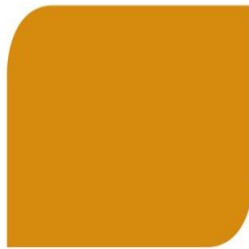
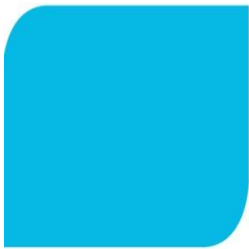
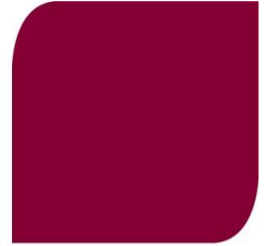


# Drug-related deaths and deaths among drug users in Ireland



2010 figures from the  
National Drug-Related Deaths Index

January 2013

## Summary of 2010 results

This update presents figures from the National Drug-Related Deaths Index (NDRDI) on deaths due to poisoning by alcohol and/or other drugs, and deaths among drug users, in the period 2004–2010. The figures in this update supersede all previously published figures.<sup>a</sup>

### Overview

- In the seven-year period 2004–2010 a total of 3,972 deaths by drug poisoning and deaths among drug users met the criteria for inclusion in the NDRDI database. Of these deaths, 2,364 were due to poisoning and 1,608 were deaths among drug users (non-poisoning) (Table 1).
- The annual number of deaths in 2010 decreased to 575, compared to 652 in 2009. The 2010 figure is likely to be revised when new data become available (Table 1).

### Poisoning deaths in 2010

- The annual number of deaths increased from 267 in 2004 to 388 in 2007, but decreased in subsequent years, to a total of 323 in 2010 (Table 1). This appears to reflect the wider international trend, which shows a decrease in the number of drug-related deaths in Europe.<sup>b</sup>
- Males accounted for the majority of deaths in each year since 2004; 74% of all poisoning deaths in 2010 were male (Figure 1).
- Twenty-six per cent of deaths in 2010 were of females, compared to 32% in 2009 (Figure 2).
- The median age of those who died in 2010 was 40 years, compared to 38 years in 2009 (Table 2).
- Just over half (52%) of all deaths involved just one substance (Table 3 and Table 4).
- Alcohol was involved in 46% of deaths in 2010, more than any other substance (Table 5). Alcohol alone was responsible for 24% of all deaths (Table 4).
- The number of deaths in which heroin was implicated decreased by 39%, to 70 in 2010 compared to 115 in 2009 (Table 5).<sup>c</sup>
- Since 2007 there has been a 70% decrease in the number of deaths where cocaine was implicated, with 20 deaths in 2010 compared to 66 in 2007 (Table 5). This reflects the wider international trend, which shows a decrease in the number of cocaine-related deaths in Europe.<sup>b</sup>
- In 2010 the number of deaths where methadone was implicated dropped for a second year, to 56, compared to 69 in 2009 and 80 in 2008 (Table 5).
- Benzodiazepines, which include diazepam and flurazepam, were the second most common drug group implicated in poisoning deaths, after alcohol (Table 5).

### Non-poisoning deaths in 2010

- The number of non-poisoning deaths recorded among drug users decreased slightly in 2010, to 252, compared to 278 reported in 2009 (Table 1). It was possible to categorise 243 of the deaths in 2010 as being due either to trauma or to medical causes.

### Deaths due to trauma

- The number of deaths due to trauma decreased in 2010, to 112 deaths, down from 132 in 2009 (Figure 4).
- The majority (76, 68%) of those who died from traumatic causes in 2010 were aged under 39 years (Figure 5). The median age was 33 years. As in previous years, the majority (87, 78%) of those who died due to trauma were male.
- The most common causes of death due to trauma in 2010 were hanging (49, 44%) and drowning (12, 12%) (Figure 6).

<sup>a</sup> Please note that previously reported figures for the years 2004–2009 have been updated to include new data. Similarly, figures for 2010 will be revised in the future when new data become available.

