 2018

Drug of choice	Number of clients	Percentage of clients
Alcohol	32	94%
Ecstasy	25	74%
Cannabis	28	82%
Cocaine	28	82%
Prescribed medication	26	76%
Heroin	9	26%
Methadone	4	12%
Speed	21	62%
LSD	18	53%
Other/head shop	10	29%

Source: Tabor Group, 2019

Renewal: women's residence extended treatment centre

Renewal works with women who have completed a primary 28-day treatment programme. It is a 12-week residential extended treatment programme where clients learn to find routine, balance and structure. Renewal is the only Minnesota Model extended treatment centre for women based in Ireland, and was opened in 1999.

In 2018, some 51 clients were admitted to Renewal, of whom 30 completed the programme. Seventy per cent of these clients were between 18 and 35 years of age. A breakdown of the specific drug of choice for admissions to Renewal in 2018 is shown in Table T1.5.3.6. In 2018, 90% of clients admitted presented with a history of alcohol abuse.

Table T1.5.3.6 Specific drug of choice for clients admitted to Renewal: women's residence extended treatment centre in 2018

Drug of choice	Number of clients	Percentage of clients
Alcohol	46	90%
Ecstasy	33	65%
Cannabis	35	69%
Cocaine	35	69%
Prescribed medication	37	73%
Heroin	13	25%
Methadone	9	18%
Speed	26	51%
LSD	15	29%
Other/head shop	4	8%

Source: Tabor Group, 2019

In addition to group therapy, lectures and one-to-one counselling, the programme at Renewal also arranges family conferences which help clients to reconnect with their families, as well as educating families about addiction and offering them support. The programme also works in partnership with Tusla – The Child and Family Agency, as many women have children in care and need help reconnecting and rebuilding the parent/child relationship.

Tabor Group has observed that the number of people presenting with opiate or heroin addiction was down from 8% in 2017 to 5% of all presentations in 2018. However, cocaine use among all clients

presenting for treatment has more than trebled since 2016 – up from 4% to 13% – with cannabis also up 1% in the past year. In addition, addiction to alcohol alone is rarely seen, according to the report, with large numbers of people presenting for treatment indicating polydrug use, reporting ecstasy, cannabis, cocaine, heroin and prescribed medication use as well.

T1.5.4 Harm reduction services: availability and access

Availability and access of harm reductions services for drug users
See section T1.5.3 for information on the availability and access of harm reduction services for drug users in Ireland. For information on the availability and access or harm reduction services within Irish prisons, see the Prison workbook Section T1.3.3.

T1.5.5 Additional information on harm reduction activities
No new information

T1.6 Targeted intervention for other drug-related health harms

T1.6.1 Targeted interventions for other drug-related health harms
No new information

T1.7 Quality assurance of harm reduction services

T1.7.1 Quality assurance of harm reduction services
No new information

T1.7.2 Additional information on any other drug-related harms data
No new information

T2 Trends (not relevant in this section – included above)

T3. New developments

T3.1 New developments in drug-related deaths and emergencies
No new information

T3.2 New developments in drug-related infectious diseases
Intensified HCV screening in an Irish homeless population
HCV infection is a major cause of chronic liver disease and death (Lazarus*, et al.* 2014). In the Republic of Ireland and the European Union, primary care is a key area to focus efforts to enhance HCV diagnosis, and implementation of extended criteria for HCV screening is currently the subject of major debate among different stakeholders.

Homelessness is associated with an increased prevalence of risk factors for HCV, such as injecting drug use, and the link between homelessness and poor health is well established (Fazel*, et al.* 2014). A 2012 systematic review and meta-analysis of HCV in homeless populations found prevalence ranging from 3.9% to 36.2% (Beijer*, et al.* 2012). In Ireland, it is estimated that 20,000–50,000 people are chronically infected with HCV, and general prevalence estimates within the drug user populations range from 54% to 84% (Thornton*, et al.* 2011) (Smyth*, et al.* 2000). A 2015 study of people who were homeless/at risk of homelessness receiving free primary healthcare in Dublin reported a HCV prevalence rate of 23% (Keogh*, et al.* 2015). However, information on the extent of chronic liver disease among homeless individuals in Ireland is limited. In addition, there is substandard uptake in HCV assessment and treatment among PWID in Ireland (Crowley*, et al.* 2017).

Recent Irish research aimed to investigate and establish the characterisation of HCV burden among individuals who attended an intensified screening programme for HCV in homeless services in Dublin (Lambert*, et al.* 2019). In this study, published in the journal *BMC Infectious Diseases,* 597 subjects completed a short survey and were offered a rapid oral HCV test. A convenience sample of HCV-positive participants were selected to complete a survey on health and social risk factors. Participants were then tracked along the referral pathway to identify whether they were referred to a specialist clinic, attended the specialist clinic, were assessed for cirrhosis by transient elastography (Fibroscan), and were treated for HCV.

Results

Out of 597 recruited subjects, only 353 provided information on previous HCV screening. Of the 353 subjects, 223 (63%) reported having been screened previously for HCV, of whom 100 (45%) indicated that the results were positive, 78 (35%) negative, and 45 (20%) were unsure. Almost one-half of those with reported previous HCV screening indicated that the screening had been conducted more than two years previously. Five-hundred and thirty-eight participants were screened as part of the current research, with 37% testing positive. Among those who tested positive, 112 (56%) were 'new positives' and 44% were 'known positives'. Undiagnosed HCV was prevalent in 19% of the study sample. Other characteristics of study participants included the following:

- 69% reported use of drugs in the past 30 days, with 45% ever sharing needles, and 73% currently attending a drug treatment centre.
- Unstable accommodation was the most common barrier to attending specialist appointments and accessing treatment.
- Depression and anxiety, dental problems, and respiratory conditions were commonly reported health problems.
- Following a positive HCV test, 46 subjects were referred to specialist care, of which 21 attended at least two appointments. Seven subjects received a Fibroscan or ultrasound and two subjects completed HCV treatment.

Conclusions

The authors indicated that findings from this study represent a first step in Ireland to understanding the needs of homeless individuals, and are intended to inform HepCare Europe in its development of a community-based model of care in order to engage with homeless individuals who are infected with, or affected by, HCV. In addition, the authors suggest that the study demonstrates that the current hospital-based model of care is inadequate in addressing the specific needs of a homeless population and emphasises the necessity for a community-based treatment approach.

