



European Transport Safety Council



Road Safety Lecture

Monday, 12th October 2009

Dublin Castle

Intoxicated Driving

Denis A. Cusack,

Director of the Medical Bureau of Road Safety,

Professor of Forensic & Legal Medicine,

UCD School of Medicine & Medical Science



*Intoxicated Driving –
Justified optimism with the need for joined-
up thinking and action across professions,
agencies and States*

Intoxicants



- Alcohol
- Other drugs
- Define
 - Medical & clinical effects
 - Legal considerations
 - Forensic assessment & analyses

Intoxicant



- “intoxicant” includes alcohol and drugs and any combination of drugs or of drugs and alcohol
- substance which when taken into a body by one mean or another produces a condition of diminished mental and physical ability, hyperexcitability, or stupefaction.

Classes of Drugs



- Alcohol
- Cannabis
- Benzodiazepines
- Amphetamine / Metamphetamine
- Cocaine
- Methadone
- Opiates
- Antidepressants
- Antihistamines

Clinical Assessment



- Acute signs and symptoms
- Chronic signs and symptoms
- Psychological effects
- Psychomotor effects
- Physical effects

Amphetamines



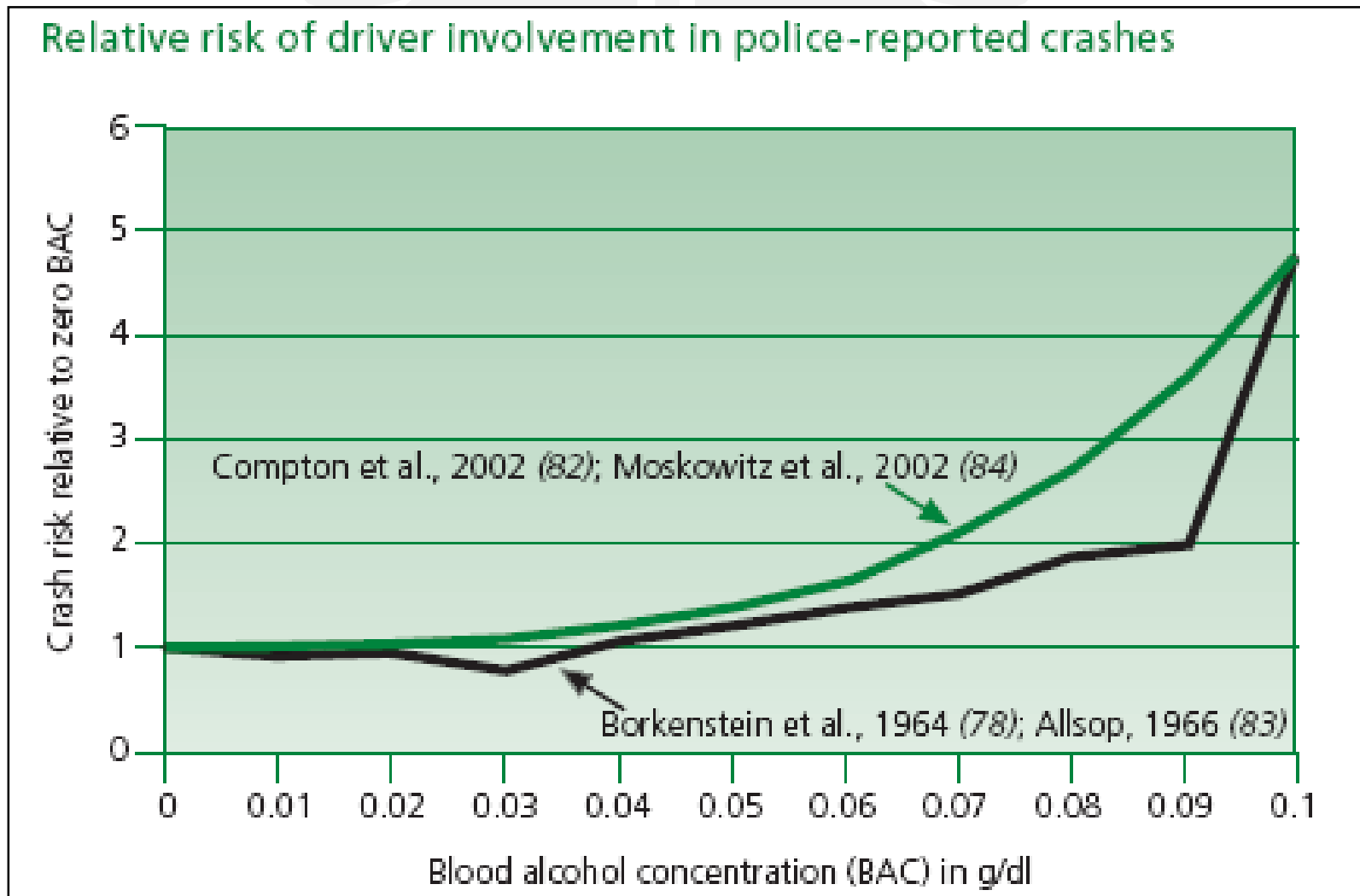
- Tachycardia
- Palpitations
- Hypertension
- Euphoria
- Increased energy
- Restlessness
- Delusions
- Paranoia

