# Impaired Driving Countermeasures: an Australian perspective

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CARRS-Q is a joint venture initiative of the
Motor Accident Insurance Commission
and Queensland University of Technology

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# Overview

- The prevalence of impaired driving in Australia
- Regulatory approaches used to manage:
  - Alcohol impaired driving
  - Other drug impaired driving
- Key countermeasures
  - Lower blood alcohol limits
  - Random breath testing (RBT)
  - Random drug testing (RDT)
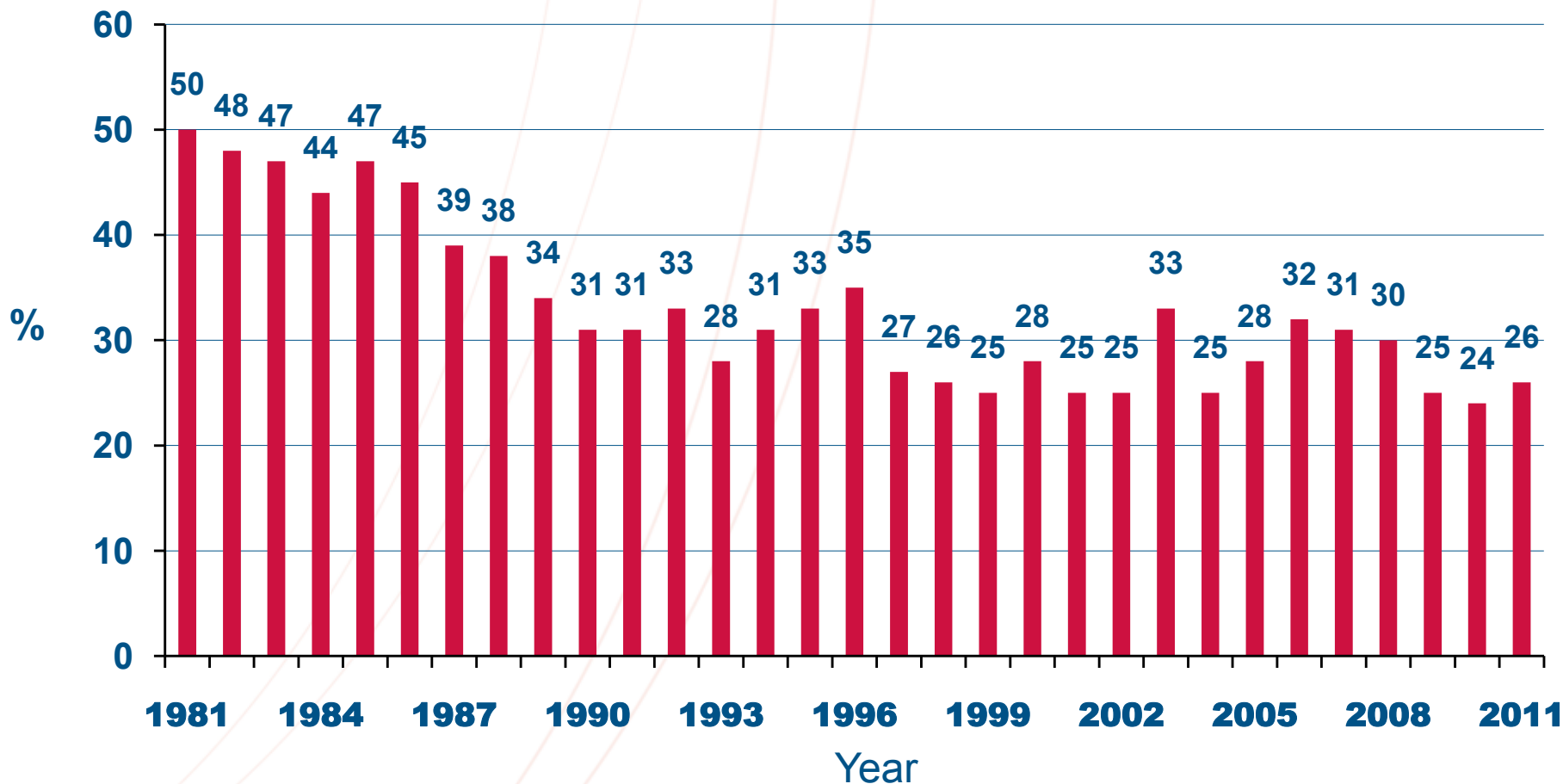- Ongoing challenges and future directions