<sup>b</sup> [http://www.emcdda.europa.eu/attachements.cfm/att\\_190854\\_EN\\_TDAC12001ENC\\_.pdf](http://www.emcdda.europa.eu/attachements.cfm/att_190854_EN_TDAC12001ENC_.pdf)

<sup>c</sup> A decline in heroin-related deaths was also recorded in Scotland in 2010 <http://www.gro-scotland.gov.uk/files2/stats/drug-related-deaths/2011/j23789800.htm>

## Deaths due to medical causes

- The number of deaths due to medical causes remained stable in 2010. However the numbers have risen steadily over the reporting period, increasing from 55 in 2004 to a total of 131 in both 2009 and 2010. (Figure 4).
- The majority (63%) of those who died from medical causes in 2010 were aged between 30 and 49 years (Figure 7). The median age was 43 years. Males accounted for 76% (100) of those who died due to medical causes in 2010.
- The most common medical causes of death in 2010 were cardiac events (34, 26%) and respiratory problems (16, 12%) (Figure 8).

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## Glossary

**Drug users:** Individuals who have a history of drug dependency or of non-dependent abuse of drugs and/or other substances

**Non-poisoning deaths:** Deaths in individuals 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 was directly implicated in the death

**Poisoning deaths:** Deaths which are directly due to the toxic effect of the presence in the body of one or more drugs and/or other substance(s)

## Introduction

The Irish National Drug-Related Deaths Index (NDRDI) is an epidemiological database which records cases of death by drug and alcohol poisoning, and deaths among drug users and those who are alcohol dependent. The NDRDI is maintained by the Health Research Board (HRB). It is jointly funded by the Department of Health and the Department of Justice and Equality.

The NDRDI was established in September 2005 to comply with Action 67 of the 2001–2008 National Drugs Strategy.<sup>1</sup> Prior to that, drug-related deaths and deaths among drug users had not been systematically documented in Ireland. Families of substance users in Dublin, through the Family Support Network (which supports the development of family support groups and networks in Ireland in dealing with the problem of drug misuse) had advocated for some years for the development of a mechanism to accurately measure the extent of premature death among drug users. In response to this, Action 67 called for the development of a system for recording drug-related deaths and deaths among drug users to enable the State and its agencies to respond in a timely manner, with accurate data. The objectives of the NDRDI also include identifying and prioritising areas for intervention and prevention, and measuring the effects of such interventions. The remit of the NDRDI was further expanded in January 2006 to include alcohol-related deaths and deaths of people who were alcohol dependent.

The number of drug-related deaths and deaths among drug users is one of the key indicators used to measure the consequences of problem drug use in Europe. The NDRDI enables accurate reporting of these key data to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA).

The NDRDI records data from four sources: the Coroner Service, the Hospital In-Patient Enquiry scheme (HIPE), the Central Treatment List (CTL), and the General Mortality Register (GMR) in order to ensure that the database is complete and accurate. Cases from the different data sources are cross-matched on a selection of variables, including name, gender, county of residence, date of birth and date of death. This allows the NDRDI to eliminate duplicates and to maximise the amount of information available on each case recorded on the database. Named

data were not available from the GMR for the years 2004 and 2005; to avoid duplication and over-estimation of the number of cases, GMR cases with no match in the other three data sources were not included in the NDRDI for those two years. More detailed information on the methodology can be found in the previously published HRB Trends Series papers.<sup>2-4</sup>

## Background

Drug use can lead to premature death from a range of different causes.<sup>5</sup> Many deaths are caused by poisoning (both intentional and unintentional), where the death is directly attributable to the consumption of drugs (alone or in combination with other substances). For the purposes of this paper, this type of directly drug-related death is referred to as a **poisoning**.