Affects on Driving



- Sensory input
- Concentration
- Reaction time
- Action response

Crash Risk



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.

Bedford et al, *Alcohol in Fatal Road Crashes in Ireland* (2006)

Causation



- Causing
- Contributing
- Factor
- Found
- Multiple factors

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

Road Fatalities - EU

- 2001: 54,400
- 2008: 39,000
- 2010 target: 27,000

Road Fatalities - Ireland

- 2001: 411
- 2008: 281 (but 16 to 30 year olds = 120 and males = 204)
- 2009: 184 to Friday, 9th October
- ETSC ranked Ireland as 6th safest country out of EU27 (report June 2009)
- 2010 target: 205



Optimism

Road Safety: Ireland Today



- Road fatalities
- Blood alcohol limit
- Drugs

Legislation – Lowering the BAC: Evidence-Based Change

- Beirness et al (2002) Canada
- Bernat et al (2004) USA
- Bernhoft et al (2005) Denmark
- Tippetts et al (2005) USA
- Vollrath et al (2005) Germany
- Fell et al (2006) USA
- Nagata et al (2008) Japan

**Numbers of deaths per year (UK) to be estimated for
Collisions involving drivers with BACs in the
following four ranges:**

BAC mg/100mls	1-50	51-80	81-110	>110
Deaths per year	593	64	65	485

Allsop, R. (2005) How much is too much? - Lowering the Legal Drink-Drive Limit *Paper presented at the Brake Conference on Drink and Drug Driving, London*

New BAC Limits



- 50 – 80 mgs / 100 mls blood
 - administrative
- 20 – 50 mgs
 - Professional drivers
 - Novice drivers

Legislation – *per se* limits for other drugs

- Zero tolerance laws
 - Illicitly used drugs
 - Non-prescribable drugs
- Impairment laws
 - Prescribable drugs
- Two-tier system
- Graded penalties if in addition to alcohol
 - E.g. BAC 120 mgs % + another drug