Drug use among men who have sex with men in Ireland

Most men who have sex with men (MSM) who use recreational drugs do so on a sporadic basis, for specific purposes such as partying, socialising or having sex. However, evidence suggests that among MSM who use drugs, there is a preference for 'sex-drugs' (chemsex), including alkyl nitrites ('poppers'), crystal methamphetamine ('crystal meth'), club drugs (including ketamine and ecstasy) and new psychoactive substances (McCarthy-Caplan*, et al.* 2014). Use of these drugs is associated with higher-risk sexual behaviours and sexually transmitted disease acquisition (Tomkins*, et al.* 2018). Little is known about the prevalence and determinants of drug use among MSM in Ireland. However, the number of HIV diagnoses has been increasing among MSM in Ireland in recent years and drug use among this population may be a contributory factor.

Recent Irish research aimed to measure the prevalence of recreational drug use among MSM in a national sample and to identify subgroups of MSM who may benefit from targeted preventive interventions (Barrett*, et al.* 2019). In this study, published in the *International Journal of Drugs Policy*, a community-recruited, nationally promoted, self-completed online survey for MSM was used to collect data, which included standardised questions on recreational drugs, poppers, and drugs associated with chemsex. Multivariable-adjusted logistic regression was used to identify factors associated with use of these substances.

Among the survey findings, the study authors highlighted the following:

- In the previous year, 36% of MSM used recreational drugs, 33% used poppers, and 7% used drugs associated with chemsex.
- 5% were diagnosed HIV positive.
- Recreational drug users were significantly younger than non-users (median=27 vs 32 years; p<0.001).
- Popper users were significantly older than non-users (median=34 vs 28 years; p<0.001).

In adjusted multivariable models, it was found that the odds of recreational drug use were significantly higher among students, men who lived in Dublin, and men who smoked tobacco and/or typically binge drink. Any drug use was also associated with increasing openness about homosexual desire (i.e. outness). The odds of recreational drug use were higher among men diagnosed HIV positive (OR=2.27, 95%CI 1.39–3.70), followed by men whose last test was negative (OR=1.37, 95%CI 1.09–1.72) compared with those who never tested. Use of poppers and use of drugs associated with chemsex were also higher among MSM diagnosed HIV positive.

The authors noted that the prevalence of recreational drug use is higher among MSM than in the general population and is particularly high among MSM diagnosed HIV positive. They suggest that targeted harm reduction messages and preventative interventions are needed to complement existing population-based approaches in order to reduce drug use in the population.

T3.2 New developments in harm reduction interventions

Client perspectives on barriers to progressing through methadone maintenance treatment in Ireland

Opiate use disorder (OUD) is a problem worldwide (Teoh Bing Fei*, et al.* 2016). European statistics show that there are approximately 1.3 million high-risk opioid users in the EU, where opioids are found in 82% of fatal overdoses (European Monitoring Centre for Drugs and Drug Addiction 2016). The most recent Irish data from 2014 estimated that there were 18,988 opiate users in the Republic of Ireland, giving a rate of 6.18 per thousand population aged 15–64 years (95% CI: 6.09–6.98) (Hay*, et al.* 2017).

Methadone has ideal properties for the long-term treatment of OUD. A single dose of methadone overpowers the symptoms of opioid withdrawal for 24–36 hours without producing analgesia, sedation or euphoria (Stotts*, et al.* 2009). In Ireland, at year-end 2016, there were 80 Health Service Executive (HSE) methadone specialist centres in operation, treating 5,438 clients (Moran*, et al.* 2018). However, of these clients, only 17 were appropriately stabilised and, as such, transferred to the lower-risk community setting. This represented only 2.2% of the potential transferrable client population.

A recent Irish study aimed to identify reasons as to why clients remain 'trapped' in the high-risk, specialist clinical setting (Moran*, et al.* 2018). In this research, published in the journal *BMC Health Services Research*, qualitative semi-structured interviews were undertaken with 17 clients of one of Ireland's HSE Drug and Alcohol Services. Each client had a severe OUD and had spent on average 7.5 years engaging with the methadone maintenance treatment programme.

Results

Participants' life journey prior to an OUD included adverse childhood experiences (ACEs) and early exposure to illicit drug use. It was found that factors resulting in clients initiating and sustaining an OUD involved continuous hardship into adulthood, mental illness, and concurrent benzodiazepine use disorder, with subjects stating that these often resulted in loneliness and lack of life purpose. Living environments, a mistaken understanding of their illness, and poor communication with allied health professionals further perpetuated their OUD. Participants stated that positive factors influencing periods of abstinence were familial incentives and a belief in the efficacy of methadone. Clients' own suggestions for improving their journeys included employing a multisectorial approach to managing OUD and educating themselves and others on opioid agonist treatments. If clients were not progressing appropriately, they themselves suggested enforcing a 'time-limit' to engage with the programme, or for their treatment to be postponed.

Conclusions

The authors noted that methadone maintenance treatment is ideally placed to work collaboratively with public health in order to access and support vulnerable, high-risk individuals subjected to ACEs. They concluded that a cross-departmental, intergovernmental approach to address substance misuse as a societal issue as a whole is needed. In addition, it was recommended that subsequent work needs to be done on tackling vulnerable children's exposure to illicit drug use, concurrent benzodiazepine use in individuals with OUD, their housing conditions, and their lack of life purpose and loneliness.

T4. Additional information

Report on NPS in Ireland

New psychoactive substances (NPS) have been described by the United Kingdom Advisory Council on the Misuse of Drugs as "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 … are seeking for intoxicant use" (Advisory Council on the Misuse of Drugs 2011). Since 2009, there has been a rapid growth in the availability of novel NPS, labelled 'legal highs', 'designer drugs', 'synthetic drugs', 'bath salts', and 'research chemicals' (Zawilska and Andrzejczak 2015). However, research to date on NPS use in Ireland has been limited to a small number of qualitative studies. A recently published report summarised the available evidence (Hearne*, et al.* 2017).

