



Alcohol in Fatal Road Crashes in Ireland

Declan Bedford, Nuala McKeown, Akke Vellinga, Fenton Howell

Population Health Directorate
Health Service Executive



Background

- Alcohol is recognised as a major factor in road crashes
- We know Irish drivers do drink alcohol and drive
- We don't know what contribution alcohol makes to fatal road crashes in Ireland
- 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



Department of Transport
An Roinn Iompar



Legal limit

- Blood = 80 mg/100ml
- Urine = 107mg/100ml
- Breath = 35ug/100ml



Definition Alcohol Related Crash

Driver

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

Pedestrian

- Blood alcohol level level of 20mg/100ml and the circumstances of the crash



Results

- 301 fatal crashes killing 335 persons



Department of Transport
An Roinn Iompair



Status of the Deceased

	No	%
Driver*	188	56
Passenger	70	21
Pedestrian	63	19
Cyclist	12	4
Other	2	1
Total	335	100

**Includes drivers of motorcycles*



Crashes where alcohol was a factor

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



Department of Transport
An Roinn Iompair



Crashes where alcohol was a factor

- 123 persons were killed



Department of Transport
An Roinn Iompar



Figure 1. Day of fatal alcohol related crashes

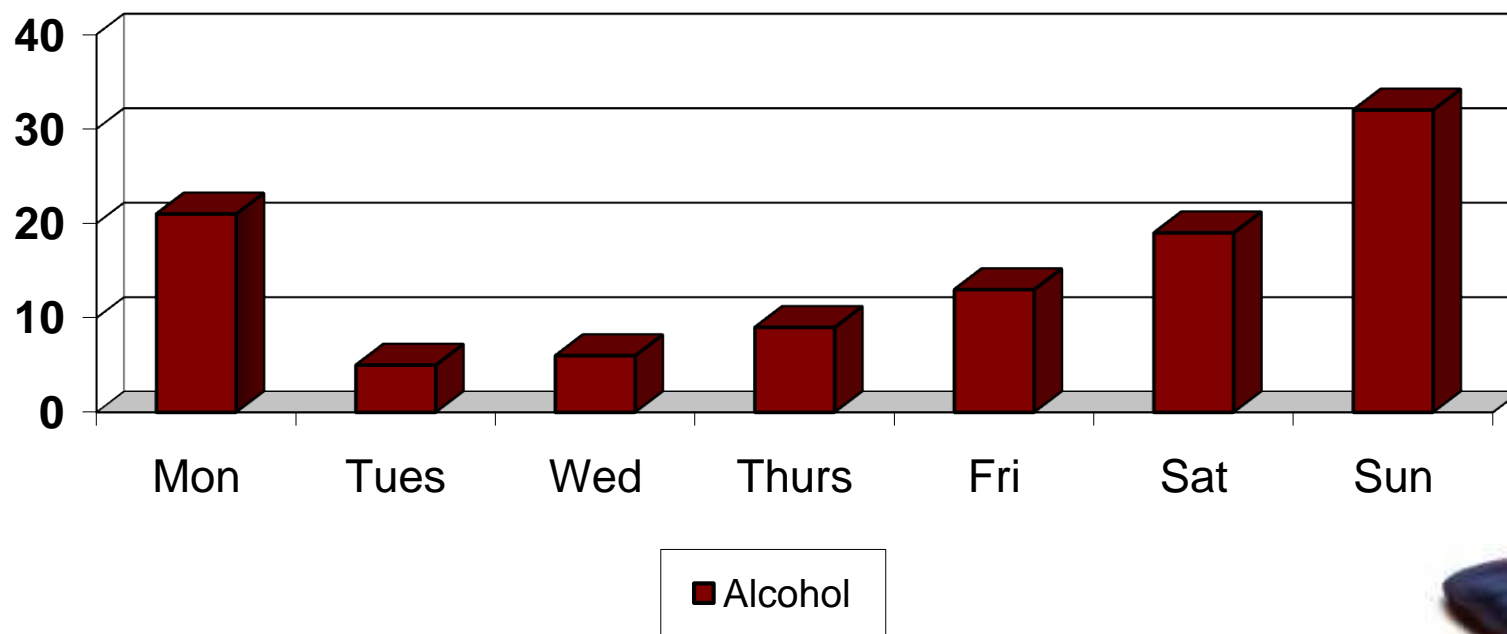
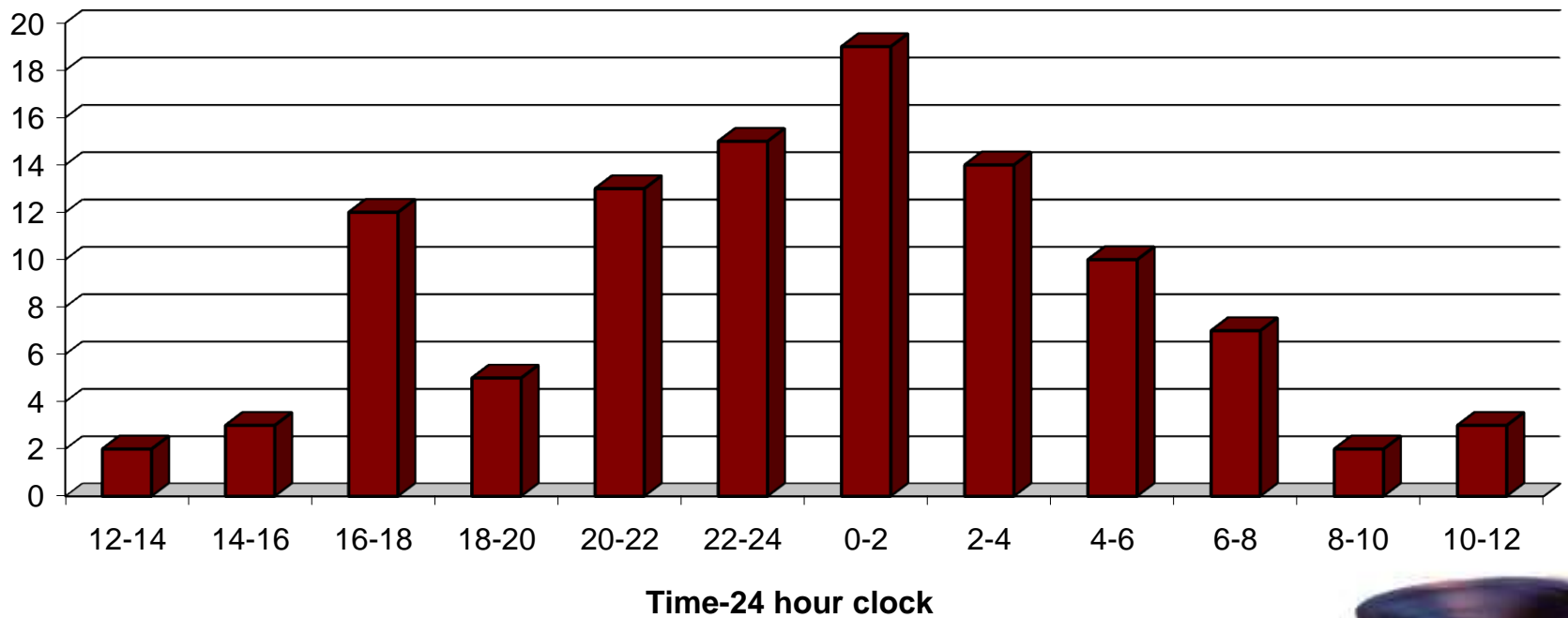