Legislation – testing for other drugs



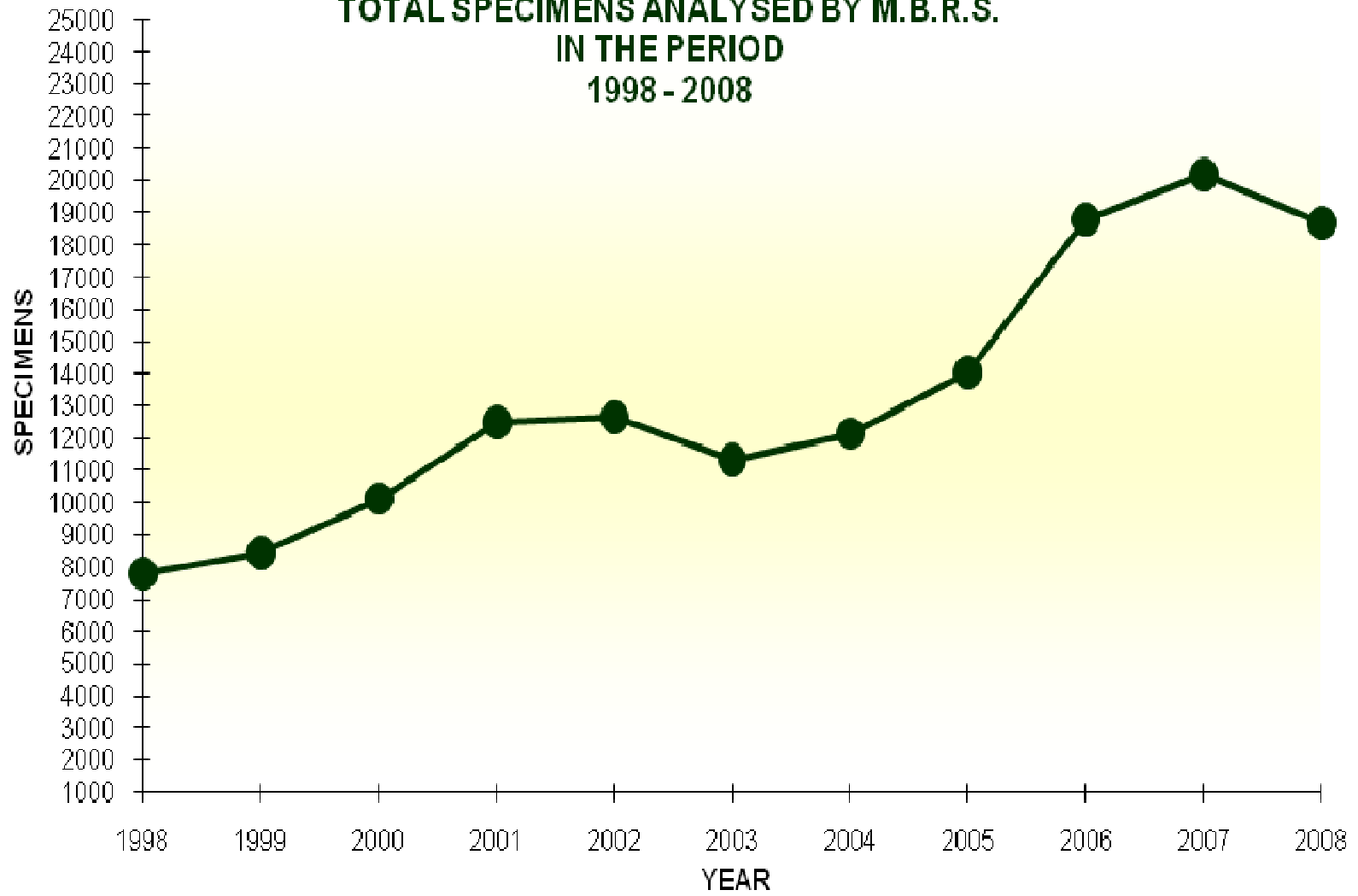
- EMCDDA Drugs in Focus Briefing 2/2009
- Roadside testing (ROSITA / DRUID)
- Field impairment testing (law & training)

Enforcement



- MAT introduced 21st July 2006
- 1,000 roadside alcohol screening devices supplied to Gardaí by MBRS
- DWI 2008:
 - 18,053
 - 12,332 (first 8 months)
- DWI 2009:
 - 10,014 (first 8 months)

Chart 1
TOTAL SPECIMENS ANALYSED BY M.B.R.S.
IN THE PERIOD
1998 - 2008



MBRS Analyses 2008



- Blood & Urine Alcohol:
 - 5,851 samples certified
 - 3,817 > limit
 - 2,034 < limit
- Blood & Urine Drugs:
 - 1,842 certified
 - 1,411 confirmed presence
 - 431 no confirmed presence

