# Drink Driving in Ireland

Dr Declan Bedford 13<sup>th</sup> October 2008 RSA Conference Dublin

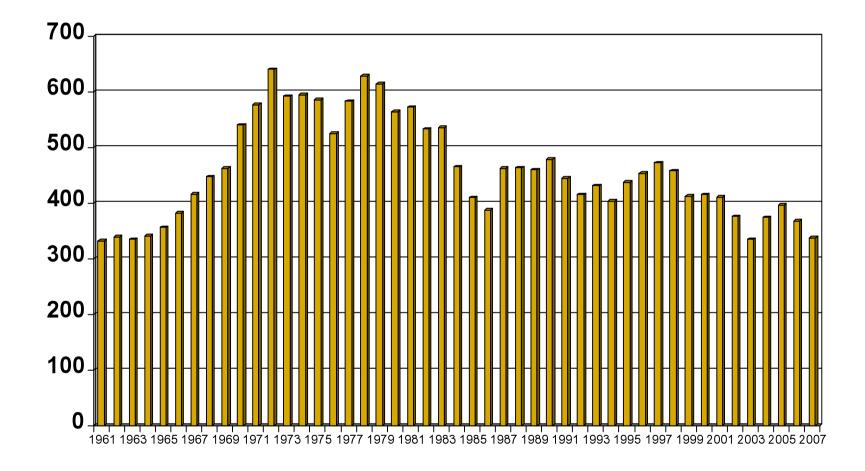
# This presentation

- Trends in fatal road crashes in Ireland
- Preliminary results of study into role of alcohol in fatal crashes
- Drivers
- Pedestrians
- Why we need to lower the legal limit to at least 50mg%

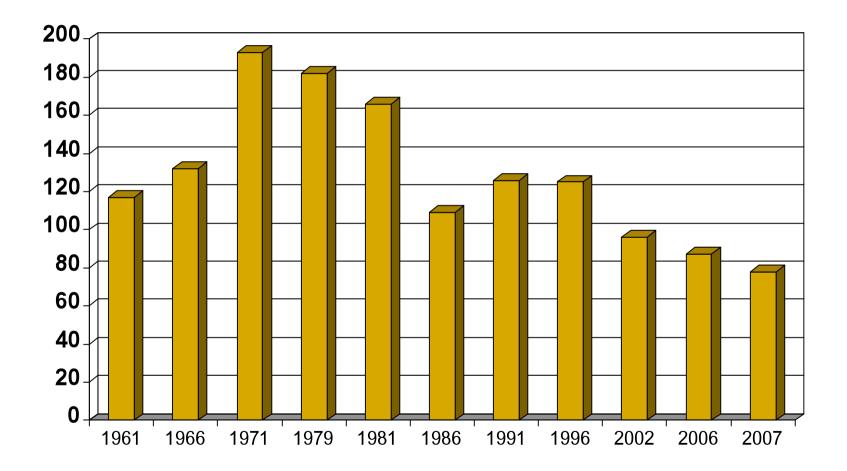
# Acknowledgements

- Fellow Authors
  - Nuala McKeown
  - Ann O'Farrell
  - Fenton Howell
- Staff of the Traffic Bureau in Garda HQ
  Josephine Healy

# Deaths on Irish Roads 1961-2007



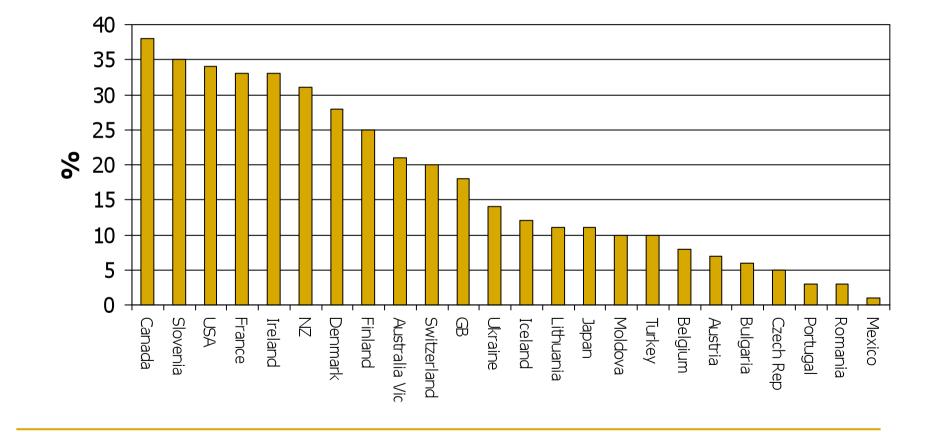
# Deaths on Irish Roads 1961-2007 per million population