# Alcohol-impaired driving:

# Drink driving

# Percentage of drivers and riders killed with BAC of .05 or more in <u>Australia</u>: 1980-2008
## (where BAC is known)
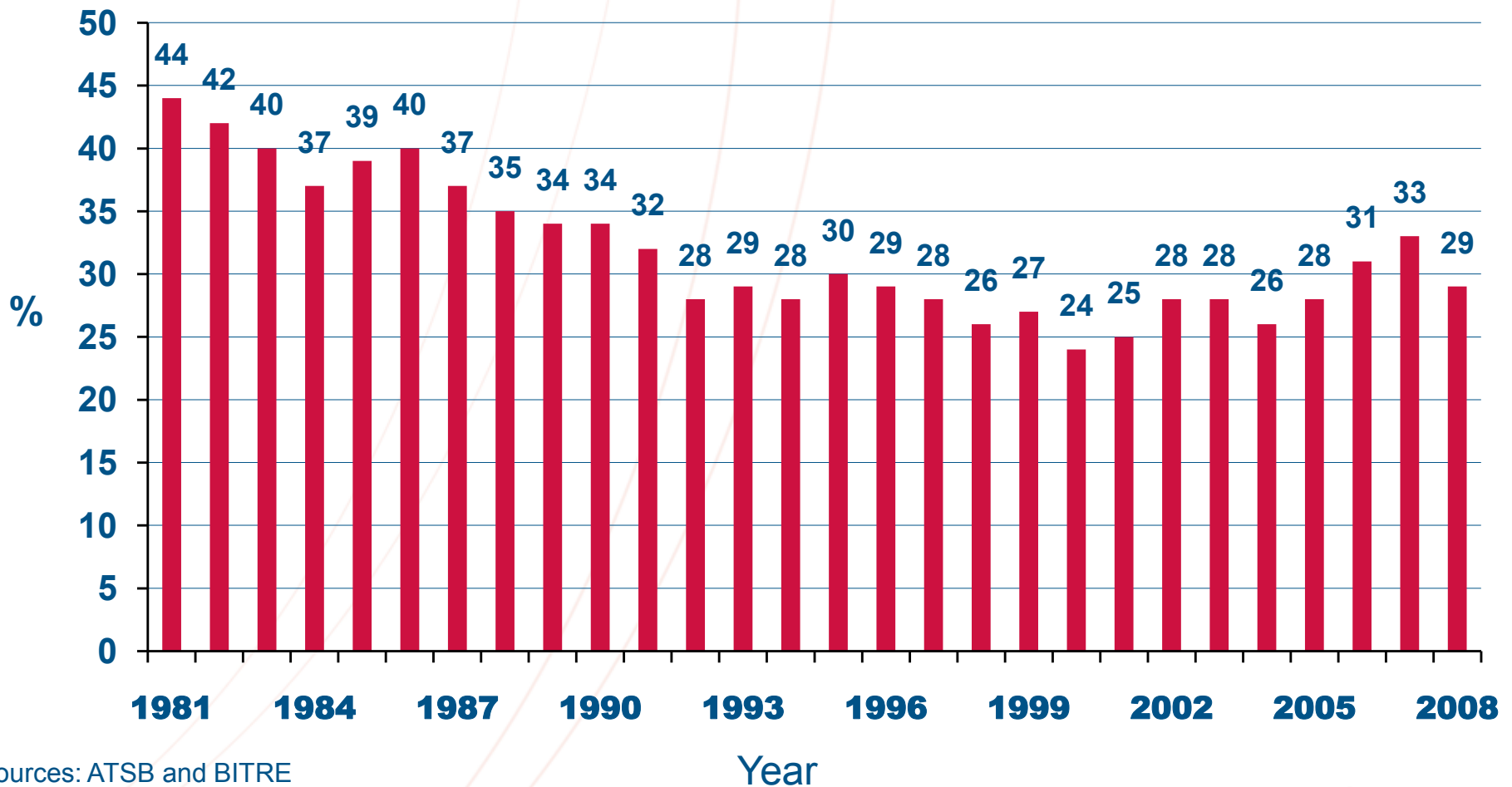


Sources: ATSB and BITRE

# Percentage of drivers and riders killed with BAC of .05 or more in <u>Queensland</u>: 1980-2011
## (where BAC is known)



Source: Queensland Transport & Main Roads

# Evolution of drink driving countermeasures (1)

- Late 1960s and 1970s
  - Introduction of 'per se' drink driving laws, the use of the breathalyzer and a .08 general alcohol limit
  - First drink driving publicity campaigns conducted
- 1980s
  - Random Breath Testing (RBT) adopted, supported by intensive mass media publicity campaigns
  - General alcohol limit lowered to .05
  - Mandatory penalties for drink driving introduced, generally entailing loss of licence