NPS use in Ireland

Irish legislation blanket bans all psychoactive substances. Under this legislation, psychoactive substances are defined as substances that stimulate or depress the central nervous system and are associated with dependency, hallucinations or disturbances in motor function and/or behaviour (Hearne*, et al.* 2017). The most recent 2010/2011 general population survey in Ireland reported that 3.5% of all adults and 6.7% of young adults aged 15–34 years used NPS, such as party pills or herbal highs, herbal smoking mixtures, or powders such as cathinones, during the 12 months prior to the survey (National Advisory Committee on Drugs and Alcohol 2016). When compared with the previous survey, NPS use has appeared to decline since the introduction of legislation in 2010 and 2011. This drop has also been demonstrated in a reduction in the number of unfavourable incidents

connected with NPS use reported (Hearne*, et al.* 2017). A decline in the detection of cathinone derivatives was also noted via screening of methadone programme clients between 2010 and 2012 (Hearne*, et al.* 2017). In addition, the National Student Drug Survey of Ireland reported a significant decline in the use of synthetic substances (Bingham*, et al.* 2015).

Supply and harm reduction

The National Drugs Strategy 2009–2016 endeavours to monitor head shop activities (pre-legislation) and all other businesses concerned with NPS sales (e.g. online vendors), with the objective of guaranteeing that no illegal actions are undertaken. Nevertheless, demand reduction data, such as custom and excise seizure data relating to NPS use, is currently unavailable.

Although harm reduction information in Ireland is based largely around needle exchange services aimed at reducing harm to injecting drug users and the spread of blood-borne viruses (Van Hout and Hearne 2015), in 2010, the Health Service Executive (HSE) launched a national drug awareness campaign 'Legal or illegal highs – they're anything but safe'. The campaign consisted of information on t-shirts, posters and wallet cards relating to the dangers of NPS, and harm reduction advice about it. It also included an information booklet for parents explaining all aspects of NPS use, legal issues, harm reduction information, and how to deal with someone having a negative reaction to a synthetic substance (Irish Focal Point (Reitox) 2011).

Treatment and NPS-related deaths

The report noted that information regarding treatment is extremely limited in Ireland, but that information available suggests that the numbers of people seeking treatment for NPS as their primary problem substance in recent years are minimal. However, the figures for NPS-related deaths increased from five deaths in 2009 to 15 deaths in 2013. The majority of these deaths were related to polydrug use (Irish Focal Point (Reitox) 2011).

Conclusions

The authors of the report recommend that given the recent legislative changes in Ireland, coupled with the decrease in NPS use prevalence and availability of head shops, greater focus is warranted to monitor online sourcing of NPS to Irish customers, continued harm reduction dissemination to all types of users, and localised surveillance of new trends.

T4.1 Additional sources of information

No information

T4.2 Further aspects of drug-related harms and harm reduction

No information

T5. Sources and methodology

T5.1 Sources

Data for this workbook were provided using five sources:

- National Drug-Related Deaths Index (NDRDI)
- Health Protection Surveillance Centre (HPSC)
- Hospital In-Patient Enquiry (HIPE) scheme
- National Psychiatric In-patient Reporting System (NPIRS)
- National Self-Harm Registry Ireland

T5.2 Methodology

Established in 2005, the **National Drug-Related Deaths Index (NDRDI)**, which is maintained by the HRB, is an epidemiological database that records cases of death by drug poisoning, and deaths among drug users in Ireland, extending back to 1998. The NDRDI also records data on alcohol-related poisoning deaths and deaths among those who are alcohol dependent, extending back to 2004.

The **Health Protection Surveillance Centre (HPSC)** is Ireland's specialist agency for the surveillance of communicable diseases. Part of the HSE, and originally known as the National Disease Surveillance Centre, the HPSC endeavours to protect and improve the health of the Irish population by collating, interpreting and disseminating data to provide the best possible information on infectious diseases. The HPSC has recorded new cases among injecting drug users of HIV since 1982, HBV since 2004, and HCV since 2006.

The **HIPE (Hospital In-Patient Enquiry)** is a computer-based health information system, managed by the Economic and Social Research Institute (ESRI) in association with the Department of Health and the HSE. It collects demographic, medical and administrative data on all admissions, discharges and deaths from acute general hospitals in Ireland. It was started on a pilot basis in 1969 and then expanded and developed as a national database of coded discharge summaries from the 1970s onwards. Each HIPE discharge record represents one episode of care; each discharge of a patient, whether from the same or a different hospital, with the same or a different diagnosis, gives rise to a separate HIPE record. The scheme, therefore, facilitates analysis of hospital activity rather than of the incidence of disease. HIPE does not record information on individuals who attend accident and emergency units but are not admitted as inpatients.

The **National Psychiatric In-Patient Reporting System (NPIRS)**, administered by the HRB, is a national psychiatric database that provides detailed information on all admissions to, and discharges from, 56 inpatient psychiatric services in Ireland. It records data on cases receiving inpatient treatment for problem drug and alcohol use. The NPIRS does not collect data on the prevalence of psychiatric comorbidity in Ireland. The HRB publishes an annual report on the data collected in the NPIRS, entitled *Activities of Irish psychiatric units and hospitals*.

National Self-Harm Registry Ireland is a national system of population monitoring for the occurrence of deliberate self-harm, established at the request of the Department of Health and Children by the National Suicide Research Foundation. Since 2006/7 the Registry has achieved complete national coverage of hospital-treated deliberate self-harm. The Registry defines deliberate self-harm as "an act with a non-fatal outcome in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others, will cause self-harm, or deliberate ingestion of a substance in excess of the prescribed or generally recognised therapeutic dosage, and which is aimed at realising changes that the person desires via the actual or expected physical consequences". All methods of deliberate self-harm are recorded in the Registry, including drug overdoses and alcohol overdoses, where it is clear that the self-harm was intentionally inflicted. All individuals who are alive on admission to hospital following a deliberate act of self-harm are included. Not considered deliberate self-harm are accidental overdoses, e.g. an individual who takes additional medication in the case of illness, without any intention to self-harm; alcohol overdoses alone, where the intention was not to self-harm; accidental overdoses of street drugs (drugs used for recreational purposes), without the intention to self-harm; and individuals who are dead on arrival at hospital as a result of suicide.