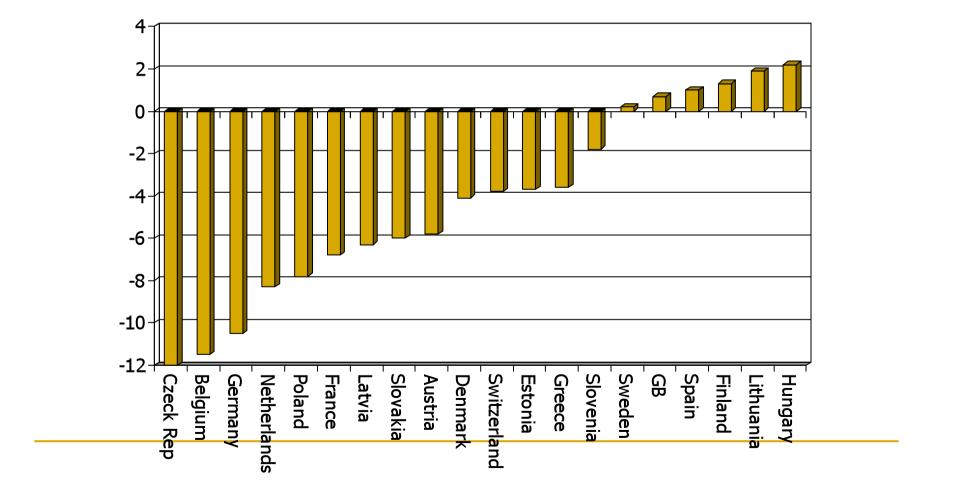
## Alcohol Related Road Deaths In Ireland

- No systematic collection of data
- 1975 regional study:
  - 46% killed drivers above legal limit
- 2003 national study:
  - alcohol a factor in 37% of road deaths

#### Drink Driving as a Factor in Fatal Crashes in Selected Countries (2002,2003 or 2004) (Joint OECD/ECMT Transport Research Centre)



Average yearly % change in road deaths resulting from crashes related to drink driving between 1996-1998 and 2005. (ETSC)



# Study Into Alcohol And Fatal Crashes

#### Methods

- + Files on fatal crashes kept by The National Traffic Bureau of An Garda Siochana
  - † Witness reports
  - Technical examination of sites and vehicles
  - + Post mortem reports including toxicology
  - + Garda Investigations
- + All files for 2003-2005 examined by authors

# Legal limit

- + Blood = 80 mg/100ml.
- <sup>+</sup> Urine = 107mg/100ml.
- <sup>+</sup> Breath = 35ug/100ml.

Alcohol impairs driving ability

"There is no blood alcohol level at which impairment does not occur" \*

 Relative risk of a fatal crash is 4-10 times higher for drivers with BACs between 50-79mg% risk compare to drivers with BACs of zero

## 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 and the circumstances of the crash
- In any crash other factors such as speed may also be involved

Results of Data 2003-2005

#### 995 crashes killing 1,105 people

#### Fatal Crashes That Were Alcohol Related

|        | All Crashes | Alcohol<br>crashes | % Alcohol<br>Crashes |
|--------|-------------|--------------------|----------------------|
| 2003   | 301         | 110                | 37%                  |
| 2004   | 334         | 95                 | 28%                  |
| 2005   | 360         | 104                | 29%                  |
| 2003-5 | 995         | 309                | 31%                  |