Deaths among drug users (whether the user is dependent or non-dependent) may be indirectly attributed to their drug use. For the purpose of this paper, this type of indirectly drug-related death is referred to as a **non-poisoning**. Causes of death in such cases include:

- infection with HIV as a result of sharing drug paraphernalia, and subsequent development of an AIDS-related illness;
- the harmful effects of drug use (both short and long term) on the health of the drug user, such as the
- cardio-toxic effect of cocaine or drug-related liver disease;<sup>6-9</sup>
- actions taken while under the influence of drugs, such as accidents caused by impaired judgement or
- exacerbation of risky behaviours;<sup>5, 6</sup>
- psychiatric illness as a co-morbid condition, which places the individual at a greater risk of suicide.<sup>5, 10-12</sup>

In line with international practice, deaths that are the result of the drug use of another individual, such as a road traffic collision or an assault, are not recorded by the NDRDI.

Alcohol consumption has been reported as the third most detrimental risk factor for ill health and premature death in Europe.<sup>13</sup> The NDRDI has retrospectively recorded data from 2004 onwards on alcohol-related deaths and deaths among those who were alcohol dependent. Poisoning deaths due to alcohol-only (collected retrospectively from 2004) have been included in the web-updates of 2009 data onwards, therefore data reported since then differ to previous NDRDI reports on poisoning deaths. This update however does not include data on non-poisoning deaths in individuals who had a history of alcohol dependency *only*.

Most cases of drug misuse or dependence involve illicit drugs; however, licit drugs also may be misused and may lead to dependency. Deaths in which licit drugs are implicated are included in the NDRDI. A documented history of drug dependence or drug use is not available in all cases, leading to an under recording of the total number of non-poisoning deaths in the drug-using population. Calculation of mortality figures for both poisonings and non-poisonings provides an estimate of the total burden of mortality related to drug use in Ireland.

## Results

Between 2004 and 2010, 3,972 deaths by drug and alcohol poisoning and deaths among drug users met the criteria for inclusion in the NDRDI. **Please note** that previously reported figures for the years 2004–2009 have been updated to include new data. Similarly, figures for 2010 will be revised in the future when new data become available.

Table 1 Number of deaths, by year, NDRDI 2004 to 2010 (N=3,972)

	2004	2005	2006	2007	2008	2009	2010
All deaths	431	501	561	628	624	652	575
Poisoning (n=2,364)	267	300	326	388	386	374	323
Non-poisoning (n=1,608)	164	201	235	240	238	278	252

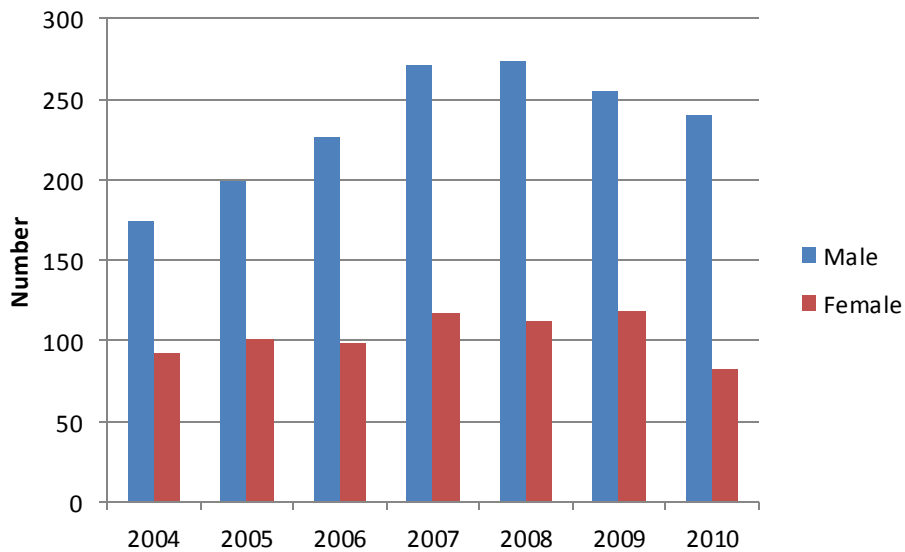


Figure 1 Number of poisoning deaths, by gender and by year of death, NDRDI 2004 to 2010 (N=2,364)