T5.3 References

Adolescent addiction service (2018). Adolescent addiction service report 2018. Health Service Executive, Dublin. Available at https://www.drugsandalcohol.ie/29358/

Advisory Council on the Misuse of Drugs (2011). Consideration of the novel psychoactive substances ('legal highs'). Advisory Council on the Misuse of Drugs, London. Available at https://www.drugsandalcohol.ie/16149/

Attewill, F. (2011, 31 January). Fears for addicts as heroin drought hits. Metro. Retrieved from http://www.drugsandalcohol.ie/15367/

Barrett, P., O'Donnell, K., Fitzgerald, M., Schmidt, A., Hickson, F., Quinlan, M. *, et al.* (2019). Drug use among men who have sex with men in Ireland: Prevalence and associated factors from a national online survey. International Journal of Drug Policy, **64**, 5-12. Available at https://www.drugsandalcohol.ie/30028/

Beijer, U., Wolf, A. and Fazel, S. (2012). Prevalence of tuberculosis, hepatitis C virus, and HIV in homeless people: a systematic review and meta-analysis. The Lancet. Infectious diseases, **12**, (11), 859-870. Available at https://www.ncbi.nlm.nih.gov/pubmed/22914343 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3494003/

Bingham, T., O'Driscoll, C. and De Barra, G. (2015). National student drug survey 2015. n/a, Dublin. Available at http://www.drugsandalcohol.ie/24807/

Cousins, G., Boland, F., Courtney, B., Barry, J., Lyons, S. and Fahey, T. (2016). Risk of mortality on and off methadone substitution treatment in primary care: a national cohort study. Addiction, **111**, (1), 73-82. Available at http://www.drugsandalcohol.ie/24374/

Cousins, G., Boland, F., Barry, J., Lyons, S., Keenan, E., O'Driscoll, D. *, et al.* (2017). J-shaped relationship between supervised methadone consumption and retention in methadone maintenance treatment (MMT) in primary care: national cohort study. Drug and Alcohol Dependence, **173**, 126-131. Available at http://www.drugsandalcohol.ie/26891/

Crowley, D., Cullen, W., Laird, E., Lambert, J. S., Mc Hugh, T., Murphy, C. *, et al.* (2017). Exploring patient characteristics and barriers to hepatitis C treatment in patients on opioid substitution treatment attending a community based fibro-scanning clinic. Journal of Translational Internal Medicine, **5**, (2), 112-119. Available at http://www.drugsandalcohol.ie/27666/

Crozier, S. R., Robinson, S. M., Borland, S. E., Godfrey, K. M., Cooper, C. and Inskip, H. M. (2009). Do women change their health behaviours in pregnancy? Findings from the Southampton Women's Survey. Paediatr Perinat Epidemiol, **23**, (5), 446-453.

Cullen, W., Stanley, J., Langton, D., Kelly, Y. and Bury, G. (2007). Management of hepatitis C among drug users attending general practice in Ireland: baseline data from the Dublin area hepatitis C in general practice initiative. European Journal of General Practice, **13**, (1), 5-12.

Daly, A. and Craig, S. (2016). Irish psychiatric units and hospitals census 2016: main findings. Health Research Board, Dublin. Available at http://www.drugsandalcohol.ie/26559/

Daly, A. and Craig, S. (2018). Activities of Irish psychiatric units and hospitals 2017. Main findings. Health Research Board, Dublin. Available at https://www.drugsandalcohol.ie/29345/

Daly, A., Craig, S. and O'Sullivan, E. (2019). A profile of psychiatric in-patient admissions with no fixed abode (NFA) 2007-2016. Irish Medical Journal, **112**, (1). Available at https://www.drugsandalcohol.ie/30179/

Department of Community, Rural and Gaeltacht Affairs, (2009). National Drugs Strategy (interim) 2009–2016. Department of Community, Rural and Gaeltacht Affairs, Dublin. Available at http://www.drugsandalcohol.ie/12388/

Department of Health (2015). National sexual health strategy 2015-2020 and action plan 2015-2016. Department of Health, Dublin. Available at https://www.drugsandalcohol.ie/24714/

Department of Health (2017). Hepatitis C screening. National clinical guideline no. 15. Department of Health, Dublin. Available at https://www.drugsandalcohol.ie/27729/

Drummond, A., Codd, M., Donnelly, N., McCausland, D., Mehegan, J., Daly, L. *, et al.* (2014). Study on the prevalence of drug use,including intravenous drug use, and blood-borne viruses among the Irish prisoner population. National Advisory Committee on Drugs and Alcohol, Dublin. Available at http://www.drugsandalcohol.ie/21750/

European Centre for Disease Prevention and Control (ECDC) and European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2011). Prevention and control of infectious diseases among people who inject drugs. ECDC, Stockholm. Available at http://www.drugsandalcohol.ie/16075/

European Monitoring Centre for Drugs and Drug Addiction (2016). European drug report 2016: trends and developments. Publications Office of the European Union, Luxembourg. Available at http://www.drugsandalcohol.ie/25579/

Fazel, S., Geddes, J. R. and Kushel, M. (2014). The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. Lancet (London, England), **384**, (9953), 1529-1540. Available at https://www.ncbi.nlm.nih.gov/pubmed/25390578

Grebely, J., Larney, S., Peacock, A., Colledge, S., Leung, J., Hickman, M. *, et al.* (2019). Global, regional, and country-level estimates of hepatitis C infection among people who have recently injected drugs. Addiction, **114**, (1), 150-166. Available at https://www.drugsandalcohol.ie/29394/

Griffin, E., Dillon, C. B., McTernan, N., Arensman, E., Williamson, E., Perry, I. J. *, et al.* (2018). National Self-Harm Registry Ireland annual report 2017. National Suicide Research Foundation, Cork. Available at https://www.drugsandalcohol.ie/29774/

Grogan, L., Tiernan, M., Geoghegan, N., Smyth, B. P. and Keenan, E. (2005). Bloodborne virus infections among drug users in Ireland: a retrospective cross-sectional survey of screening, prevalence, incidence and hepatitis B immunisation uptake. Irish Journal of Medical Science, **174**, (2), 14–20. Available at http://www.drugsandalcohol.ie/6863/

Hay, G., Jaddoa, A., Oysten, J., Webster, J., Van Hout, M. C. and Rael dos Santos, A. (2017). Estimating the prevalence of problematic opiate use in Ireland using indirect statistical methods. National Advisory Committee on Drugs and Alcohol, Dublin. Available at www.drugsandalcohol.ie/27233

Health Protection Surveillance Centre (2018). Drug-related bloodborne viruses in Ireland. Health Protection Surveillance Centre, Dublin. Available at https://www.drugsandalcohol.ie/29685/

Health Research Board (2019). National Drug-Related Deaths Index 2004 to 2016 data. Health Research Board, Dublin. Available at https://www.drugsandalcohol.ie/30174/

Health Service Executive (2016). Clinical guidelines for opioid substitution treatment. Health Service Executive, Dublin. Available at http://www.drugsandalcohol.ie/26573/

Hearne, E., Wells, J. and Van Hout, M. C. (2017). Country report on new psychoactive substances in Ireland. NPS-transnational Project (HOME/2014/JDRU/AG/DRUG/7077), Available at https://www.drugsandalcohol.ie/29961/

Homeless Agency (2008). Researching homelessness in Ireland: explanations, themes and approaches. . In Perspectives on Irish homelessness past, present and future, Downey, D. (ed.) Homeless Agency, Dublin,

Irish College of General Practitioners (2003). Working with opiate users in community based primary care. Irish College of General Practitioners, Dublin.