\*The decrease is not statistically significant

# Deaths In Alcohol Related Crashes

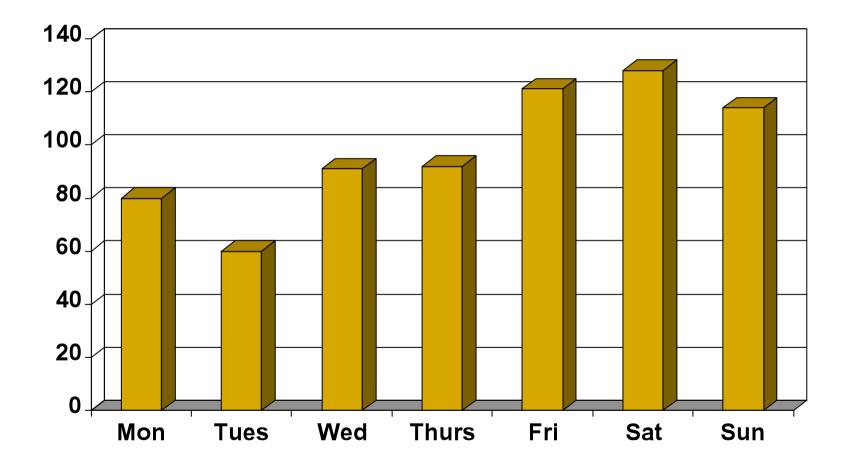
|        | All Deaths | Alcohol<br>Deaths | % Alcohol<br>Deaths |
|--------|------------|-------------------|---------------------|
| 2003   | 335        | 124               | 37%                 |
| 2004   | 374        | 110               | 29%                 |
| 2005   | 396        | 118               | 30%                 |
| 2003-5 | 1,105      | 352               | 32%                 |

\*The decrease is not statistically significant

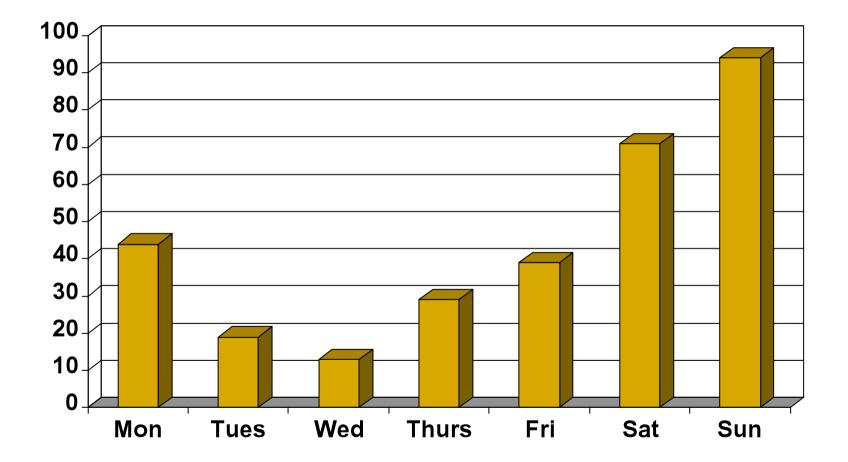
### Role of Alcohol in fatal crashes 2003-2005

|                                     | 2003 | 2004 | 2005 | 3 Year Ave |
|-------------------------------------|------|------|------|------------|
|                                     | %    | %    | %    | %          |
| Alcohol not a factor                | 30   | 43   | 34   | 36         |
| Alcohol test not available/not done | 33   | 28   | 38   | 33         |
| Driver alcohol                      | 29   | 25   | 24   | 26         |
| Pedestrian Alcohol                  | 7    | 2    | 4    | 4          |
| Pedestrian and Driver alcohol       | 1    | 1    | 1    | 1          |
| Other alcohol                       | 0    | 1    | 1    | 0          |
| Total                               | 100  | 100  | 100  | 100        |

