

National Drug-Related Deaths Index

2004 to 2014 data

Overview

This update presents figures from the National Drug-Related Deaths Index (NDRDI) on deaths due to poisoning (overdose) by alcohol and/or other drugs, and deaths among drug users (non-poisoning), in the period 2004–2014.

In the eleven-year period 2004–2014 there were a total of 6,697 poisoning deaths and deaths among drug users:

- 3,864 (58%) were due to poisoning
- 2,833 (42%) were non-poisoning

In 2014, there were 697 deaths (poisoning and non-poisoning combined), similar to the number reported in 2013 (n=698):

- Median age for all deaths in 2014 was 39 years and 75% (n=523) of all deaths were male

Poisoning deaths in 2014

The annual number of poisoning deaths decreased by 11%, from 397 in 2013 to 354 in 2014.

Two thirds of poisoning deaths involved **poly drugs**, with an average of four different drugs involved. Benzodiazepines were the most common drug group involved in poly drug deaths.

- **Prescription drugs** were implicated in three out of four poisoning deaths:

- Diazepam (a benzodiazepine) was the most common single prescription drug, implicated in one third (32%) of all poisoning deaths
- Methadone was implicated in more than a quarter of poisonings (98, 28%)
- Zopiclone-related deaths (a non-benzodiazepine sedative drug) increased by 41% between 2013 and 2014

The number of deaths where the **illicit drugs** heroin and cocaine were implicated increased:

- Heroin-related deaths increased to 90 in 2014 compared to 86 in 2013
- Cocaine-related deaths increased by 25% from 32 in 2013 to 40 in 2014

Alcohol was implicated in 115 deaths (32% of all poisonings):

- Alcohol alone was responsible for 13% of all poisoning deaths in 2014

Non-poisoning deaths in 2014

The number of non-poisoning deaths increased by 14%, from 301 in 2013 to 343 in 2014. The main causes of non-poisoning deaths were hanging (27%) and cardiac events (15%):

- One in four were due to hanging
- 21% increase in deaths due to hanging between 2013 and 2014
- Over two thirds (67%) of people who died as a result of hanging had a history of mental health illness

Trends 2004 to 2014

In the eleven-year period 2004–2014 a total of 6,697 poisoning deaths and deaths among drug users met the criteria for inclusion in the NDRDI database. The number of deaths increased by 62% in the 11 year period, from 431 in 2004 to 697 in 2014.

The figures in this update supersede all previously published figures. In 2014, there were 697 deaths, similar to the number reported in 2013 (n=698) (Table 1). The 2014 figure is likely to be revised upwards when new data become available from closed inquest files.

Table 1 Number of deaths, by year, NDRDI 2004 to 2014 (N = 6,697)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All deaths (total)	431	503	554	620	628	656	607	643	660	698	697
Poisonings (3,864)	266	301	326	387	386	372	340	377	358	397	354
<i>Poisonings male</i>	175	199	228	270	274	254	252	274	266	270	254
<i>Poisonings female</i>	91	102	98	117	112	118	88	103	92	127	100
Median age	40	39	36	36	38	38	40	39	40	40	39
Non-poisonings (2,833)	165	202	228	233	242	284	267	266	302	301	343
<i>Non-poisonings male</i>	153	176	192	177	196	212	206	217	231	233	269
<i>Non-poisoning females</i>	12	26	36	56	46	72	61	49	71	68	74
Median age trauma	27	27	27	28	27.5	30	31.5	30	31	33.5	33
Median age medical	37	38	42	41	42	40	43	44	46	47	47

Poisoning deaths in 2014

The annual number of poisoning deaths decreased from 397 in 2013 to 354 in 2014 (Table 1). Males have accounted for the majority of deaths in each year since 2004; 72% of all poisoning deaths in 2014 were male. The median age of those who died in 2014 was 39 years, similar to previous years.

As the number of deaths fluctuate year on year Figure 1 shows the three year moving averages. These are likely to provide a better guide to the long-term trend than the change between any two individual years. After an increase from 2004 to 2008 the average number of deaths has plateaued.