Irish Focal Point (Reitox) (2011). 2011 National Report (2010 data) to the EMCDDA by the Reitox National Focal Point. Ireland: new developments, trends and in-depth information on selected issues. Health Research Board, Dublin. Available at http://www.drugsandalcohol.ie/16812/

Irish Prison Service (2011). Irish Prison Service healthcare standards. Irish Prison Service, Longford. Available at https://www.drugsandalcohol.ie/30875/

Keegan, D., Crowley, D., Laird, E. and Van Hout, M. C. (2017). Prevalence and risk factors for Hepatitis C viral infection amongst a cohort of Irish drug users attending a drug treatment centre for Agonist Opioid Treatment (AOT). Heroin Addiction and Related Clinical Problems, **19**, (1), 45-55. Available at http://www.drugsandalcohol.ie/25815/

Keogh, C., O'Brien, K. K., Hoban, A., O'Carroll, A. and Fahey, T. (2015). Health and use of health services of people who are homeless and at risk of homelessness who receive free primary health care in Dublin. BMC Health Services Research, **15**, (1), 58. Available at https://www.drugsandalcohol.ie/23533/

Lambert, J. S., Murtagh, R., Menezes, D., O'Carroll, A., Murphy, C., Cullen, W. *, et al.* (2019). 'HepCheck Dublin': an intensified hepatitis C screening programme in a homeless population demonstrates the need for alternative models of care. BMC Infectious Diseases, **19**, (1), 128. Available at https://www.drugsandalcohol.ie/30408/

Lazarus, J. V., Sperle, I., Maticic, M. and Wiessing, L. (2014). A systematic review of Hepatitis C virus treatment uptake among people who inject drugs in the European Region. BMC Infectious Diseases, **14**, (Supp 6), S16. Available at https://www.drugsandalcohol.ie/22756/

Long, J., Keenan, E., Grogan, L., Mullen, L., Barry, J. and Sinclair, H. (2006). HIV infection among heroin users and area of residence. Irish Medical Journal, **99**, (8), 230-233.

McCarthy-Caplan, D., Jantz, I. and Swartz, J. (2014). MSM and drug use: a latent class analysis of drug use and related sexual risk behaviors. AIDS and Behavior, **18**, (7), 1339-1351. Available at https://www.drugsandalcohol.ie/27659/

Merchants Quay Ireland (2017). Merchants Quay Ireland annual review 2016. Merchants Quay Ireland, Dublin. Available at https://www.drugsandalcohol.ie/27910/

Merchants Quay Ireland (2018). Merchant's Quay Ireland annual review 2017. Merchants Quay Ireland, Dublin. Available at https://www.drugsandalcohol.ie/29674/

Moore, G., McCarthy, P., MacNeela, P., MacGabhann, L., Philbin, M. and Proudfoot, D. (2004). A review of harm reduction approaches in Ireland and evidence from the international literature. Stationery Office, Dublin.

Moran, L., Keenan, E. and Elmusharaf, K. (2018). Barriers to progressing through a methadone maintenance treatment programme: perspectives of the clients in the Mid-West of Ireland's drug and alcohol services. BMC Health Services Research, **18**, (1), 911. Available at https://www.drugsandalcohol.ie/30195/

Murphy, N., Thornton, L. and Bourke, M. (2018). Audit of Hepatitis C testing and referral 2016 addiction treatment centres, community health organisation area 7. Health Protection Surveillance Centre, Dublin. Available at https://www.drugsandalcohol.ie/30876/

Murtagh, R., Swan, D., O'Connor, E., McCombe, G., Murphy, C., Lambert, J. S. *, et al.* (2017). Hepatitis C management among patients receiving opioid substitution treatment in general practice in Ireland. Irish Journal of Medical Science, **186**, (12), S466. Available at https://www.drugsandalcohol.ie/30872/

National Advisory Committee on Drugs and Alcohol (2016). Prevalence of drug use and gambling in Ireland & drug use in Northern Ireland. Bulletin 1. National Advisory Committee on Drugs and Alcohol, Dublin. Available at http://www.drugsandalcohol.ie/26364/

National Immunisation Advisory Committee of the Royal College of Physicians of Ireland (2019). Immunisation guidelines for Ireland, 2019 edition. Royal College of Physicians of Ireland, Dublin. Available at https://www.drugsandalcohol.ie/12920/

Nelson, P. K., Mathers, B. M., Cowie, B., Hagan, H., Des Jarlais, D. C., Horyniak, D. *, et al.* (2011). Global epidemiology of hepatitis B and hepatitis C in people who inject drugs: results of systematic reviews. The Lancet, **378**, (9791), 571-583. Available at http://www.drugsandalcohol.ie/15845/

O'Keefe, C. (2010, December 16). Heroin drought can lead to death. Irish Examiner. Retrieved from http://www.drugsandalcohol.ie/14424/

O'Kelly, F., Cullen, B., Bury, G. and Dean, G. (1988). The rise and fall of heroin use in an inner city area of Dublin. Irish Journal of Medical Science, **157**, (2), 35-38. Available at https://www.drugsandalcohol.ie/6538/

O'Kelly, F. D. and O'Kelly, C. (2012). The natural history of injecting drug use: a 25-year longitudinal study of a cohort of injecting drug users in inner city Dublin. Irish Journal of Medical Science, **181**, (4), 541-548. Available at http://www.drugsandalcohol.ie/17219/

Reynolds, C. M., Egan, B., Daly, N., McKeating, A., Sheehan, S. R. and Turner, M. J. (2019). The interaction between maternal smoking, illicit drug use and alcohol consumption associated with neonatal outcomes. Journal of Public Health, **Early online**. Available at https://www.drugsandalcohol.ie/30260/

Smyth, B. P., Keenan, E. and O'Connor, J. J. (2000). Assessment of hepatitis C infection in injecting drug users attending an addiction treatment clinic. Irish Journal of Medical Science, **169**, (2), 129–132. Available at http://www.drugsandalcohol.ie/6584/

Stotts, A. L., Dodrill, C. L. and Kosten, T. R. (2009). Opioid dependence treatment: options in pharmacotherapy. Expert opinion on pharmacotherapy, **10**, (11), 1727-1740. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2874458/

Tabor Group (2019). Tabor Group annual report 2018. Tabor Group, Cork. Available at https://www.drugsandalcohol.ie/30698/

Teoh Bing Fei, J., Yee, A. and Habil, M. H. (2016). Psychiatric comorbidity among patients on methadone maintenance therapy and its influence on quality of life. Am J Addict, **25**, (1), 49-55.