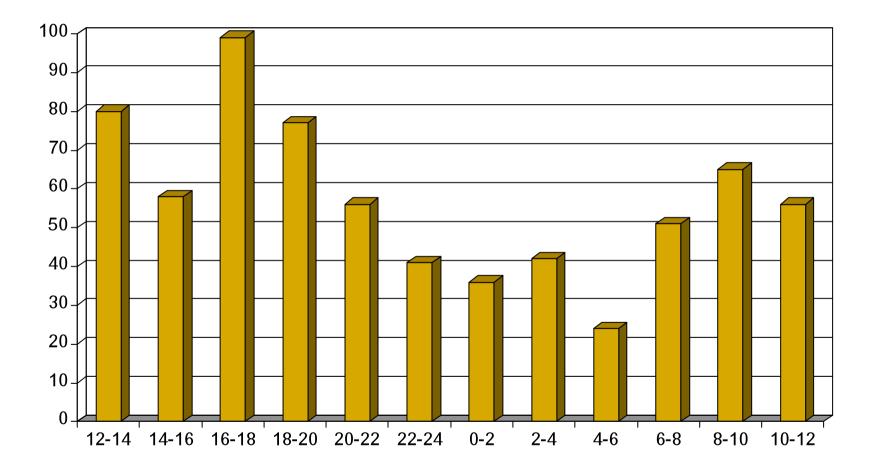
## Day Of Week Of Non-alcohol Related Crashes 2003-5



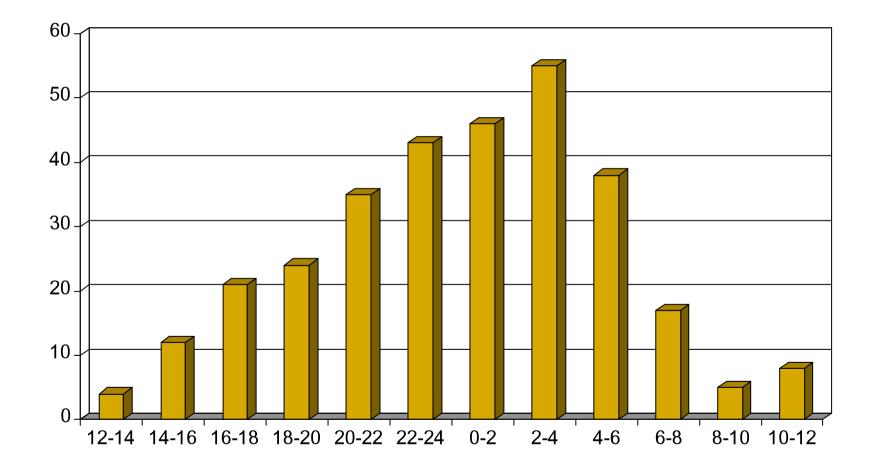
# Day Of Week Of Alcohol Related Crashes 2003-5



# Time Of Day Of Non-alcohol Fatal Crashes 2003-5



# Time Of Day Of Alcohol Related Fatal Crashes 2003-5



Alcohol Related Crashes

- 2 out of every 3 occur between 10PM on Friday night and 8AM on Monday mornings
- 1 in every 2 occur on Saturdays and Sundays

## Alcohol Related Deaths

#### 15% in mornings between 04.00 and 08.00

# Persons Who Died In Alcohol Related Crashes

|                       | 2003 | 2004 | 2005 | All years |
|-----------------------|------|------|------|-----------|
|                       | 02   | 70   | 7.4  | 22.4      |
| Drivers               | 82   | 78   | 74   | 234       |
| Pedestrians/ Cyclists | 23   | 13   | 24   | 60        |
| Passengers            | 19   | 19   | 20   | 58        |
| Total                 | 124  | 110  | 118  | 352       |

# BACs in killed drivers

| BAC LEVEL                | M   | Male |     | Female |     | Total |  |
|--------------------------|-----|------|-----|--------|-----|-------|--|
|                          | No  | %    | No  | %      | No  | %     |  |
| Zero                     | 132 | 26   | 33  | 31     | 165 | 27    |  |
| Not recorded as done/not |     |      |     |        |     |       |  |
| available                | 169 | 34   | 45  | 42     | 214 | 35    |  |
| 1-19                     | 7   | 1    | 5   | 5      | 12  | 2     |  |
| 20-49                    | 12  | 2    | 6   | 6      | 18  | 3     |  |
| 50-80                    | 18  | 4    | 0   | 0      | 18  | 3     |  |
| 81-159                   | 50  | 10   | 5   | 5      | 55  | 9     |  |
| 160-239                  | 65  | 13   | 9   | 8      | 74  | 12    |  |
| 240+                     | 50  | 10   | 5   | 5      | 55  | 9     |  |
| Total                    | 503 | 100  | 108 | 100    | 611 | 100   |  |