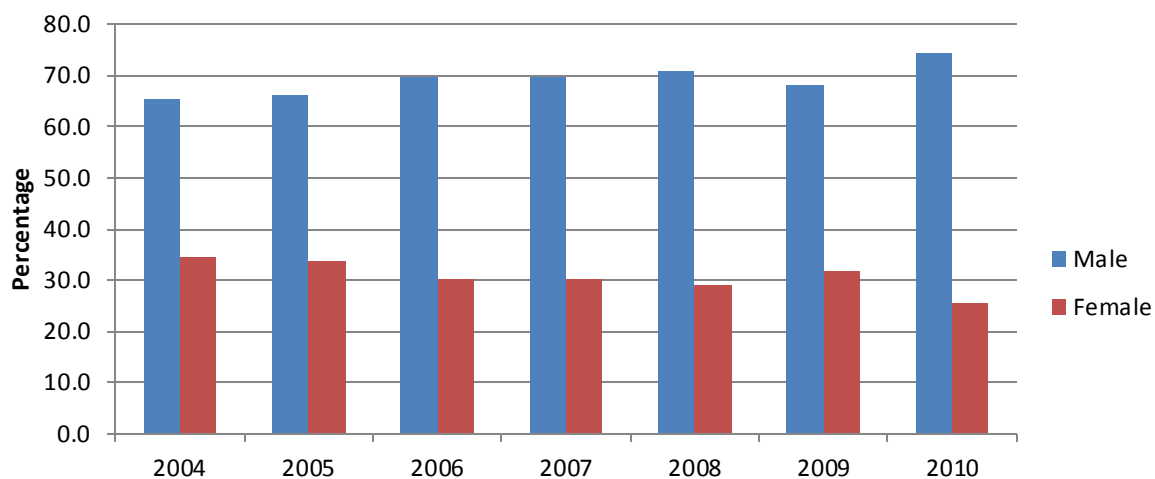


Figure 2 Percentage poisoning deaths, by gender and by year of death, NDRDI 2004 to 2010 (N=2,364)

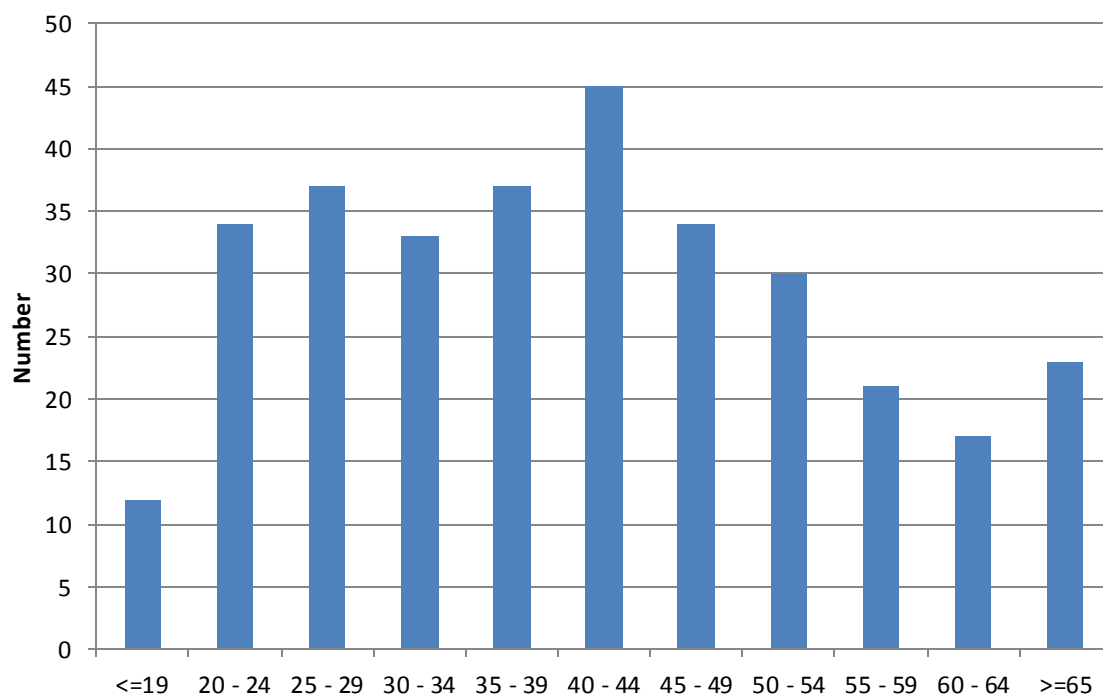


Figure 3 Poisoning deaths, by age group, NDRDI 2010 only (N=323)