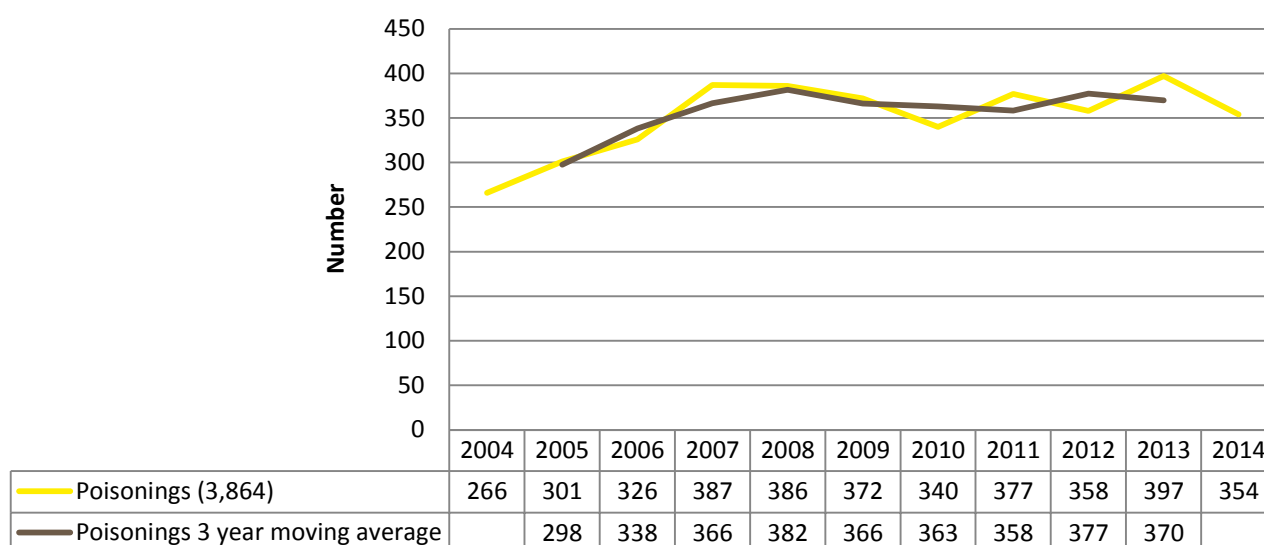


Figure 1 Three year moving averages, NDRDI 2004 to 2014 (N = 3,864)

Prescription drugs were implicated in 73% (n=259) of all poisoning deaths. Table 2 shows the most common drug groups while Table 3 shows the most common individual drugs implicated in poisoning deaths:

- Benzodiazepines were the most common prescription drug group implicated
- Diazepam (a benzodiazepine) was the most common single prescription drug, implicated in 115 (32%) of all poisoning deaths

- Zopiclone-related deaths (a non-benzodiazepine sedative drug) increased by 41% from 51 in 2013 to 72 in 2014
- Pregabalin-related deaths (antiepileptic drug) increased by 86% from 14 in 2013 to 26 in 2014.

Opiates were the main drug group implicated in poisoning deaths in Ireland in 2014 (Table 2).

- Methadone was implicated in more than a quarter of poisonings (98, 28%) (Table 3)

Overall, the number of deaths where **illicit** drugs were implicated increased in 2014 (Table 2 & 3):

- Number of deaths where heroin was implicated increased to 90 in 2014 compared to 86 in 2013. This is the second year in succession that a rise in heroin deaths is reported (Table 3)
- Cocaine-related deaths increased by 25% from 32 in 2013 to 40 in 2014
- MDMA-related deaths continue to increase since 2010, rising to 15 deaths in 2014 (Table 3)

- Individual deaths where new psychoactive substances (NPS) were implicated decreased to 13 in 2014 from 17 in 2013.

Alcohol continues to be the single most common drug implicated over the reporting period (Table 2 & 3). In 2014, alcohol was implicated in 115 deaths (32% of all poisonings)

- The number of deaths involving alcohol has decreased from 140 in 2013 to 115 in 2014.
- Alcohol alone was responsible for 13% of all poisoning deaths in 2014.

Table 2 Multi-response: Poisoning deaths categorised by drug group, NDRDI 2004 to 2014 (N = 3,864)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All poisoning deaths*	266	301	326	387	386	372	340	377	358	397	354
Opiates [†]	131	159	183	190	219	236	190	260	224	251	249
Benzodiazepines	77	79	116	123	123	136	131	251	174	238	228
Alcohol	125	116	113	172	155	143	152	142	129	140	115
Antidepressants	54	53	43	48	87	67	67	99	90	121	120
Other prescription meds [§]	43	42	41	63	62	60	77	90	103	142	190
Stimulants (exc NPS) [¶]	32	46	62	84	68	56	22	35	38	46	55
Non-opiate analgesics	13	23	11	19	18	16	15	21	23	30	33
New Psychoactive Substances (NPS)	0	0	0	0	0	5	6	8	8	30	23
Others/Unknown [‡]	7	23	21	23	31	42	31	30	28	36	25

*This is a multi-response table taking account of up to six drugs. Therefore numbers in columns may not add up to totals shown, as individual cases may have more than one drug implicated in their death.