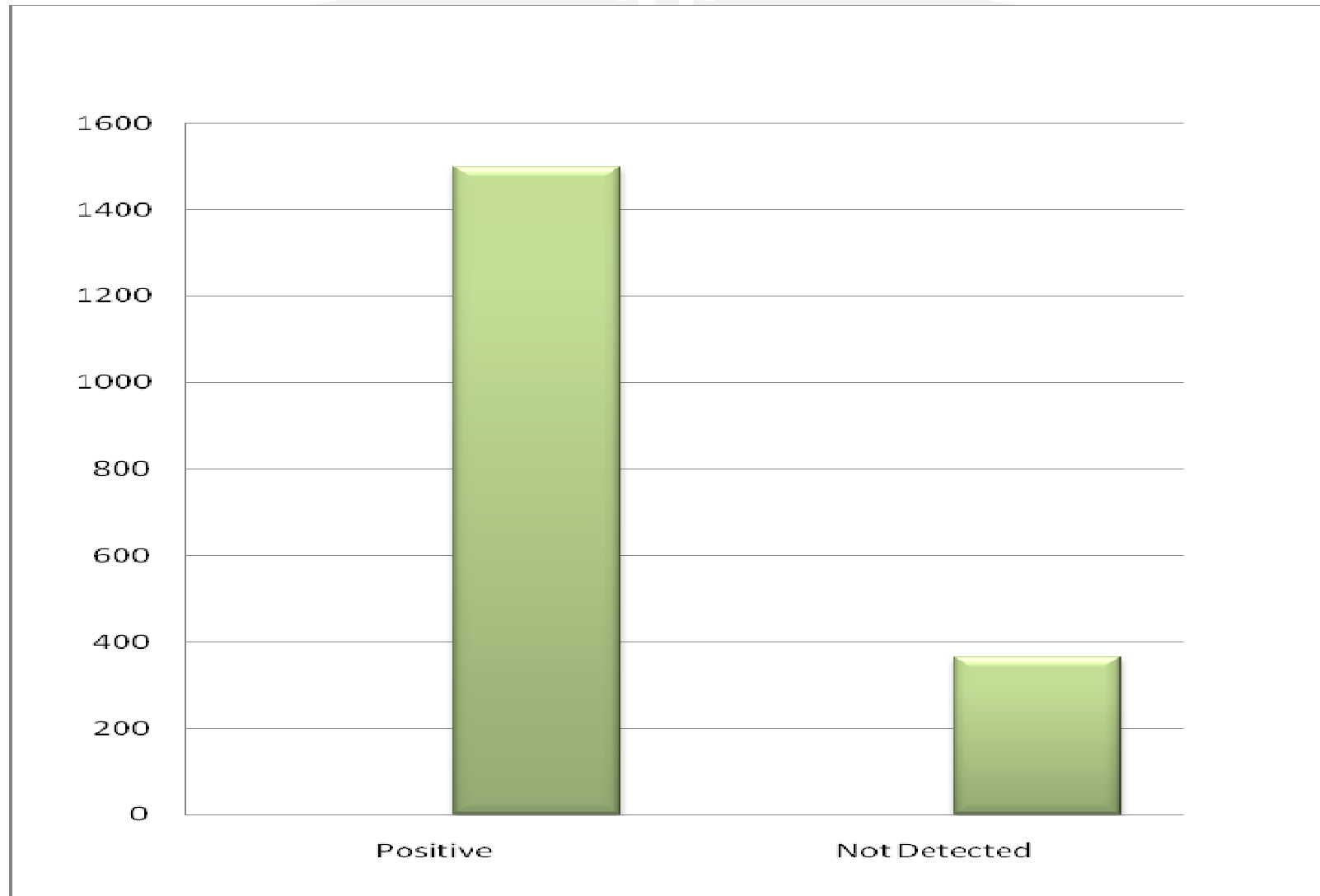
2000 v 2008 DUI MBRS Analyses

- 2000: blood, urine & breath samples - 9,586 results certified for alcohol concentration
- 2008: 17,352 results certified
- 2000: blood & urine samples for other drugs – 78 results certified
- 2008: 1,842 results certified