Table 2 Poisoning deaths, by median age and by gender, NDRDI 2004 to 2010 (N=2,364)

	2004	2005	2006	2007	2008	2009	2010
Median age in years	40	39	36	36	38	38	40
Age range*	20–68	18–65	20–64	19–67	21–65	22–67	21–67
Median age – Male	36	36	35	34	36	36	38
Median age – Female	47	46	43	43	46	47	49

\*Age range presented is the 5th to the 95th percentile (90% of cases are included within this range)

Table 3 Single and polysubstance poisoning deaths, NDRDI 2004 to 2010 (N=2,364)

	2004	2005	2006	2007	2008	2009	2010
<b>Total poisonings</b>	267	300	326	388	386	374	323
Single substance (n=1,271)	152 (56.9)	167 (55.7)	190 (58.5)	211 (54.4)	196 (50.8)	188 (50.3)	167 (51.7)
Polysubstance (n=1,093)	115 (43.1)	133 (44.3)	136 (41.7)	177 (45.6)	190 (49.2)	186 (49.7)	156 (48.3)

Table 4 Combinations of drugs involved in poisoning deaths, NDRDI 2004 to 2010 (N=2,364)

	2004	2005	2006	2007	2008	2009	2010
<b>All poisoning deaths</b>	267	300	326	388	386	374	323
<b>Single substances</b>							
Alcohol alone	61	51	54	86	81	61	76
Opiates alone	33	34	53	54	54	60	46
Analgesic (including an analgesic containing an opiate compound)	22	24	16	6	10	10	7
All other specified single substances	36	58	67	65	51	57	38
<b>Polysubstances</b>							
Polysubstances (including opiates such as heroin, methadone)	41	64	80	91	120	121	91
Polysubstances (including analgesics containing an opiate compound)	28	31	15	16	11	14	20
Polysubstances (excluding opiates)	35	29	26	58	50	34	32
Psychoactive medication with alcohol	11	9	15	12	9	17	13

**Table 5 All drugs involved in poisoning deaths, NDRDI 2004 to 2010 (N=2,364)**

	2004	2005	2006	2007	2008	2009	2010	% Total
All deaths*	267	300	326	388	386	374	323	100
Alcohol	125	116	111	173	155	142	147	41.0
Heroin	29	47	68	80	91	115	70	21.2
Methadone	40	43	61	55	80	69	56	17.1
Other opiate <sup>†</sup>	62	69	55	54	47	52	51	16.5
Cocaine	19	36	53	66	60	53	20	13.0
MDMA	13	10	7	19	7	~	~	2.5
Diazepam	31	41	64	61	66	80	60	17.0
Other benzodiazepine	28	25	29	42	38	30	31	9.4
Flurazepam	18	13	23	21	20	24	22	6.0
Other prescription medication <sup>§</sup>	42	37	39	61	62	59	71	15.7
Antidepressant	54	53	43	48	85	67	62	17.4
Non-opiate analgesic	13	23	12	19	18	16	14	4.9
Other <sup>‡</sup>	9	22	21	25	31	50	36	8.2

\*This is a multi-response table taking account of illicit use of up to six drugs. Therefore numbers and percentages in columns may not add up to totals shown as individual cases may use more than one drug or substance.

<sup>†</sup> Includes morphine, codeine, unspecified opiate-type drug, other opiate analgesic.

<sup>§</sup> Includes non-benzodiazepine sedatives, anti-psychotics, cardiac and all other types of over-the-counter medication.

<sup>‡</sup> includes solvents, insecticides, herbicides, other amphetamines, hallucinogens, head shop drugs and other chemicals.

