

**A review of 2014 RTC fatalities with a positive toxicology for alcohol
Source: The Health Research Board National Drug-Related Death Index (NDRDI) on behalf
of the RSA**

Background

The Health Research Board (HRB) collected information on 2014 road traffic fatalities from closed coronial files on behalf of the RSA in the context of the National Drug-Related Death Index (NDRDI).

The National Drug-Related Deaths Index (NDRDI) is an epidemiological database which records all deaths due to drug and alcohol poisoning, and all deaths among drug users and those who are alcohol dependent.

In 2012, the Road Safety Authority (RSA) contacted the Health Research Board (HRB) to explore the possibility of collaborating with the NDRDI in order to access data on fatal RTCs contained in the coronial files and also extend the remit of the NDRDI to include all RTCS, not only those which fulfilled the NDRDI inclusion criteria.

In the current Road Safety Strategy (2013-2020) a specific action addressed this requirement:

| Action No | Action | Lead Agency or Department | Responsibility | Completion Date | Support Department or Agency |
|-----------|---|---------------------------|---|-----------------|------------------------------|
| 120 | Carry out a feasibility study to extend the remit of the National Drug-Related Death Index to collect all data on fatalities from coronial files. | RSA | Director Road Safety, Research & Driver Education | Q3 2013 | HRB/Coroners |

A feasibility project was conducted in 2014-15; data on all fatal RTCs (for which a closed coronial file was available) were collected by the NDRDI staff for the year 2013. Data collection included additional variables as specified by the RSA in order to provide the most complete and accurate information that would contribute to the RSA's understanding of RTCs and enable it to develop effective evidence-based approaches to road safety. Based on the success of the feasibility study the RSA requested the HRB to continue collecting data on fatal RTCs. **The analysis in this report relates to data collected on fatal RTCs for year of death 2014. Field values less than 5 are not displayed to protect the anonymity of the deceased and their families.**

2014 Results

There were 136 fatalities arising from 124 fatal RTCs which occurred in 2014 and were extracted from closed coronial files. This does not include those who died while not on a public road, by suicide or due to a medical incident e.g. heart attack while driving.

Data on 3rd parties involved (i.e. road users involved in these fatal collisions who survived) was also collected but is not presented in this summary document.

The total number of fatalities that occurred in 2014 as per RSA official records is 193. The available data from coronial files for 2014 fatalities (136, 71% of all fatalities) is likely to increase when more files become available once inquests are closed. Supplementary data will be collected in 2016/2017.

Of the 136 fatalities, 74 were drivers of motorised vehicles, most commonly car drivers (52, 38%) (Table 1). Drivers include car drivers, motorcycle drivers and van or HGV drivers. A driver does not include a person who was driving but alighted from their vehicle and was subsequently involved in a RTC. The majority of those who died were male (91, 67%).

Table 1 Type of road user, NDRDI 2014

| | Driver Car | Driver Motorcycle | Pedestrian | Passenger | Driver Other (Van/HGV/horse drawn gig/truck) | Cyclist |
|---------|------------|-------------------|------------|-----------|--|---------|
| No. (%) | 52 (38.2) | 15 (11.0) | 25 (18.4) | 24 (17.6) | 8 (5.9) | 8 (5.9) |

Toxicology

Almost a third (31%) of RTC fatalities in 2014 (42/136) had alcohol on toxicology.

One third of **drivers/motorcyclists** (33%) had alcohol on toxicology (25/75):

- 35% of **car drivers** killed had a positive toxicology for alcohol (18/52)
- 40% of **motorcyclists** killed had a positive toxicology for alcohol (6/15)

28% of **pedestrians** killed had a positive toxicology for alcohol (7/25)

21% of **passengers** killed had a positive toxicology for alcohol (5/24)

Blood alcohol concentration (BAC): All Fatalities

A summary of the BAC levels of all fatalities is set out in Table 2 below.

Over a fifth (22.5%) of fatalities had a BAC ≤ 80mg%

Almost a fifth (17.5%) had a BAC in the range 81-150mg%

The greater majority (60%) had a BAC over 151mg%

Table 2 Blood alcohol concentration (BAC mg%) across all road users, NDRDI 2014

| | No. of Fatalities | % of Fatalities by BAC level |
|----------------------------|-------------------|------------------------------|
| Total with alcohol present | 42 | |
| Total with positive BAC | 40 | |
| | | |
| BAC 0-50 mg% | 7 | 17.5% |
| Bac 51-80 mg% | 2 | 5% |
| BAC 81-100 mg% | 2 | 5% |
| BAC 101-150 mg% | 5 | 12.5% |
| BAC 151-200 mg% | 8 | 20% |
| BAC 201-250 mg% | 6 | 15% |
| BAC 251-300 mg% | 4 | 10% |
| BAC 301-350 mg% | 3 | 7.5% |
| BAC 351-400 mg% | 3 | 7.5% |

Table 3 Blood alcohol concentration (BAC mg%) by type of road user, NDRDI 2014*

| | Driver car (52) | Driver MCycle (15) | Pedestrian (25) |
|----------------------------|------------------------|---------------------------|------------------------|
| Total with alcohol present | 19 | 6 | 7 |
| Total with positive BAC | 18** | 6 | 7 |
| Median BACmg% | 192 | 104 | 243 |
| | | | |
| BAC 0-50 mg% | 2 | 2 | 2 |
| Bac 51-80 mg% | 1 | 0 | 1 |
| BAC 81-100 mg% | 0 | 2 | 0 |
| BAC 101-150 mg% | 2 | 1 | 0 |
| BAC 151-200 mg% | 4 | 1 | 0 |
| BAC 201-250 mg% | 2 | 0 | 2 |
| BAC 251-300 mg% | 3 | 0 | 1 |
| BAC 301-350 mg% | 2 | 0 | 1 |
| BAC 351-400 mg% | 2 | 0 | 0 |

*To protect anonymity, the NDRDI does not publish values less than five. Therefore, no information for passengers or cyclists is shown.

**One driver did not have a confirmed unit of measurement in BAC (blood) or UAC (urine)

Car drivers

Of the 52 car driver fatalities in 2014, 18 (35%) drivers recorded a positive BAC at toxicology. Three of these drivers (17%) had a BAC of $\leq 80\text{mg}\%$, 6 had a BAC of between 101-200mg% (33%), while 9 (50%) had a BAC in the range 201-400mg%.

Motorcycle drivers

40% (6) of the 15 motorcyclist drivers who died in RTCs in 2014 had alcohol recorded at toxicology. Two of these drivers had a BAC recorded $< 51\text{mg}\%$, two had a BAC of 81-100mg%, while two reported levels between 101-200 mg%.

Pedestrians

Seven of the 25 pedestrian fatalities occurring in 2014 (28%) recorded a positive BAC. Four of the seven pedestrian fatalities reported BAC levels in excess of 200mg%.

The NDRDI/HRB should be acknowledged in any publication where NDRDI data is used.