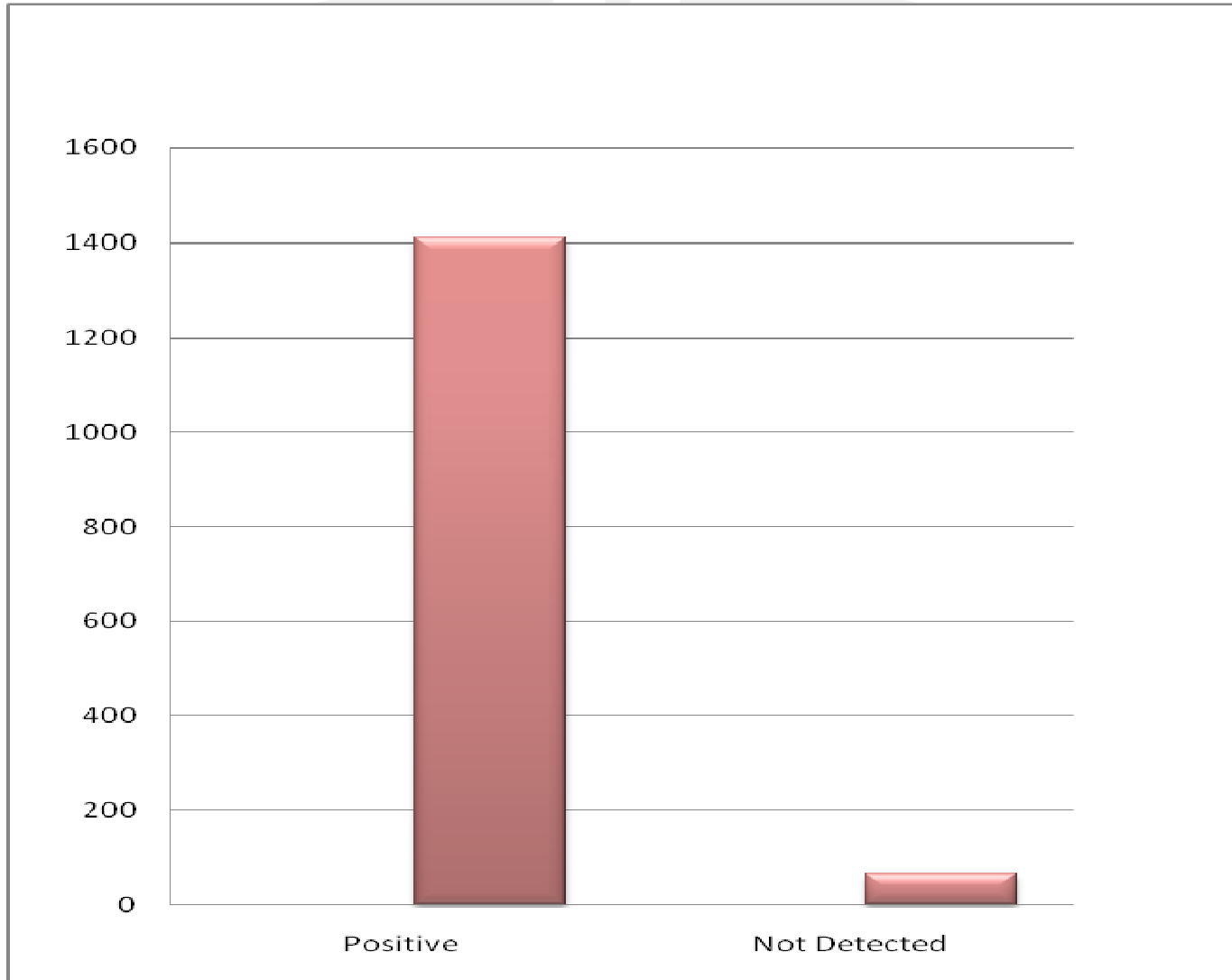
Alcohol Content			2008		2007		5 year period 2002- 2006	
BLOOD mg/100ml	URINE mg/100ml	BREATH µg/100ml	No.	%	No.	%	No.	%
0 - 80	0 - 107	0 - 35	4,932	28.4	4,704	25.0	11,689	18.7
LEGAL LIMIT								
81-100	108 - 135	36 - 44	1,896	10.9	2,173	11.6	5,705	9.1
101 - 150	136 - 200	45 - 66	4,946	28.5	5,618	29.9	18,736	29.9
151 - 200	201 - 267	67 - 88	3,612	20.8	4,098	21.8	16,571	26.4
201 and upwards	268 and upwards	89 and upwards	1,966	11.4	2,199	11.7	9,997	15.9