† Includes heroin, methadone, morphine, codeine, unspecified opiate-type drug, other opiate analgesic.

§ Includes non-benzodiazepine sedatives, anti-psychotics, Z drugs (e.g. zopiclone), barbiturates, cardiac and all other types of prescription medication (e.g. pregabalin).

¶ Includes cocaine and MDMA.

‡ includes solvents, insecticides, herbicides, other amphetamines, hallucinogens and other chemicals.

Table 3 Multi-response: Poisoning deaths categorised by main individual drug, NDRDI 2004 to 2014 (N = 3,864)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All poisoning deaths*	266	301	326	387	386	372	340	377	358	397	354
Alcohol	125	116	113	172	155	143	152	142	129	140	115
Diazepam	31	41	64	62	65	81	68	133	92	113	115
Methadone	40	43	60	57	80	70	60	116	87	94	98
Heroin	29	47	68	80	91	114	72	64	64	86	90
Zopiclone	5	~	7	6	10	12	18	22	23	51	72
Cocaine	19	36	54	65	61	53	21	24	26	32	40
Flurazepam	18	13	23	21	20	25	28	50	29	42	36
Pregabalin	0	0	0	0	0	~	~	~	~	14	26
Citalopram	14	13	8	13	20	20	20	32	16	22	21
MDMA	13	10	8	19	7	~	~	11	12	14	15

*This is a multi-response table taking account of up to six drugs. Therefore numbers in columns may not add up to totals shown, as individual cases may have more than one drug implicated in their death

~ Less than five deaths.

Poly drug poisonings

Two thirds of poisoning deaths in 2014 involved **poly drugs**. The percentage of deaths due to poly-drug poisonings continues to rise from 44% (n=118) in 2004 to 66% (n=235) in 2014 (Figure 1). Poly drug use is a significant risk factor for fatal overdose:

- 59% of deaths where alcohol was implicated involved other drugs, mainly opiates
- 92% of deaths where methadone was implicated involved other drugs, mainly benzodiazepines
- 81% of deaths where heroin was implicated involved other drugs, mainly benzodiazepines.

The number of drugs involved has also risen over the period. In 2014, on average four drugs were involved in poly drug poisoning deaths compared to an average of two in 2004.

Almost all deaths (98%) where cocaine was implicated involved other drugs.

While prescription drugs were also found in deaths where cocaine was implicated, illicit drugs featured more commonly: heroin (15, 39%) and MDMA (9, 23%). Six deaths where cocaine was implicated had 12 occurrences of NPS drugs i.e. some deaths involved more than one type of NPS.

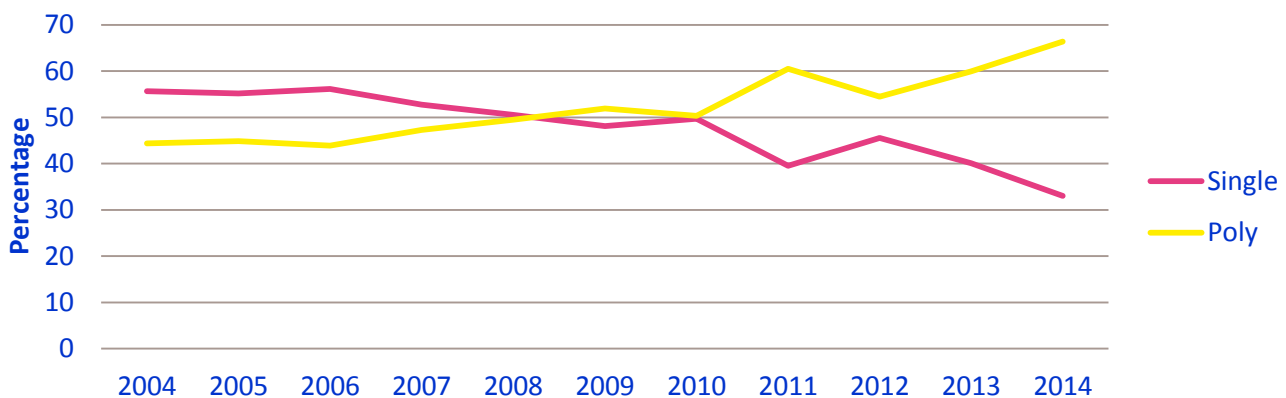


Figure 2 Evolution of poly drug poisonings, NDRDI 2004 to 2014 (N = 3,864)