The Rotunda Hospital (2018). Rotunda Hospital annual report, 2017. pp. 188 p. Dublin. Available at https://www.drugsandalcohol.ie/30085/

Thornton, L., Murphy, N., Jones, L., Connell, J., Dooley, S., Gavin, S. *, et al.* (2011). Determination of the burden of hepatitis C virus infection in Ireland. Epidemiology, **140**, (8), 1461-1468. Available at http://www.drugsandalcohol.ie/15981/

Tomkins, A., Ahmad, S., Cannon, L., Higgins, S. P., Kliner, M., Kolyva, A. *, et al.* (2018). Prevalence of recreational drug use reported by men who have sex with men attending sexual health clinics in Manchester, UK. Int J STD AIDS, **29**, (4), 350-356.

Van Hout, M. C. and Hearne, E. (2015). A community based study of Synthetic Cannabinoid use in Co. Monaghan, Ireland. Teach na Daoine Family Resource Centre, Monaghan. Available at http://www.drugsandalcohol.ie/24855/

Ventura SJ, Hamilton BE, Mathews TJ and Chandra A (2013). Trends and variations in smoking during pregnancy and low birth weight: evidence from the birth certificate, 1990-2000. Pediatrics, **111**, 1176–1180.

World Health Organization (2017). Global hepatitis report 2017. World Health Organization, Geneva. Available at https://www.drugsandalcohol.ie/27177/

Zawilska, J. B. and Andrzejczak, D. (2015). Next generation of novel psychoactive substances on the horizon - A complex problem to face. Drug Alcohol Depend, **157**, 1-17.

European Monitoring Centre for Drugs and Drug Addiction

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) is a decentralised EU agency based in Lisbon. The EMCDDA provides the EU and its Member States with information on the nature, extent, consequences and responses to illicit drug use. It supplies the evidence base to support policy formation on drugs and addiction in both the European Union and Member States. There are 30 National Focal Points that act as monitoring centres for the EMCDDA. These focal points gather and analyse country data according to common data-collection standards and tools and supply these data to the EMCDDA. The results of this national monitoring process are supplied to the Centre for analysis, from which it produces the annual *European drug report* and other outputs.

The Irish Focal Point to the EMCDDA is based in the Health Research Board. The focal point writes and submits a series of textual reports, data on the five epidemiological indicators and supply indicators in the form of standard tables and structured questionnaires on response-related issues such as prevention and social reintegration. The focal point is also responsible for implementing Council Decision 2005/387/JHA on the information exchange, risk assessment and control of new psychoactive substances.

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Adolescent addiction service (2018). Adolescent addiction service report 2018. Health Service Executive, Dublin. Available at https://www.drugsandalcohol.ie/29358/

Advisory Council on the Misuse of Drugs (2011). Consideration of the novel psychoactive substances ('legal highs'). Advisory Council on the Misuse of Drugs, London. Available at https://www.drugsandalcohol.ie/16149/

Attewill, F. (2011, 31 January). Fears for addicts as heroin drought hits. Metro. Retrieved from http://www.drugsandalcohol.ie/15367/

Barrett, P., O'Donnell, K., Fitzgerald, M., Schmidt, A., Hickson, F., Quinlan, M. *, et al.* (2019). Drug use among men who have sex with men in Ireland: Prevalence and associated factors from a national online survey. International Journal of Drug Policy, **64**, 5-12. Available at https://www.drugsandalcohol.ie/30028/

Beijer, U., Wolf, A. and Fazel, S. (2012). Prevalence of tuberculosis, hepatitis C virus, and HIV in homeless people: a systematic review and meta-analysis. The Lancet. Infectious diseases, **12**, (11), 859-870. Available at https://www.ncbi.nlm.nih.gov/pubmed/22914343 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3494003/

Bingham, T., O'Driscoll, C. and De Barra, G. (2015). National student drug survey 2015. n/a, Dublin. Available at http://www.drugsandalcohol.ie/24807/

Cousins, G., Boland, F., Courtney, B., Barry, J., Lyons, S. and Fahey, T. (2016). Risk of mortality on and off methadone substitution treatment in primary care: a national cohort study. Addiction, **111**, (1), 73-82. Available at http://www.drugsandalcohol.ie/24374/

Cousins, G., Boland, F., Barry, J., Lyons, S., Keenan, E., O'Driscoll, D. *, et al.* (2017). J-shaped relationship between supervised methadone consumption and retention in methadone maintenance treatment (MMT) in primary care: national cohort study. Drug and Alcohol Dependence, **173**, 126-131. Available at http://www.drugsandalcohol.ie/26891/

Crowley, D., Cullen, W., Laird, E., Lambert, J. S., Mc Hugh, T., Murphy, C. *, et al.* (2017). Exploring patient characteristics and barriers to hepatitis C treatment in patients on opioid substitution treatment attending a community based fibro-scanning clinic. Journal of Translational Internal Medicine, **5**, (2), 112-119. Available at http://www.drugsandalcohol.ie/27666/