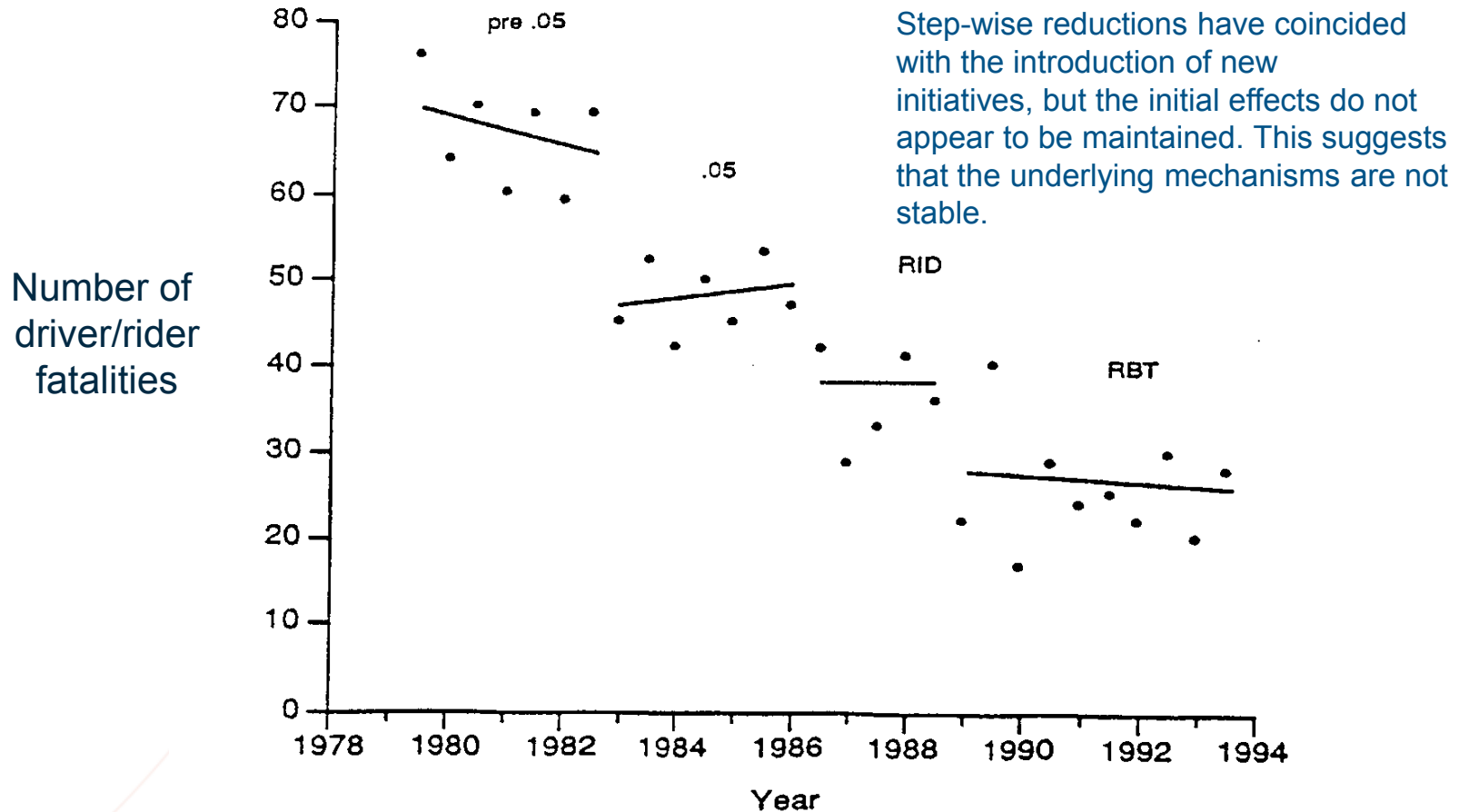# Evolution of drink driving countermeasures (2)

- 1990s
  - Introduction of zero alcohol limit for learner, provisional and professional drivers
  - Ongoing refinements of drink driving penalties e.g. immediate licence loss for high-range offenders
  - Increasing utilisation of drink driving rehabilitation
- 2000s
  - Many states introduce alcohol ignition interlocks programs and vehicle impoundment for high-range/repeat offenders

# A case study: Drink driving countermeasures in Queensland

- History:
  - 1968 - Breathalyzer introduced
  - 1982 - Alcohol limit reduced from .08 to .05
  - 1986 - Reduced Impaired Driving (RID)
  - 1988 - Random Breath Testing (RBT)
- Penalties and sanctions progressively made more severe and certain (e.g. licence loss for drink driving is mandatory for most offenders)
- Policing is supported by mass-media education

Source: Watson *et al*, 1994

# Alcohol-related fatalities in Queensland: 1978-1994

Number of driver/rider fatalities

Step-wise reductions have coincided with the introduction of new initiatives, but the initial effects do not appear to be maintained. This suggests that the underlying mechanisms are not stable.