~ Less than five cases.

Of 94 deaths in 2010 in which benzodiazepines were implicated, 19 cases involved two or more types of benzodiazepine therefore the total count for all benzodiazepines in the multi-response table is equal to 113 (Table 5).

**Table 6 Poisoning deaths, by regional drugs task force area, NDRDI 2004 to 2010 (N=2,364)**

	2004	2005	2006	2007	2008	2009	2010
	267	300	326	388	386	374	323
North Dublin City and County*	45	62	71	63	76	73	63
South Western*	54	49	63	65	74	61	61
Southern*	33	34	41	59	44	43	31
South East	26	23	22	40	40	33	34
East Coast*	25	36	28	28	28	21	31
North Eastern	18	20	25	28	29	21	21
Western	17	19	18	33	23	23	20
Mid West	15	18	13	18	19	37	25
Midlands	12	15	17	17	21	26	17
North West	14	13	10	8	13	17	7
Other/unknown	8	11	18	29	19	19	13

\* Includes the local drug task forces within the boundaries



## Non-poisoning deaths

Of the 1,608 non-poisoning deaths in the period 2004–2010, the category of death was known for 1,523 (95%), of which 800 were due to traumatic causes and 723 were due medical causes. These figures do not include deaths among alcohol-dependent people who were not drug users.

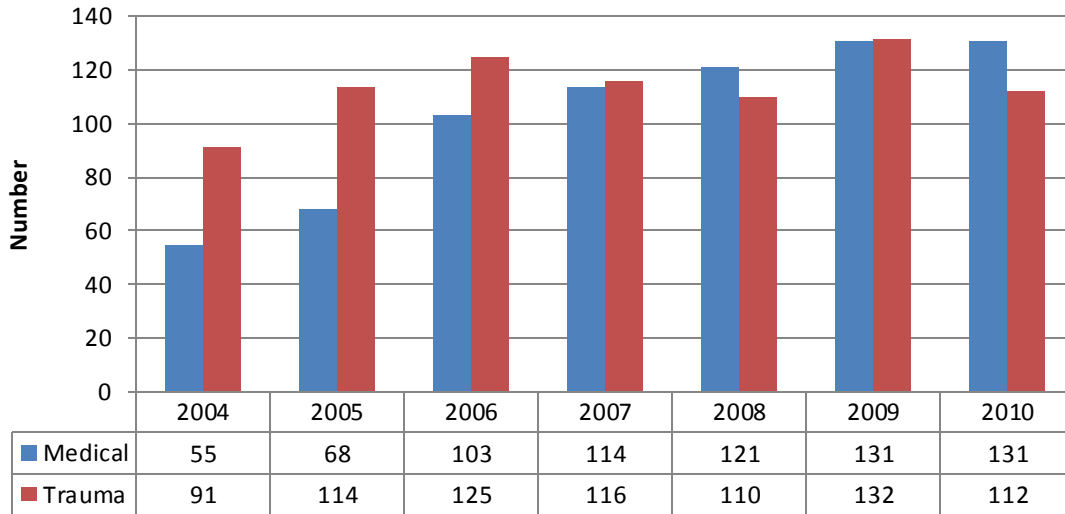


Figure 4 Non-poisoning deaths among drug users, NDRDI 2004 to 2010 (N=1,523)