Table 4 Multi-response: combinations of drugs that were implicated along with methadone, heroin, cocaine and alcohol, NDRDI 2014

	Methadone	Heroin	Cocaine	Alcohol
Poly drug poisoning deaths	N = 90	N= 73	N = 39	N = 68
Methadone		22	16	18
Diazepam	56	43	18	27
Heroin	22		15	20
Alcohol	18	20	8	
Flurazepam	17	13	~	6
Cocaine	16	15		8
MDMA	~	~	9	~
Combined drug groups*				
Other prescription medication(s) [§]	62	46	20	38
Antidepressants	43	25	13	25
Other Benzodiazepines	31	28	9	15
Other Opiate(s)	19	~	~	12
Non-opiate analgesics	7	11	8	~
New psychoactive substance(s)	~	0	12	0
Other [‡]	~	5	~	~

*This is a multi-response table taking account of up to six drugs. Therefore numbers in columns may not add up to totals shown, as individual cases may have more than one drug implicated in their death.

§ Includes non-benzodiazepine sedatives, anti-psychotics, Z drugs, barbiturates, cardiac and all other types of prescription medication.

‡ includes solvents, insecticides, herbicides, other amphetamines, hallucinogens and other chemicals.

~ Less than five deaths

Heroin-related deaths in 2014

One quarter (25%) of all poisoning deaths involved **heroin**. Of those who died where heroin was implicated:

- 87% were male
- 81% involved more than one drug
- 48% were injecting at the time of the incident that led to their death

- 46% lived outside Dublin (city and county)
- 42% were not alone at the time of the incident that led to their death
- 29% were homeless
- 18% were recorded as being in addiction treatment at the time of their death.

Table 5 Individual deaths involving heroin, NDRDI 2004 to 2014 (N = 805)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All poisonings deaths	266	301	326	387	386	372	340	377	358	397	354
Individual deaths where heroin was implicated (% of all poisonings)	29 (10.9)	47 (15.6)	68 (20.9)	80 (20.7)	91 (23.6)	114 (30.6)	72 (21.2)	64 (17.0)	64 (17.9)	86 (21.7)	90 (25.4)
All individual deaths involving heroin (n)	29	47	68	80	91	114	72	64	64	86	90
Not alone	12 (41.4)	28 (59.6)	42 (62.7)	43 (53.8)	57 (62.6)	76 (66.1)	41 (56.9)	33 (51.6)	38 (59.4)	36 (41.9)	38 (42.2)
Residing in Dublin (city or county)	23 (79.3)	28 (59.6)	45 (66.2)	43 (53.8)	54 (59.3)	61 (53.5)	37 (51.4)	27 (42.2)	33 (51.6)	46 (53.5)	49 (54.4)
Poly drugs involved	11 (37.9)	30 (63.8)	41 (60.3)	56 (70.0)	66 (72.5)	75 (65.8)	42 (58.3)	51 (79.7)	55 (85.9)	62 (72.1)	73 (81.1)
Injecting at time of death;	22 (75.9)	30 (63.8)	44 (64.7)	41 (51.3)	43 (47.3)	51 (44.7)	39 (54.2)	35 (54.7)	28 (43.8)	42 (48.8)	43 (47.8)
<i>Injecting and died in private dwelling</i>	10	15	20	19	28	32	26	30	17	26	20
<i>Injecting and died in a public place</i>	8	9	14	12	7	11	7	5	~	7	16
Ever received treatment	6	14	15	24	31	38	21	16	24	38	36
In treatment at time of death	5 (17.2)	11 (23.4)	9 (13.2)	13 (16.3)	23 (25.3)	26 (22.8)	11 (15.3)	13 (20.3)	17 (26.6)	27 (31.4)	16 (17.8)
Male	27 (93.1)	42 (89.4)	63 (92.6)	71 (88.8)	77 (84.6)	101 (88.6)	65 (90.3)	55 (85.9)	61 (95.3)	76 (88.4)	78 (86.7)
Homeless	~	8 (17.0)	16 (23.5)	19 (23.8)	7 (7.7)	13 (11.4)	14 (19.4)	7 (10.9)	10 (15.6)	20 (23.3)	26 (28.9)

~ Less than five deaths.