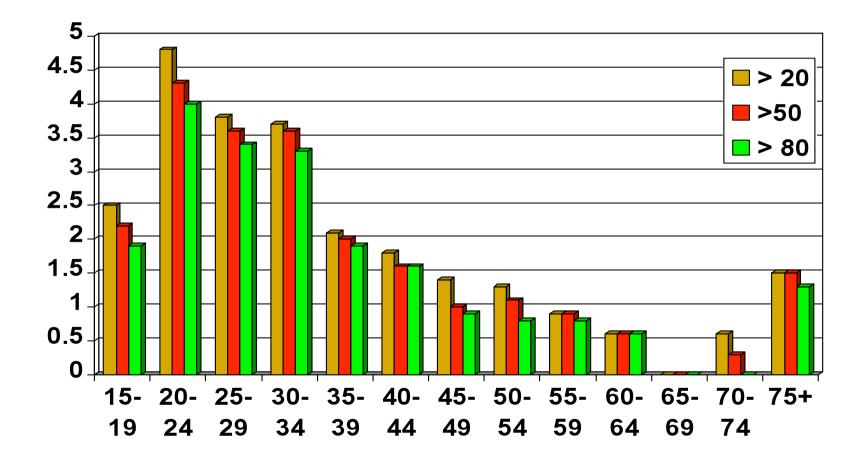
# Killed Drivers With BACs Above 80 And 50 Mg%

|   | 2003 | 2004 | 2005 | ALL<br>YEARS |
|---|------|------|------|--------------|
| All killed drivers                        | 188  | 202  | 221  | 611          |
| >80 mg%                                   | 32%  | 30%  | 28%  | 30%          |
| >50 mg%                                   | 37%  | 31%  | 31%  | 33%          |
|   |      |      |      |              |
| Killed drivers with test result available | 138  | 160  | 148  | 446          |
| >80 mg%                                   | 44%  | 38%  | 42%  | 41%          |
| >50 mg%                                   | 51%  | 39%  | 47%  | 45%          |

Who are the killed drivers with alcohol?

9 out of 10 are men

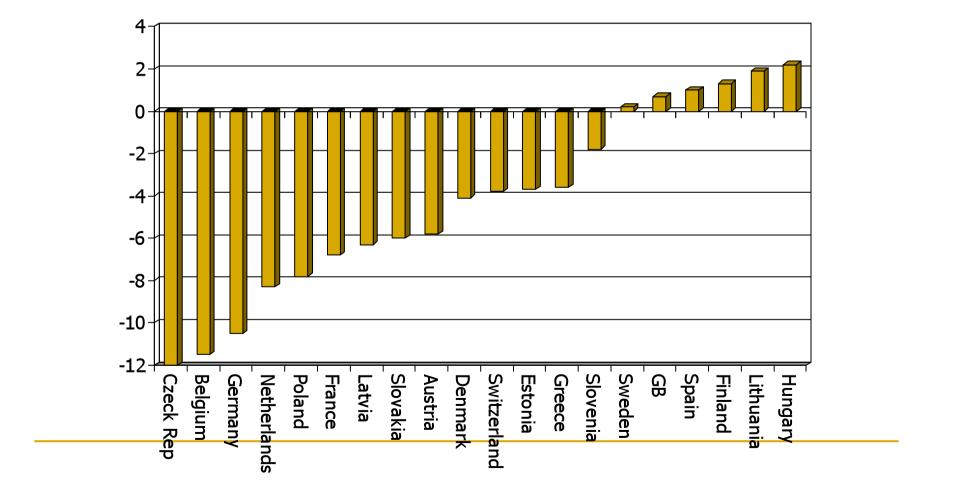
Rate per 100,000 population for killed drivers with BAC  $\geq$ 20, >50 and >80 mg/100ml