## Deaths due to trauma

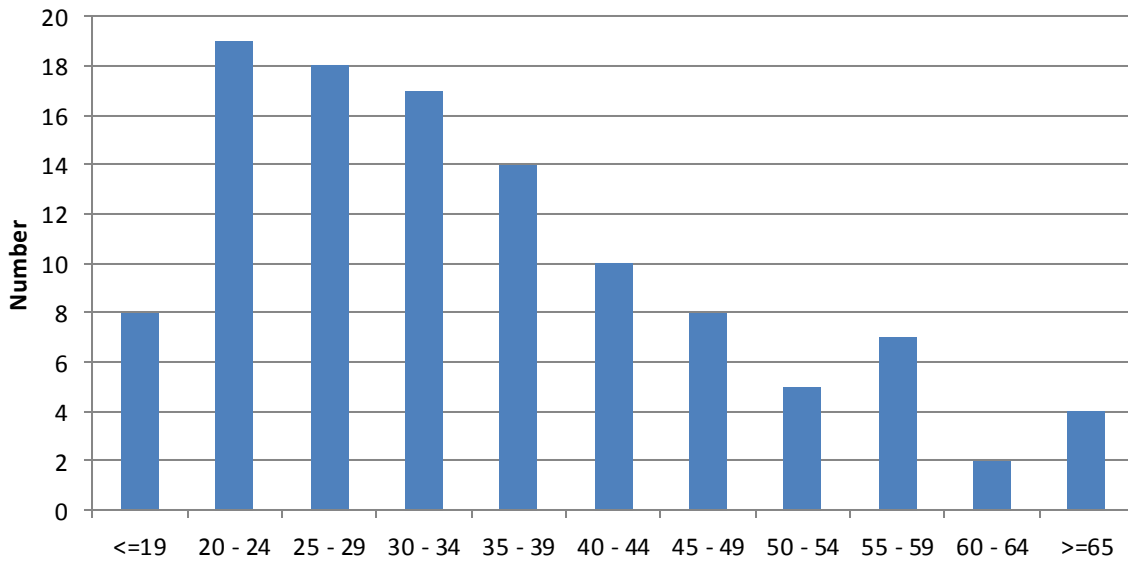


Figure 5 Deaths among drug users due to trauma, by age group, NDRDI 2010 only (N=112)

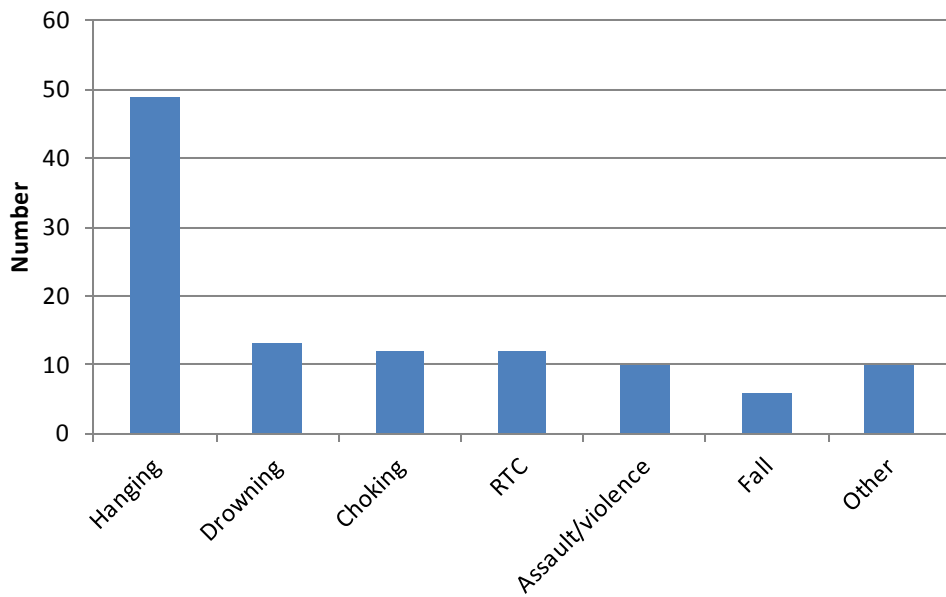


Figure 6 Deaths among drug users due to trauma, by type of death, NDRDI 2010 only (N=112)