Source: MBRS Annual Report 2008

Drugs Analysis 2008 – Initial Testing



Drugs Analysis 2008 - Confirmatory



CSO Statistics 2008 (Recorded Crime Offences)

- Driving /in charge of a vehicle while over legal alcohol limit:
 - 2004 12,168
 - 2005 14,076
 - 2006 18,602
 - 2007 19,838
 - 2008 17,970

CSO Statistics 2008 (Recorded Crime Offences)

- Driving /in charge of a vehicle under the influence of drugs:

– 2004	77
– 2005	106
– 2006	117
– 2007	258
– 2008	723

Prosecutions

- ? 50 - 70% of certified over the limit alcohol results
- ? < 20% of certified confirmed presence of drugs other than alcohol
- Changes in method of recording and reporting
- Figures now issued by Central Statistics Office and Courts Service
- Address legislative issues and criminal proofs



Court Process



- Presumption of innocence paramount
- Right to challenge evidence
- Summary offence
- Presumption in favour of the statutory certificate / statement
- DPP v Mullane [2007 No. 1668 JR]:
 - “... one must appreciate that justice is not only about the rights of the accused. There is also the public interest in the successful prosecution of offences to be taken into account ... common sense and proportionality are also factors ...”






























Road Safety Strategy 2007-2012

- Action number 32: expand drug analysis programme
- Action 33: establish drug impairment programmes
- Action 76: lower BAC
- Action 77: administrative disqualification
- Action 78: Review DUID legislation