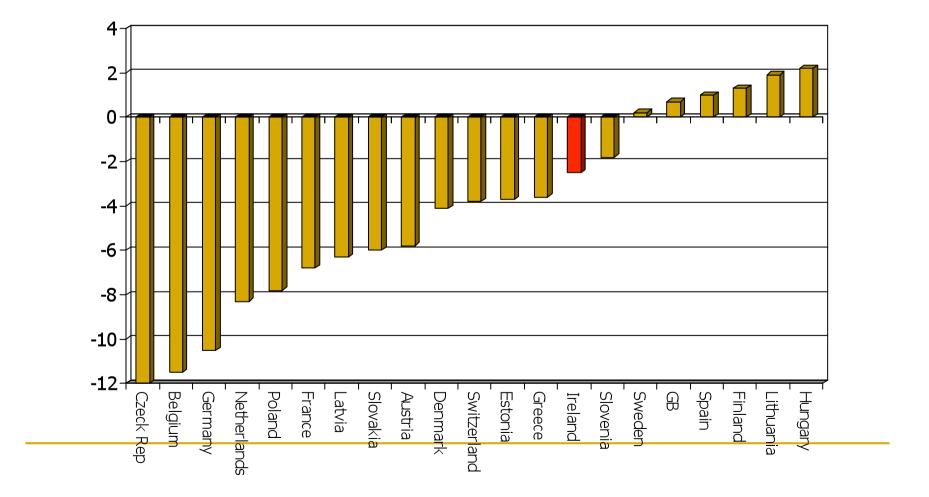
### Pedestrians Aged 15 Years And Over

- 187 killed over the 3 years
- 1 in 4 of their deaths related to their own alcohol intake
- 9 out of 10 alcohol related deaths were men
- 1 in 9 had BACs in excess of 240 mg%

Average yearly % change in road deaths resulting from crashes related to drink driving between 1996-1998 and 2005. (ETSC)



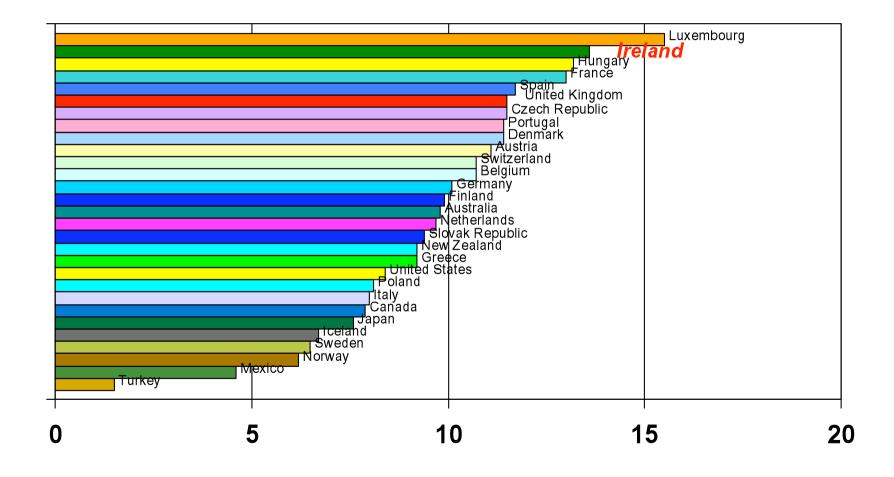
Average yearly % change in road deaths resulting from crashes related to drink driving