Source: Watson *et al*, 1994

# Role of Random Breath Testing (RBT)

- RBT is the primary drink driving law enforcement tool used throughout Australia

- The police have the power to pull over and breath test drivers at any time, irrespective of their behaviour

- Majority of tests are conducted in highly visible, stationary mode (using a bus or police cars)

- Mobile car-based RBT used to detect evaders

- RBT is supported by mass media advertising eg. "Anywhere, anytime" message

- Strong community support for RBT, with 98% approval rating nationally (Petroulias, 2009)

# RBT 'Booze Bus' Operation



Source: Queensland Transport

# Car-based RBT operations



Source:  Queensland Police Service

# Effectiveness of RBT

- Evaluations suggest that RBT has produced long-term reductions in alcohol-related crashes

- However, degree of effectiveness appears to be linked to type of program implementation:
    - Initial success linked to 'boots and all' approaches featuring high, sustained high levels of testing
    - Long-term success linked to sustaining testing levels and innovation

- Many jurisdictions conduct the equivalent of one RBT test per licensed driver every year

- The perceived risk of being detected for drink driving is generally higher than for other illegal behaviours

Sources:  Homel, 1988; Watson *et al*, 1994; Henstridge *et al*, 1994; Hart *et al*, 2004; Watson, 2004

# National exposure to RBT (prior 6 months): 1993 to 2008
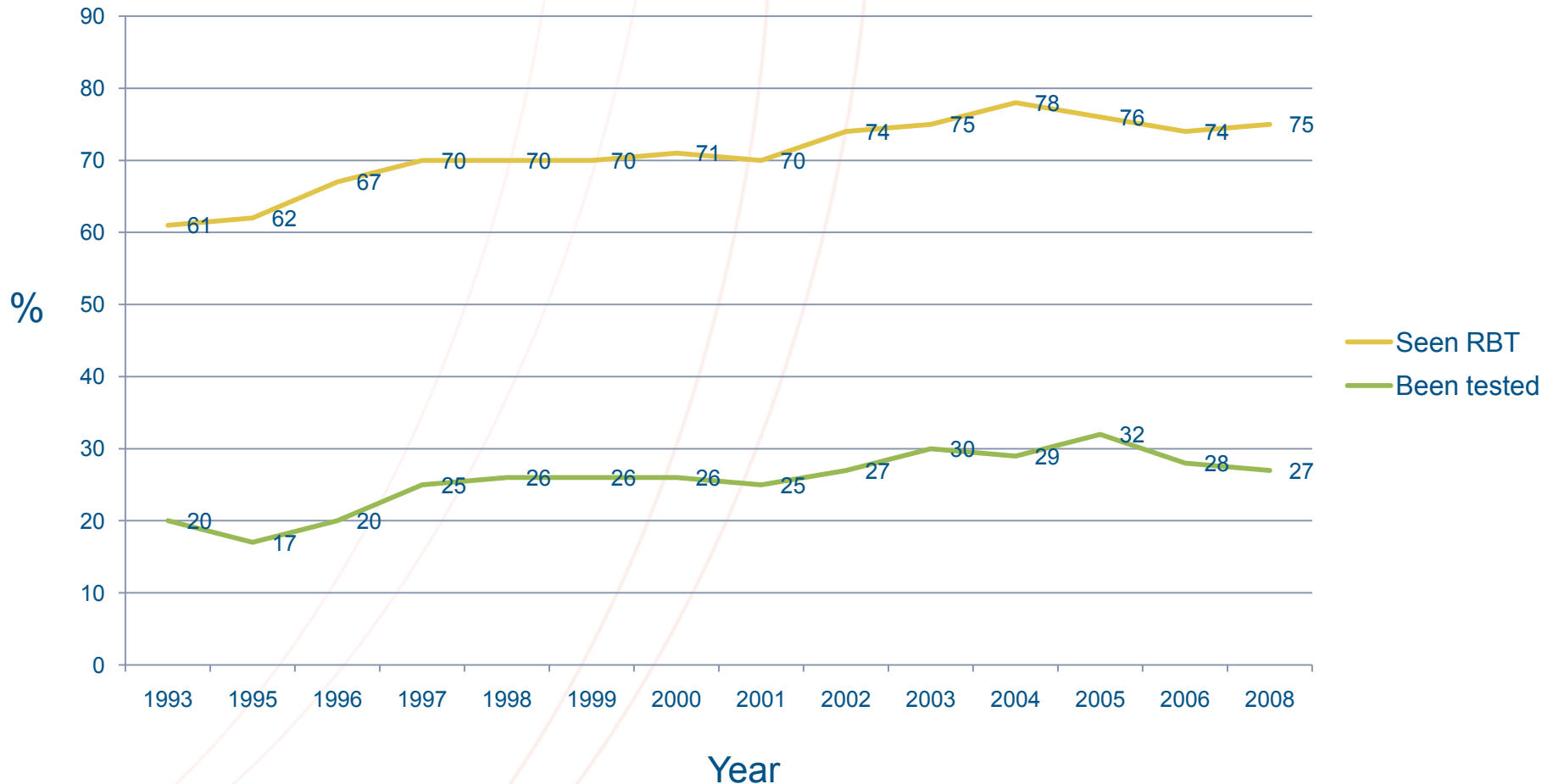


Source: Pennay, 2008

# Drug-impaired driving:

# Drug driving

# Prevalence of drug driving

- Growing concern regarding the prevalence of drug driving and its impact on crash risk

- Internationally, studies have detected drugs in between 9% and 40% of driver fatalities (Davey *et al*, 2009)

- A Victorian study found 26.7% of motorists killed had drugs other than alcohol in their system (Drummer *et al*, 2003)

- A Victorian roadside study found 2.4% of drivers tested positive for cannabis or amphetamines, which was twice the drink driving detection rate (Drummer *et al*., 2007)

- A Queensland roadside survey of 2657 drivers in metropolitan and regional centres found that 3.1% had a drug in their system, with cannabis and opiates being the most common (Davey *et al*, 2009)

# Random drug testing (RDT) (1)

- From 2003, random roadside drug testing has been progressively implemented across Australia

- These programs target select illicit drugs and are based on '*per se*' legalisation:

  - it is an offence to be detected with a concentration of the stated illicit drugs in the blood or oral fluid, or to refuse to be tested