Crozier, S. R., Robinson, S. M., Borland, S. E., Godfrey, K. M., Cooper, C. and Inskip, H. M. (2009). Do women change their health behaviours in pregnancy? Findings from the Southampton Women's Survey. Paediatr Perinat Epidemiol, **23**, (5), 446-453.
Cullen, W., Stanley, J., Langton, D., Kelly, Y. and Bury, G. (2007). Management of hepatitis C among drug users attending general practice in Ireland: baseline data from the Dublin area hepatitis C in general practice initiative. European Journal of General Practice, **13**, (1), 5-12.
Daly, A. and Craig, S. (2016). Irish psychiatric units and hospitals census 2016: main findings. Health Research Board, Dublin. Available at http://www.drugsandalcohol.ie/26559/
Daly, A. and Craig, S. (2018). Activities of Irish psychiatric units and hospitals 2017. Main findings. Health Research Board, Dublin. Available at https://www.drugsandalcohol.ie/29345/
Daly, A., Craig, S. and O'Sullivan, E. (2019). A profile of psychiatric in-patient admissions with no fixed abode (NFA) 2007-2016. Irish Medical Journal, **112**, (1). Available at https://www.drugsandalcohol.ie/30179/
Department of Community, Rural and Gaeltacht Affairs, (2009). National Drugs Strategy (interim) 2009–2016. Department of Community, Rural and Gaeltacht Affairs, Dublin. Available at http://www.drugsandalcohol.ie/12388/
Department of Health (2015). National sexual health strategy 2015-2020 and action plan 2015-2016. Department of Health, Dublin. Available at https://www.drugsandalcohol.ie/24714/
Department of Health (2017). Hepatitis C screening. National clinical guideline no. 15. Department of Health, Dublin. Available at https://www.drugsandalcohol.ie/27729/
Drummond, A., Codd, M., Donnelly, N., McCausland, D., Mehegan, J., Daly, L. *, et al.* (2014). Study on the prevalence of drug use,including intravenous drug use, and blood-borne viruses among the Irish prisoner population. National Advisory Committee on Drugs and Alcohol, Dublin. Available at http://www.drugsandalcohol.ie/21750/
European Centre for Disease Prevention and Control (ECDC) and European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (2011). Prevention and control of infectious diseases among people who inject drugs. ECDC, Stockholm. Available at http://www.drugsandalcohol.ie/16075/
European Monitoring Centre for Drugs and Drug Addiction (2016). European drug report 2016: trends and developments. Publications Office of the European Union, Luxembourg. Available at http://www.drugsandalcohol.ie/25579/
Fazel, S., Geddes, J. R. and Kushel, M. (2014). The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. Lancet (London, England), **384**, (9953), 1529-1540. Available at https://www.ncbi.nlm.nih.gov/pubmed/25390578
Grebely, J., Larney, S., Peacock, A., Colledge, S., Leung, J., Hickman, M. *, et al.* (2019). Global, regional, and country-level estimates of hepatitis C infection among people who have recently injected drugs. Addiction, **114**, (1), 150-166. Available at https://www.drugsandalcohol.ie/29394/
Griffin, E., Dillon, C. B., McTernan, N., Arensman, E., Williamson, E., Perry, I. J. *, et al.* (2018). National Self-Harm Registry Ireland annual report 2017. National Suicide Research Foundation, Cork. Available at https://www.drugsandalcohol.ie/29774/
Grogan, L., Tiernan, M., Geoghegan, N., Smyth, B. P. and Keenan, E. (2005). Bloodborne virus infections among drug users in Ireland: a retrospective cross-sectional survey of screening, prevalence, incidence and hepatitis B immunisation uptake. Irish Journal of Medical Science, **174**, (2), 14–20. Available at http://www.drugsandalcohol.ie/6863/
Hay, G., Jaddoa, A., Oysten, J., Webster, J., Van Hout, M. C. and Rael dos Santos, A. (2017). Estimating the prevalence of problematic opiate use in Ireland using indirect statistical methods. National Advisory Committee on Drugs and Alcohol, Dublin. Available at www.drugsandalcohol.ie/27233
Health Protection Surveillance Centre (2018). Drug-related bloodborne viruses in Ireland. Health Protection Surveillance Centre, Dublin. Available at https://www.drugsandalcohol.ie/29685/
Health Research Board (2019). National Drug-Related Deaths Index 2004 to 2016 data. Health Research Board, Dublin. Available at https://www.drugsandalcohol.ie/30174/
Health Service Executive (2016). Clinical guidelines for opioid substitution treatment. Health Service Executive, Dublin. Available at http://www.drugsandalcohol.ie/26573/
Hearne, E., Wells, J. and Van Hout, M. C. (2017). Country report on new psychoactive substances in Ireland. NPS-transnational Project (HOME/2014/JDRU/AG/DRUG/7077), Available at https://www.drugsandalcohol.ie/29961/