### Deaths due to medical causes

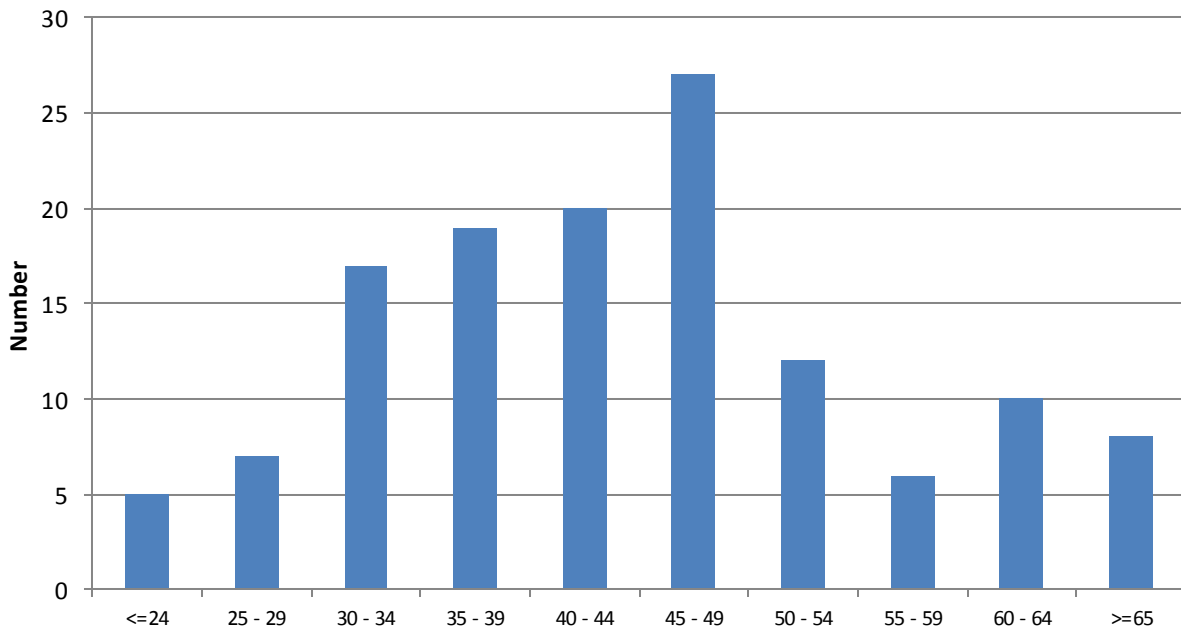


Figure 7 Deaths among drug users due to medical causes, by age group, NDRDI 2010 only (N=131)

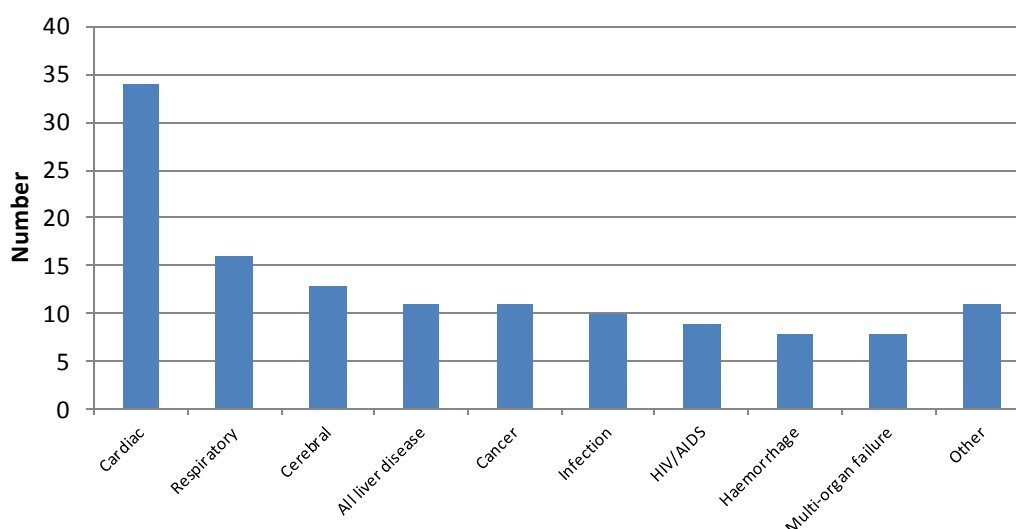


Figure 8 Deaths among drug users due to medical causes, by type, NDRDI 2010 only (N=131)

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