Alcohol in Fatal Road Crashes in Ireland

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Background

- Alcohol is recognised as a major factor in road crashes

- We know Irish drivers do drink alcohol and drive

- The aim of this study was to identify the contribution alcohol makes to fatal road crashes in Ireland
How the study was carried out

- All files on fatal crashes in 2003 in the National Traffic Bureau of the Garda Siochana were examined
Legal limit

- Blood = 80 mg/100ml
- Urine = 107mg/100ml
- Breath = 35ug/100ml
Definition Alcohol Related Crash

**Driver**
- Blood alcohol level of ≥ 20 mg/100 ml (or the equivalent in urine and breath tests) in a driver

**Pedestrian**
- Blood alcohol level of ≥ 20 mg/100 ml and the circumstances of the crash
Results

- 301 fatal crashes killing 335 persons
**Status of the Deceased**

<table>
<thead>
<tr>
<th>Status</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver*</td>
<td>188</td>
<td>56</td>
</tr>
<tr>
<td>Passenger</td>
<td>70</td>
<td>21</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>63</td>
<td>19</td>
</tr>
<tr>
<td>Cyclist</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>335</td>
<td>100</td>
</tr>
</tbody>
</table>

*Includes drivers of motorcycles*
Crashes where alcohol was a factor

- Alcohol was a factor in 110 (37%) of fatal crashes
Crashes where alcohol was a factor

• 123 persons were killed
Figure 1. Day of fatal alcohol related crashes

![Bar graph showing the number of fatal alcohol-related crashes per day of the week. Sunday has the highest number, followed by Saturday. Monday has the lowest number.]
Figure 2. Time of alcohol related crashes

Time-24 hour clock

Alcohol
Drivers with Alcohol

- 87 drivers with alcohol responsible for crashes.
  - 78 killed
  - 9 not killed

- 72 (83%) above the legal limit
- 15 (17%) not above the legal limit
• 90% of the drivers whose alcohol was a contributory factor were male
• Alcohol related fatal road crashes are 3 times more likely to occur on Saturday, Sunday or Monday

• 22 (50%) of crashes that occurred on Mondays were before 8 a.m.
  – Of these 12 (55%) were alcohol related
Killed Drivers
(includes those riding motorcycles)

- 86% of the drivers killed were male
- The average (median) age of male drivers was 30 years
- The average (median) age of female drivers was 44 years
### Vehicles Driven by Killed Drivers

<table>
<thead>
<tr>
<th></th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>107</td>
<td>57</td>
</tr>
<tr>
<td>Motorbike</td>
<td>51</td>
<td>27</td>
</tr>
<tr>
<td>Lorry/van</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>100</td>
</tr>
</tbody>
</table>
Killed Drivers and Their Alcohol Levels

- The number of killed drivers whose alcohol level was a factor was 78 (42%)
- 63 (34%) were over the legal limit for driving
## Blood Alcohol Levels in Killed Drivers

<table>
<thead>
<tr>
<th>Category</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not recorded as done/not available</td>
<td>50</td>
<td>27</td>
</tr>
<tr>
<td>Zero</td>
<td>59</td>
<td>32</td>
</tr>
<tr>
<td>1-19</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>20-49</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>50-79</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>80-159</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>160-239</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>240+</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>188</td>
<td>100</td>
</tr>
</tbody>
</table>

Killed Drivers and Their Alcohol Levels

- For those drivers who had a blood alcohol level available 45% were over the legal limit

- The average blood alcohol level for males was 107mg/100ml

- The average blood alcohol level for females was 51 mg/100ml
Figure 5. Rate per 100,000 population for killed drivers with blood alcohol concentration ≥20mg/100ml and >80 mg/100ml
Single Vehicle Single Occupant Crashes

- 63 (21%) were single vehicle, single occupant crashes which involved no other parties
- In 39 (62%) of these driver alcohol was a factor
  - 92% male
  - 50% aged over 30 years
- 36 (57%) over the legal limit
Pedestrians and Alcohol

- Alcohol consumed by pedestrians was a factor in 24 (38%) of the pedestrian deaths.
- The average (median) age was 53 years.
- No tests positive for alcohol in respect of persons aged less than 18 years.
- 79% male.
- The average blood level was 143 mg/100ml.
- Pedestrians with positive blood alcohol levels were 8 times more likely to be killed between 10 p.m. on Friday night to 8 a.m. on Monday morning.
- 20 (83%) occurred between 8 p.m. and 8 a.m.
Passengers killed in driver alcohol related crashes

- 19 (27%) of the passengers were killed in driver alcohol related crashes

- Male passengers are more likely to be killed

- 46% of the killed male passengers were killed in such crashes

- 47% of the passengers killed in driver alcohol related crashes died in crashes that occurred between midnight and 4 a.m.
Conclusions 1

- Any amount of alcohol is a risk
- Do not have to be over the limit to be at risk
- Weekends, late at night and early mornings high risk
Conclusions 2

- 37% of fatal road crashes related to alcohol
- A serious problem with male drivers
- Young men most at risk of drinking, driving and being killed
- Middle-aged and older men also at risk
- Pedestrians with alcohol a serious risk to themselves