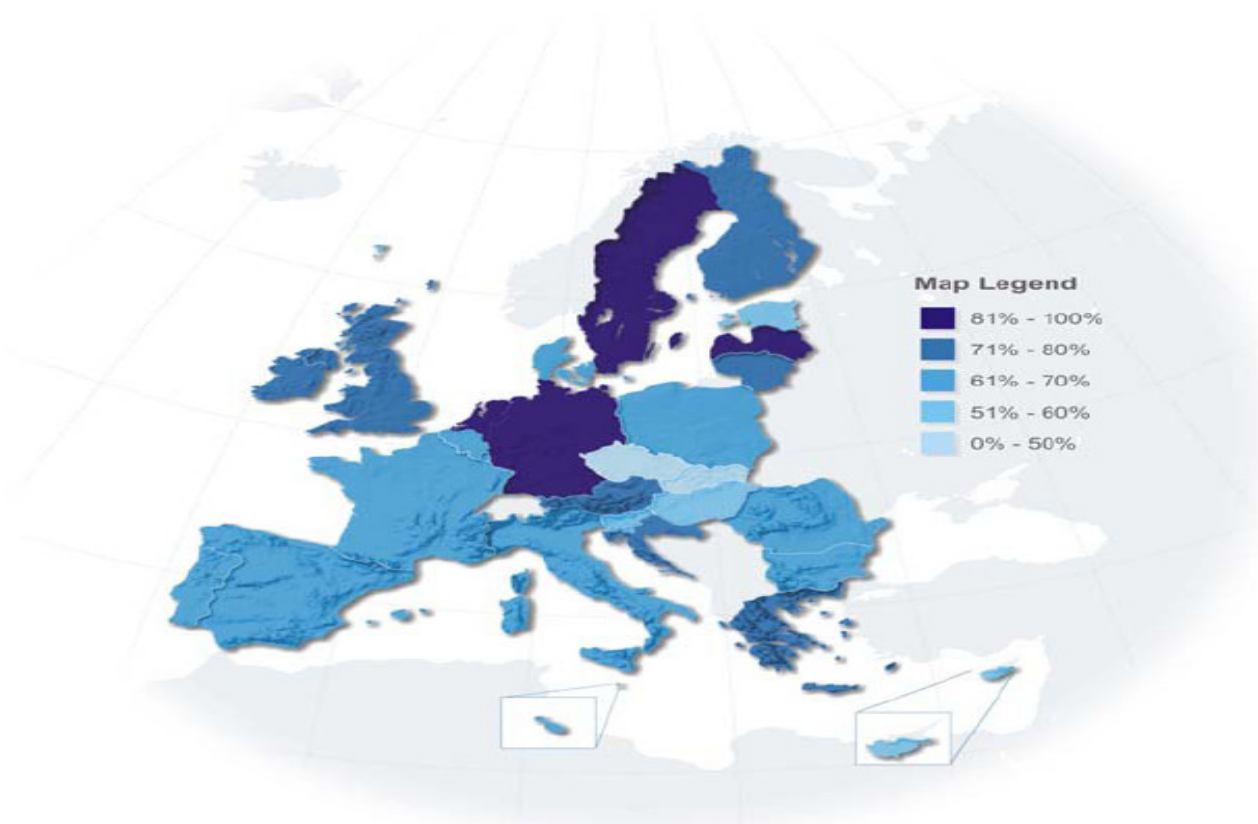
Public Support

Question: QB15b. Would you agree or disagree to lower blood alcohol levels (BAC) for young and novice drivers to 0,2g/l in all 25 European Union Member States?

Answers: Agree

 DE	89%
 NL	87%
 SE	85%
 LV	85%
 LT	80%
 AT	77%
 FI	77%
 UK	75%
 EL	74%
 IE	74%
 EU25	73%
 BE	70%
 ES	70%
 FR	70%
 LU	68%
 DK	67%
 IT	64%
 PT	64%
 PL	64%
 MT	61%
 EE	58%
 CY*	57%
 SI	54%
 HU	53%
 CZ	49%
 SK	40%
*CY (toc)=75%	
 HR	71%
 BG	68%
 RO	67%

 IE	74%
 EU25	73%



Spectrum



- Evidence-based
- Legislation
- Enforcement
- Forensic analysis
- Prosecution
- Conviction
- Retraining

What is this all about?

- Not about punishment
- Not about killing off rural life
- Not strictly about the battle against alcohol and other drugs in society generally
- It is about improving road safety
- It is about saving lives and reducing injuries
- It is about reducing family and economic loss
- It is about maturing and getting serious