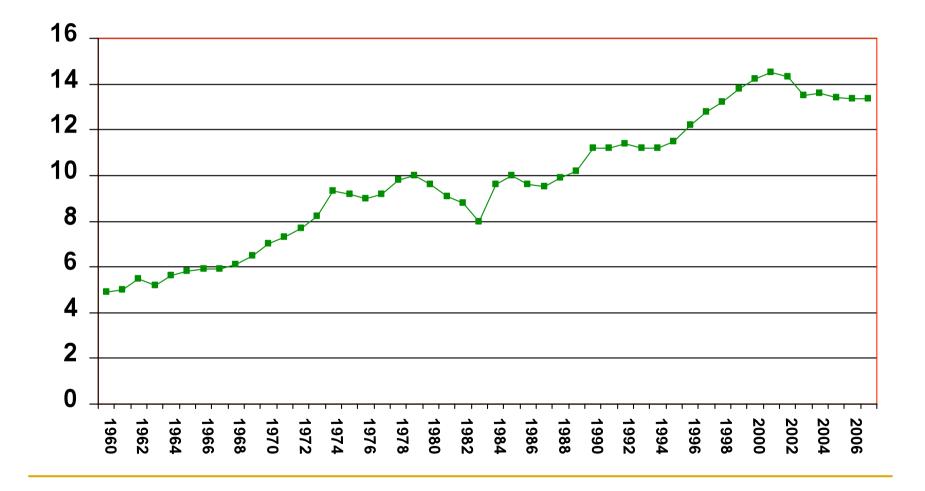
Drink Driving

- Still a serious problem
- Kills at least 120 people a year

# Annual Alcohol Consumption, Litres per population 15+



# Per capita Alcohol consumption Ireland (age 15+) 1960-2007

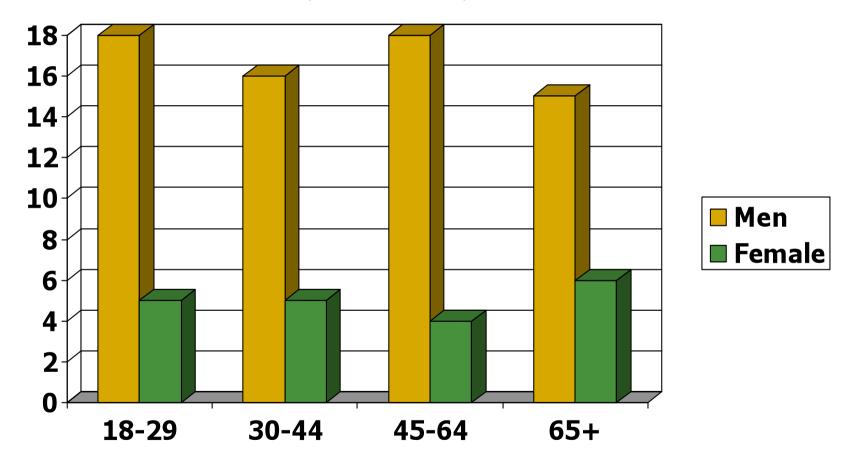


Special Eurobarometer March 2007

#### 5 drinks or more in typical session

| Ireland | 34% |
|---------|-----|
| Finland | 27% |
| UK      | 24% |
| EU      | 10% |
| Italy   | 2%  |

Percentage of drivers, who are drinkers, who drive after drinking 2 or more standard drinks (SLAN 2007)



Targeted action needed because of high alcohol consumption

## Road Safety Strategy In Ireland 2007-2012

 Action 76: Legislate for and introduce a reduction in the legal BAC for drivers by 2<sup>nd</sup> Quarter 2009

# Reducing the limit works

- NSW and Queensland 1982-92;
- 80mg% to 50mg%
- Study controlled for weather, seasons, economic and road activity, alcohol consumption and other legislations such as RBT
- Significant reduction in all collision and fatality measures in both states.

# Reducing the limit works

### NSW

- Serious collisions down 7%
- Fatal collisions down 8%

### Queensland

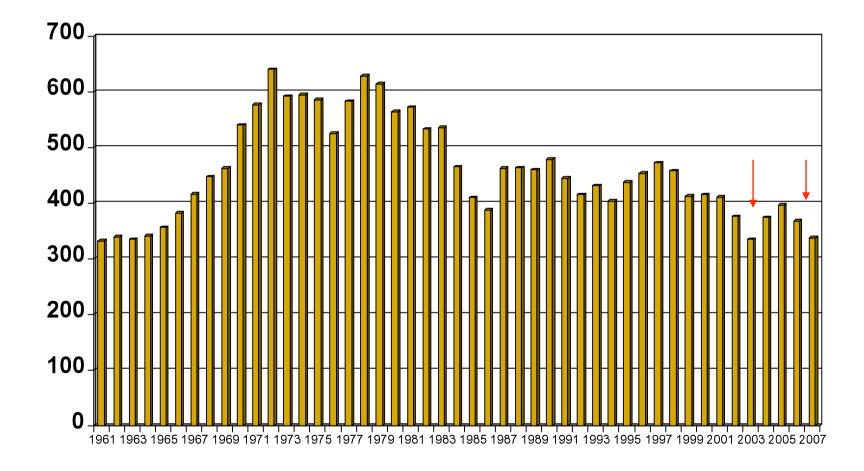
- Serious collisions down
  14%
- Fatal collisions down 18%

Reducing the limit works

- Scientific review (Mann et al, 2001)
  - In most but not all cases beneficial effect on traffic safety measures
- Scientific review (Fell, Voas, 2006)
  - Strong evidence in the literature that lowering the BAC limit from .08 to .05 is effective, and saves lives.