Non-poisoning deaths in 2014

Non-poisoning deaths are deaths among people with a history of drug dependency or non-dependent abuse of drugs (ascertained from toxicology results and from Central Treatment List, medical or coronial records) whether or not the use of the drug had a direct impact on the cause of death.

The number of non-poisoning deaths increased by 14%, from 301 in 2013 to 343 in 2014 (Table 1).

These deaths are categorised as being due to either trauma (n = 177) or to medical causes (n = 166).

The **main causes** of non-poisoning deaths were hanging [trauma] (27%) and cardiac events [medical] (15%) (Figure 3). A younger cohort died from traumatic causes (median age of 33 years) in comparison to deaths due to medical causes (median age of 47 years) (Table 1).

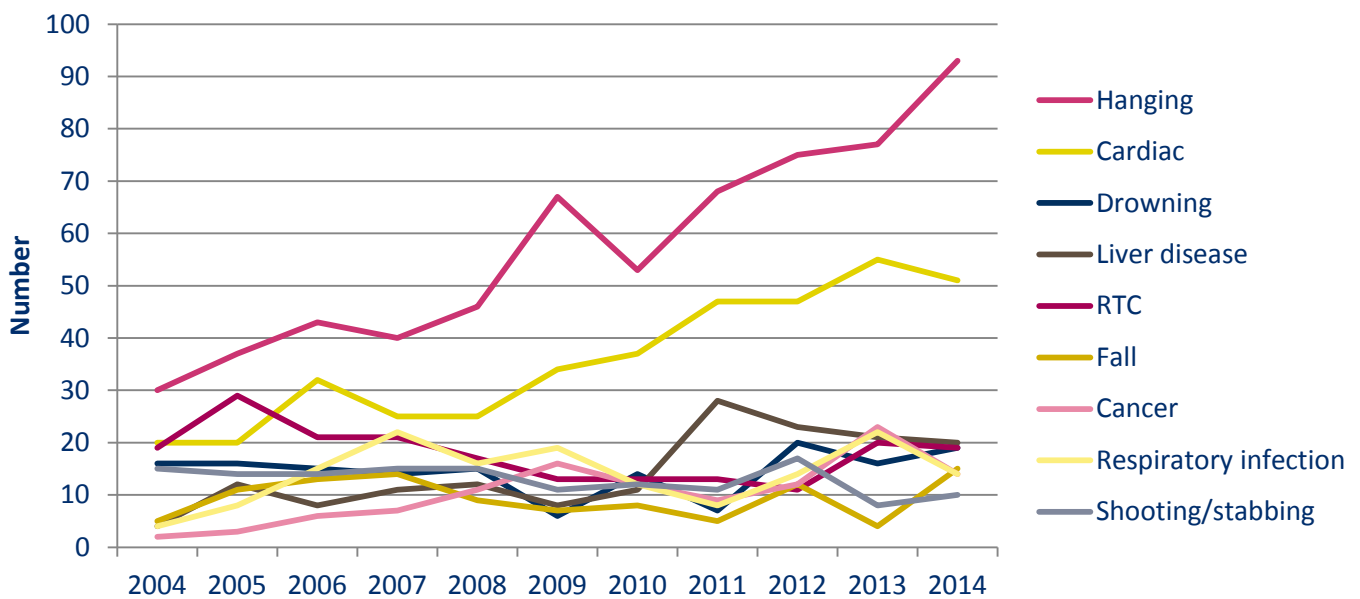


Figure 3 Non-poisoning deaths: main causes, NDRDI 2004 to 2014

Traumatic deaths as a result of hanging in 2014

Deaths due to **hanging** accounted for 27% of all non-poisoning deaths in 2014:

- The majority were male (84%)
- Over two thirds (67%) had a history of mental health illness
- Cannabis and cocaine were the most common drugs used by those who died as a result of hanging.

References

This document may be cited as: Health Research Board (2016) National Drug-Related Deaths Index 2004 to 2014 data. Available at: www.drugsandalcohol.ie/26299 and at www.hrb.ie/publications.

More detailed information on the methodology can be found in previously published HRB Trends Series papers - <http://www.hrb.ie/publications/hrb-publication/publications//492/>

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