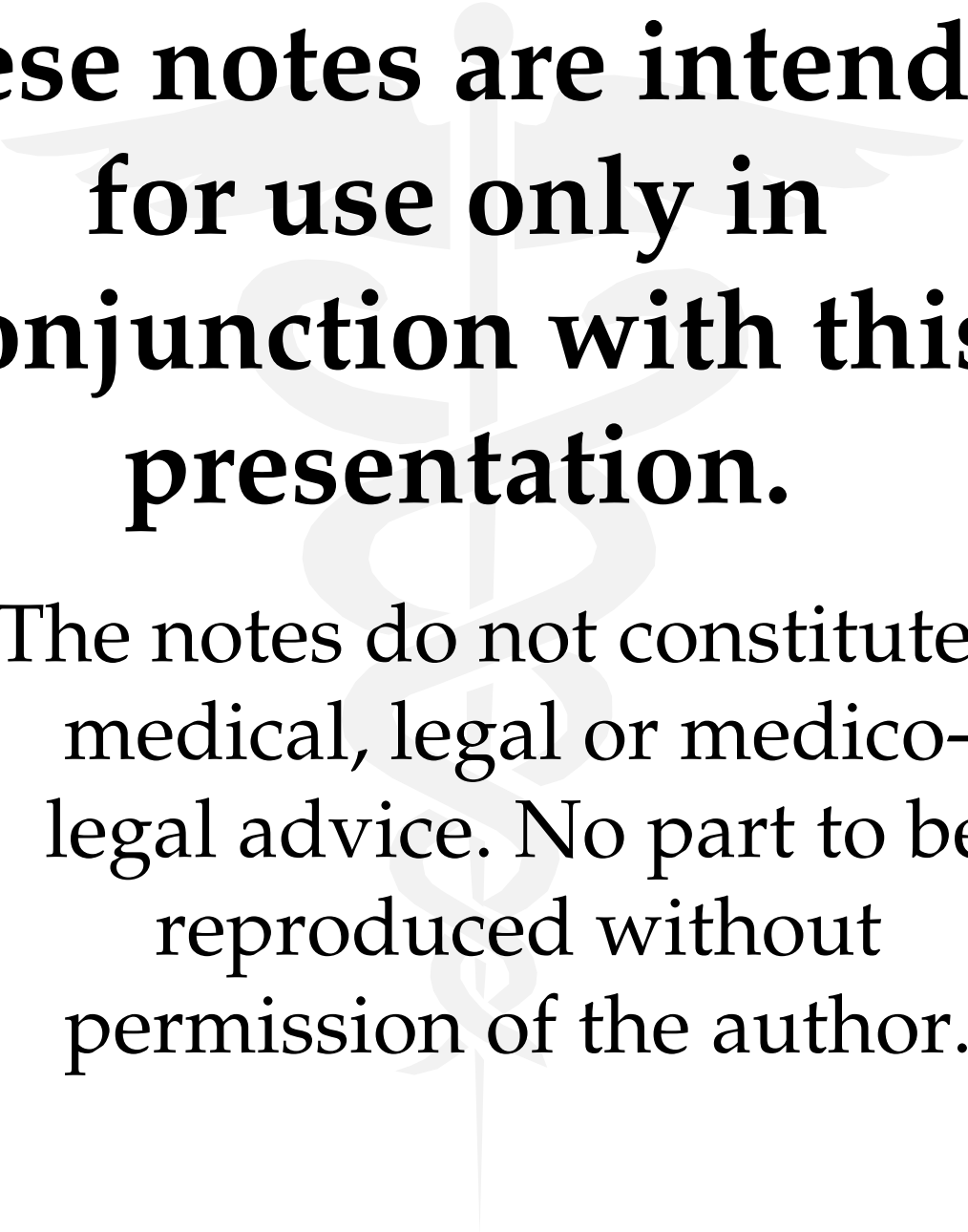
References



- Beirness et al (2002) Canada
- Bernat et al (2004) USA
- Bernhoft et al (2005) Denmark
- Tippetts et al (2005) USA
- Vollrath et al (2005) Germany
- Fell et al (2006) USA
- Nagata et al (2008) Japan

Further References

- Cusack & McGovern. *Current road traffic legislation is not realising its potential to save lives and reduce serious injuries*. MLJI (2004) 10,2: 62-66
- Fitzpatrick et al. *Drinking, drugs and driving in Ireland: more evidence for action*. Injury Prevention 2006; 12: 404-408
- Bedford et al. *Alcohol in fatal road crashes in Ireland in 2003*. Health Services Executive (Naas, Ireland) 2006.
- McGovern & Cusack. *Single vehicle collisions in County Kildare and road safety in Ireland*. Report, UCD & Kildare Coroner, 2006.



**These notes are intended
for use only in
conjunction with this
presentation.**

The notes do not constitute
medical, legal or medico-
legal advice. No part to be
reproduced without
permission of the author.

Prof. Dr. Denis A. Cusack,
FRCPI, FFFLM, FCLM, Barrister-at-Law

Medical Bureau of Road Safety



**School of Medicine and Medical
Science**

**Scoil an Leighis agus Eolaíocht
an Leighis**