Figure 2. Time of alcohol related crashes



■ Alcohol



Department of Transport
An Roinn Iompair



RSA



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



Department of Transport
An Roinn Iompair



- 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



Department of Transport
An Róidín Iompair



Vehicles Driven by Killed Drivers

	No.	%
Car	107	57
Motorbike	51	27
Lorry/van	16	9
Other	14	8
Total	188	100



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

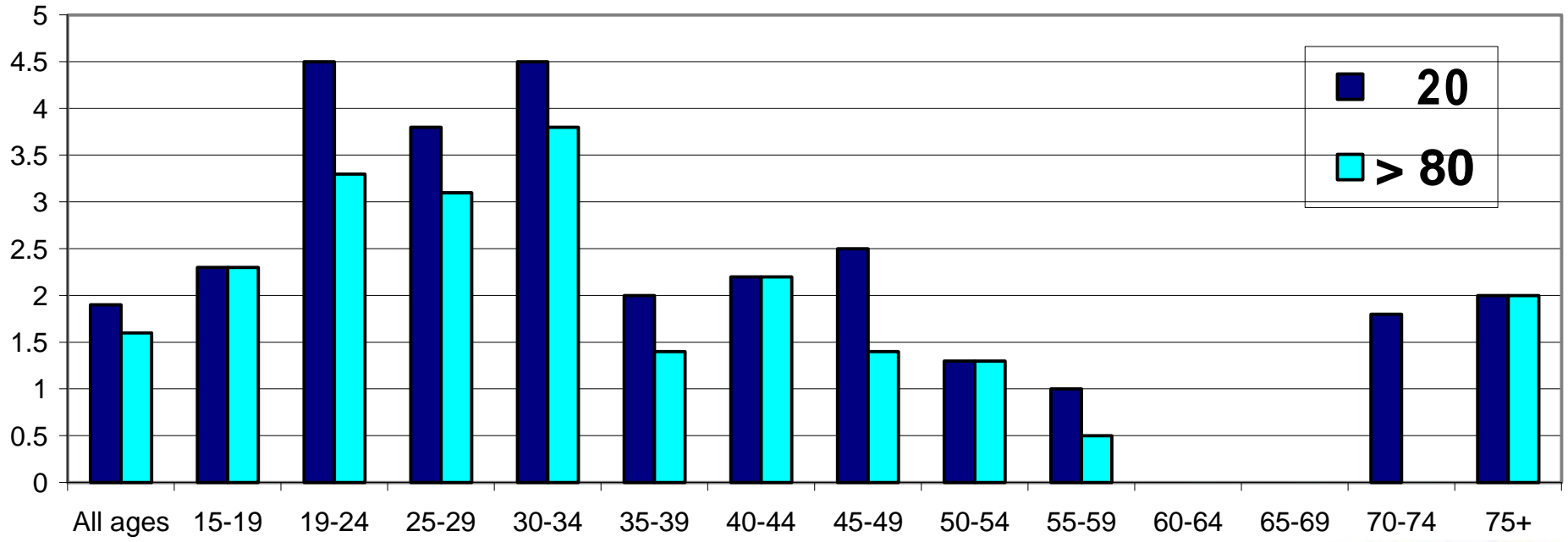
	No	%
Not recorded as done/not available	50	27
Zero	59	32
1-19	4	2
20-49	6	3
50-79	8	4
80-159	13	7
160-239	31	17
240+	17	9
Total	188	100

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



Department of Transport
An Roinn Iompair



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

