National Drug-Related Deaths Index 2004 to 2014 data



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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 nonbenzodiazepine 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 |
| Poisonings male | 175 | 199 | 228 | 270 | 274 | 254 | 252 | 274 | 266 | 270 | 254 |
| Poisonings female | 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 |
| Non-poisonings male | 153 | 176 | 192 | 177 | 196 | 212 | 206 | 217 | 231 | 233 | 269 |
| Non-poisoning females | 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.

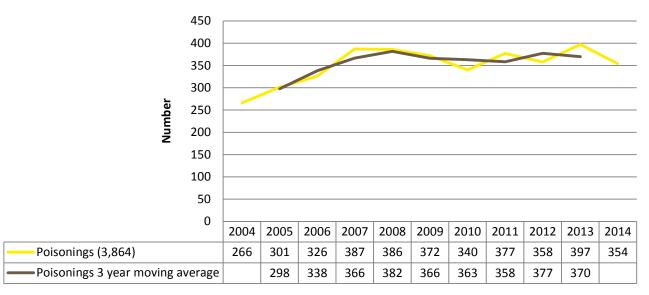


Figure 1 Three year moving averages, NDRDI 2004 to 2014 (N = 3,864)

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 nonbenzodiazepine 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) ^f | 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 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

[†] 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).

f Includes cocaine and MDMA.

[~] 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.

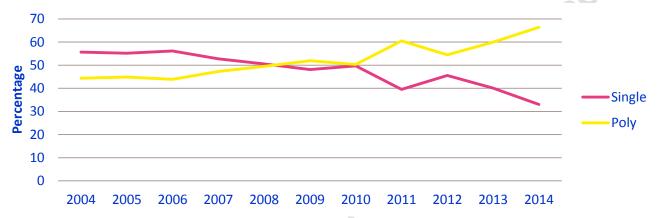


Figure 2 Evolution of poly drug poisonings, NDRDI 2004 to 2014 (N = 3,864)

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 | 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) |
| implicated (% of all poisonings) | (10.9) | (13.0) | (20.9) | (20.7) | (23.0) | (30.0) | (21.2) | (17.0) | (17.9) | (21.7) | (23.4) |
| 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) |
| Injecting and died in private dwelling | 10 | 15 | 20 | 19 | 28 | 32 | 26 | 30 | 17 | 26 | 20 |
| Injecting and died in a public place | 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).

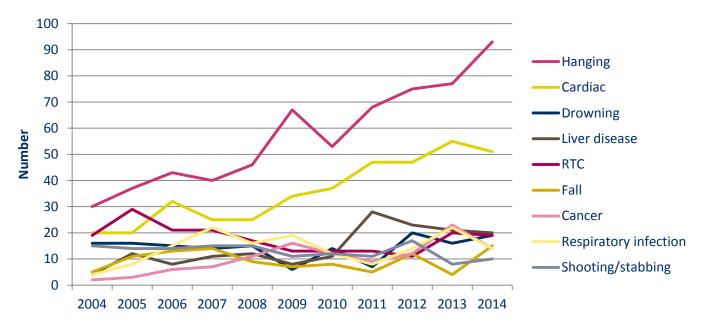


Figure 3 Non-poisoning deaths: main causes, NDRDI 2004 to 2014

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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