  - the roadside saliva test is specific to cannabis, meth/amphetamine, and MDMA (ecstasy)

  - a laboratory test is undertaken to confirm results

- RDT is conducted in conjunction with breath testing (and only proceeds if the breath test is passed)

Source:  Haworth & Lenne, 2007

# Random drug testing (RDT) (2)

- RDT operations tend to target three groups:
  - ➢ Truck drivers
  - ➢ Young drivers
  - ➢ General driving population (Haworth & Lenne, 2007)
- Similar to RBT, RDT is designed to enhance general deterrent effect of laws but testing rates are considerably lower due to high costs and more targeted
- Detection rates for RDT are typically higher than for RBT (currently 1:40 vs. 1:120 in Queensland)
- Limited evaluations of RDT undertaken to date

# Random Roadside Drug Testing



Source:  Queensland Police Service

# Random Roadside Drug Testing



Source: Queensland Police Service

# Drink driving challenges

- The rate of reduction in the role of alcohol in driver and rider fatalities crashes appears to have plateaued

- Over the last two decades, the constraints on the availability of alcohol have been reduced and binge drinking has increased

  ➢ producing countervailing negative effects on safety

- Australia does not utilise fiscal policies to any large extent to manage alcohol use

- The uptake of alcohol ignition interlocks and drink driving rehabilitation remains relatively low

# Drug driving challenges

- The costs associated with random drug testing makes it difficult to achieve the 'boots and all' effect associated with RBT

- Drug detection methods need to be enhanced and sensitive to changes in drug use within the community (eg. synthetic drugs)

- Little attention has been given to the prevalence of prescription drugs among drivers nor strategies to address this issue

- Some research has occurred into the effectiveness of warning labels in prescription drugs comparing Australian and French approach (Smyth, 2012)

# Priorities for the future

- Continue to enhance policing programs to maximize their general deterrent effect, while minimizing evasion opportunities

- Better identify drug drivers who are detected with a positive blood alcohol concentration

- Improve the management of recidivist drink driving offenders through the widespread application of alcohol ignition interlocks and vehicle impoundment, accompanied by rehabilitation programs

- Improve the management of recidivist drug drivers

- Develop non-intrusive alcohol ignition interlock devices for use in all motor vehicles