### Major initiatives work

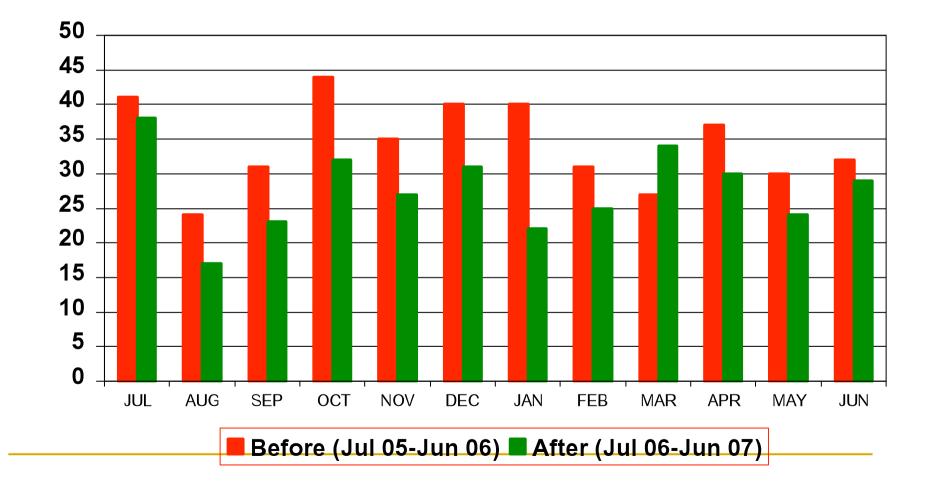
# Deaths on Irish Roads 1961-2007



RBT introduced in Ireland in July 2006

An immediate reduction in fatalities

 A reduction in hospital admissions resulting from road crashes The Number Of Road Deaths In Ireland In The 12 Months Before And After The Introduction Of RBT



In the first 6 months after the introduction of RBT\*

- 3,430 admissions to hospital from car crashes
- 352 admissions less than the corresponding
  6 months in 2005

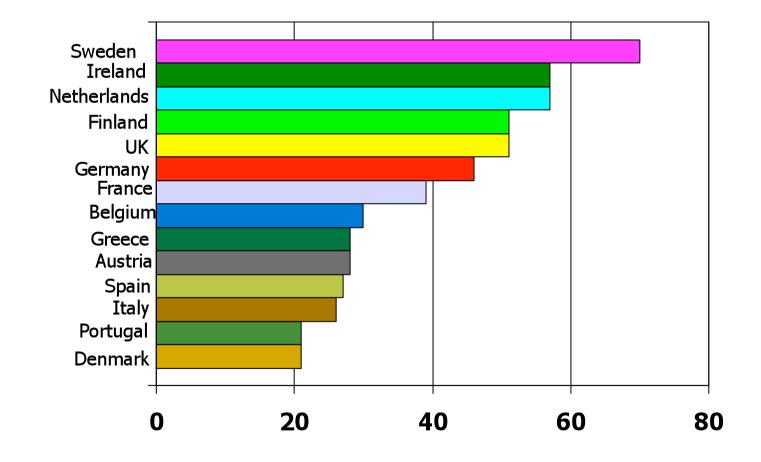
In other areas major national initiatives used to prevent similar number of deaths

- In late 2000 meningococcal C vaccination introduced for children
- Prior to introduction in 1999 and 2000 average deaths per year was 8

There Is Support For Lowering The Limit

- DOHC survey 2002 67%
- Sartre 2004 (where limit 80+)\_ 75%
- PARC 2007 99%

## Drivers Should Be Allowed No Alcohol At All (Sartre 3)



The legal limit needs to be reduced

- Alcohol even at low levels impairs driving ability
- The evidence has shown that reducing the limit works
- Too many deaths and injuries as a result of alcohol
- Targeted action needed because of high alcohol consumption
- There is support for a reduction

## Conclusion

#### Drink driving is a problem in Ireland

#### Lowering the Limit

- Will save lives
- Will reduce injury and disability