Homeless Agency (2008). Researching homelessness in Ireland: explanations, themes and approaches. . In Perspectives on Irish homelessness past, present and future, Downey, D. (ed.) Homeless Agency, Dublin,
Irish College of General Practitioners (2003). Working with opiate users in community based primary care. Irish College of General Practitioners, Dublin.
Irish Focal Point (Reitox) (2011). 2011 National Report (2010 data) to the EMCDDA by the Reitox National Focal Point. Ireland: new developments, trends and in-depth information on selected issues. Health Research Board, Dublin. Available at http://www.drugsandalcohol.ie/16812/
Irish Prison Service (2011). Irish Prison Service healthcare standards. Irish Prison Service, Longford. Available at https://www.drugsandalcohol.ie/30875/
Keegan, D., Crowley, D., Laird, E. and Van Hout, M. C. (2017). Prevalence and risk factors for Hepatitis C viral infection amongst a cohort of Irish drug users attending a drug treatment centre for Agonist Opioid Treatment (AOT). Heroin Addiction and Related Clinical Problems, **19**, (1), 45-55. Available at http://www.drugsandalcohol.ie/25815/
Keogh, C., O'Brien, K. K., Hoban, A., O'Carroll, A. and Fahey, T. (2015). Health and use of health services of people who are homeless and at risk of homelessness who receive free primary health care in Dublin. BMC Health Services Research, **15**, (1), 58. Available at https://www.drugsandalcohol.ie/23533/
Lambert, J. S., Murtagh, R., Menezes, D., O'Carroll, A., Murphy, C., Cullen, W. *, et al.* (2019). 'HepCheck Dublin': an intensified hepatitis C screening programme in a homeless population demonstrates the need for alternative models of care. BMC Infectious Diseases, **19**, (1), 128. Available at https://www.drugsandalcohol.ie/30408/
Lazarus, J. V., Sperle, I., Maticic, M. and Wiessing, L. (2014). A systematic review of Hepatitis C virus treatment uptake among people who inject drugs in the European Region. BMC Infectious Diseases, **14**, (Supp 6), S16. Available at https://www.drugsandalcohol.ie/22756/
Long, J., Keenan, E., Grogan, L., Mullen, L., Barry, J. and Sinclair, H. (2006). HIV infection among heroin users and area of residence. Irish Medical Journal, **99**, (8), 230-233.
McCarthy-Caplan, D., Jantz, I. and Swartz, J. (2014). MSM and drug use: a latent class analysis of drug use and related sexual risk behaviors. AIDS and Behavior, **18**, (7), 1339-1351. Available at https://www.drugsandalcohol.ie/27659/
Merchants Quay Ireland (2017). Merchants Quay Ireland annual review 2016. Merchants Quay Ireland, Dublin. Available at https://www.drugsandalcohol.ie/27910/
Merchants Quay Ireland (2018). Merchant's Quay Ireland annual review 2017. Merchants Quay Ireland, Dublin. Available at https://www.drugsandalcohol.ie/29674/
Moore, G., McCarthy, P., MacNeela, P., MacGabhann, L., Philbin, M. and Proudfoot, D. (2004). A review of harm reduction approaches in Ireland and evidence from the international literature. Stationery Office, Dublin.
Moran, L., Keenan, E. and Elmusharaf, K. (2018). Barriers to progressing through a methadone maintenance treatment programme: perspectives of the clients in the Mid-West of Ireland's drug and alcohol services. BMC Health Services Research, **18**, (1), 911. Available at https://www.drugsandalcohol.ie/30195/
Murphy, N., Thornton, L. and Bourke, M. (2018). Audit of Hepatitis C testing and referral 2016 addiction treatment centres, community health organisation area 7. Health Protection Surveillance Centre, Dublin. Available at https://www.drugsandalcohol.ie/30876/
Murtagh, R., Swan, D., O'Connor, E., McCombe, G., Murphy, C., Lambert, J. S. *, et al.* (2017). Hepatitis C management among patients receiving opioid substitution treatment in general practice in Ireland. Irish Journal of Medical Science, **186**, (12), S466. Available at https://www.drugsandalcohol.ie/30872/
National Advisory Committee on Drugs and Alcohol (2016). Prevalence of drug use and gambling in Ireland & drug use in Northern Ireland. Bulletin 1. National Advisory Committee on Drugs and Alcohol, Dublin. Available at http://www.drugsandalcohol.ie/26364/
National Immunisation Advisory Committee of the Royal College of Physicians of Ireland (2019). Immunisation guidelines for Ireland, 2019 edition. Royal College of Physicians of Ireland, Dublin. Available at https://www.drugsandalcohol.ie/12920/
Nelson, P. K., Mathers, B. M., Cowie, B., Hagan, H., Des Jarlais, D. C., Horyniak, D. *, et al.* (2011). Global epidemiology of hepatitis B and hepatitis C in people who inject drugs: results of systematic reviews. The Lancet, **378**, (9791), 571-583. Available at http://www.drugsandalcohol.ie/15845/
O'Keefe, C. (2010, December 16). Heroin drought can lead to death. Irish Examiner. Retrieved from http://www.drugsandalcohol.ie/14424/

O'Kelly, F., Cullen, B., Bury, G. and Dean, G. (1988). The rise and fall of heroin use in an inner city area of Dublin. Irish Journal of Medical Science, **157**, (2), 35-38. Available at https://www.drugsandalcohol.ie/6538/
O'Kelly, F. D. and O'Kelly, C. (2012). The natural history of injecting drug use: a 25-year longitudinal study of a cohort of injecting drug users in inner city Dublin. Irish Journal of Medical Science, **181**, (4), 541-548. Available at http://www.drugsandalcohol.ie/17219/
Reynolds, C. M., Egan, B., Daly, N., McKeating, A., Sheehan, S. R. and Turner, M. J. (2019). The interaction between maternal smoking, illicit drug use and alcohol consumption associated with neonatal outcomes. Journal of Public Health, **Early online**. Available at https://www.drugsandalcohol.ie/30260/
Smyth, B. P., Keenan, E. and O'Connor, J. J. (2000). Assessment of hepatitis C infection in injecting drug users attending an addiction treatment clinic. Irish Journal of Medical Science, **169**, (2), 129–132. Available at http://www.drugsandalcohol.ie/6584/
Stotts, A. L., Dodrill, C. L. and Kosten, T. R. (2009). Opioid dependence treatment: options in pharmacotherapy. Expert opinion on pharmacotherapy, **10**, (11), 1727-1740. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2874458/
Tabor Group (2019). Tabor Group annual report 2018. Tabor Group, Cork. Available at https://www.drugsandalcohol.ie/30698/
Teoh Bing Fei, J., Yee, A. and Habil, M. H. (2016). Psychiatric comorbidity among patients on methadone maintenance therapy and its influence on quality of life. Am J Addict, **25**, (1), 49-55.
The Rotunda Hospital (2018). Rotunda Hospital annual report, 2017. pp. 188 p. Dublin. Available at https://www.drugsandalcohol.ie/30085/
Thornton, L., Murphy, N., Jones, L., Connell, J., Dooley, S., Gavin, S. *, et al.* (2011). Determination of the burden of hepatitis C virus infection in Ireland. Epidemiology, **140**, (8), 1461-1468. Available at http://www.drugsandalcohol.ie/15981/
Tomkins, A., Ahmad, S., Cannon, L., Higgins, S. P., Kliner, M., Kolyva, A. *, et al.* (2018). Prevalence of recreational drug use reported by men who have sex with men attending sexual health clinics in Manchester, UK. Int J STD AIDS, **29**, (4), 350-356.
Van Hout, M. C. and Hearne, E. (2015). A community based study of Synthetic Cannabinoid use in Co. Monaghan, Ireland. Teach na Daoine Family Resource Centre, Monaghan. Available at http://www.drugsandalcohol.ie/24855/
Ventura SJ, Hamilton BE, Mathews TJ and Chandra A (2013). Trends and variations in smoking during pregnancy and low birth weight: evidence from the birth certificate, 1990-2000. Pediatrics, **111**, 1176–1180.
World Health Organization (2017). Global hepatitis report 2017. World Health Organization, Geneva. Available at https://www.drugsandalcohol.ie/27177/
Zawilska, J. B. and Andrzejczak, D. (2015). Next generation of novel psychoactive substances on the horizon - A complex problem to face. Drug Alcohol Depend, **157**, 1-17.