NSW Centre for Road Safety

RTA

DR SOAMES JOB

Director, NSW Centre for Road Safety

NSW Centre for Road Safety

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Reducing Road Trauma in NSW

- Formation of the NSW Centre for Road Safety
- NSW Road Toll
- Safer Roads - Mainstreaming Road Safety
  - Wire Rope Safety Barriers
  - Route Reviews
- Safer Vehicles
- Safer People - Speed Management
  - Young Drivers
  - Drink and Drug Driving

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Centre established on Safe Systems framework

- Safer Roads
- Safer People
- Safer Vehicles
- Safety Technology (within Strategy)

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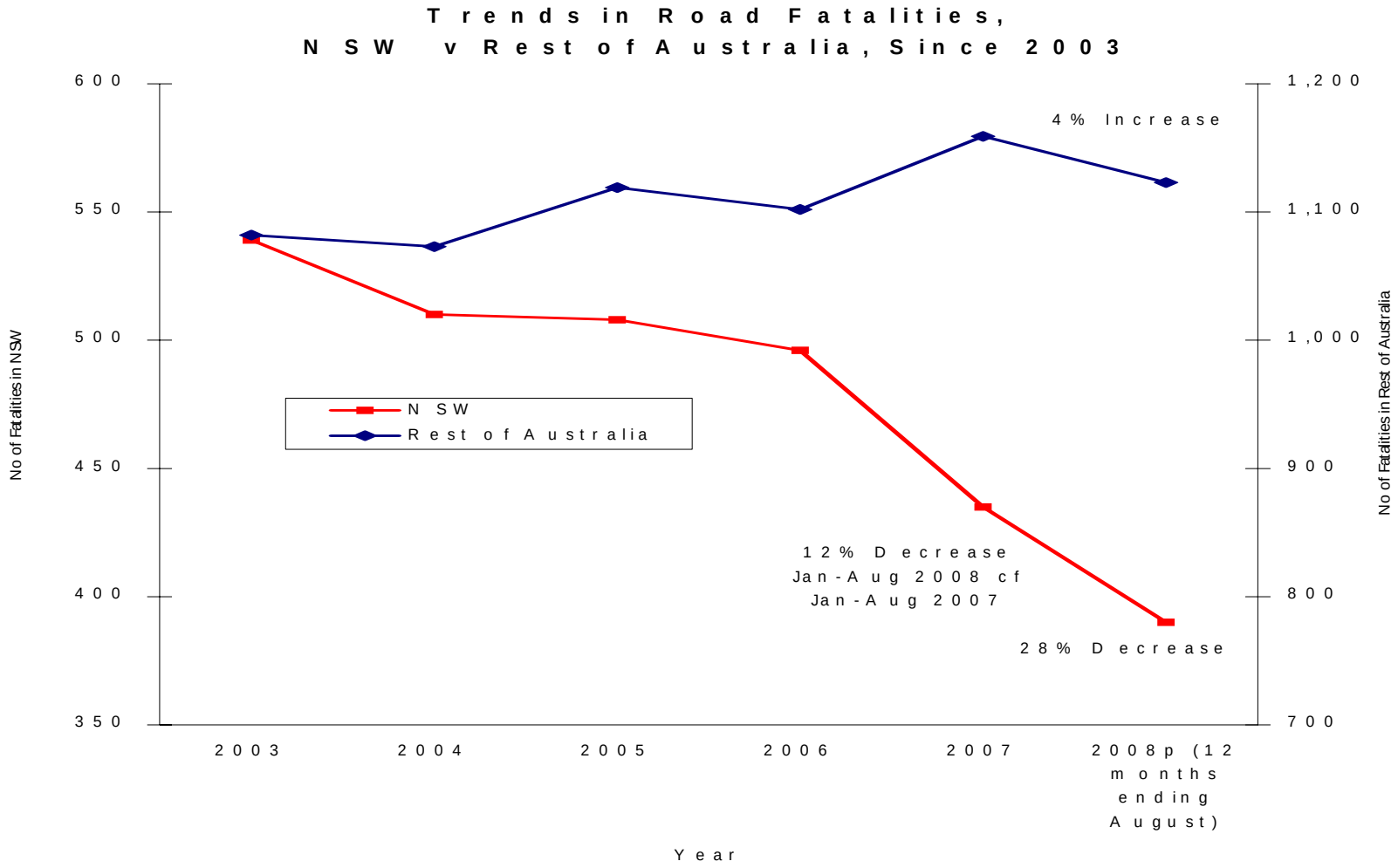
New South Wales (NSW) - Road Toll

- Last year the NSW road toll was a record low since World War Two.
- Despite there being 13 times as many vehicles now …… 10 times as many licensed drivers … and double the population compared to **1945**.
- The final road toll for 2007 was 435, a 12 per cent reduction on the previous year.
- The fatality per population rate in 2007 was the lowest since records began in 1908

Road Toll Progress Since 2003
NSW v Rest of Australia



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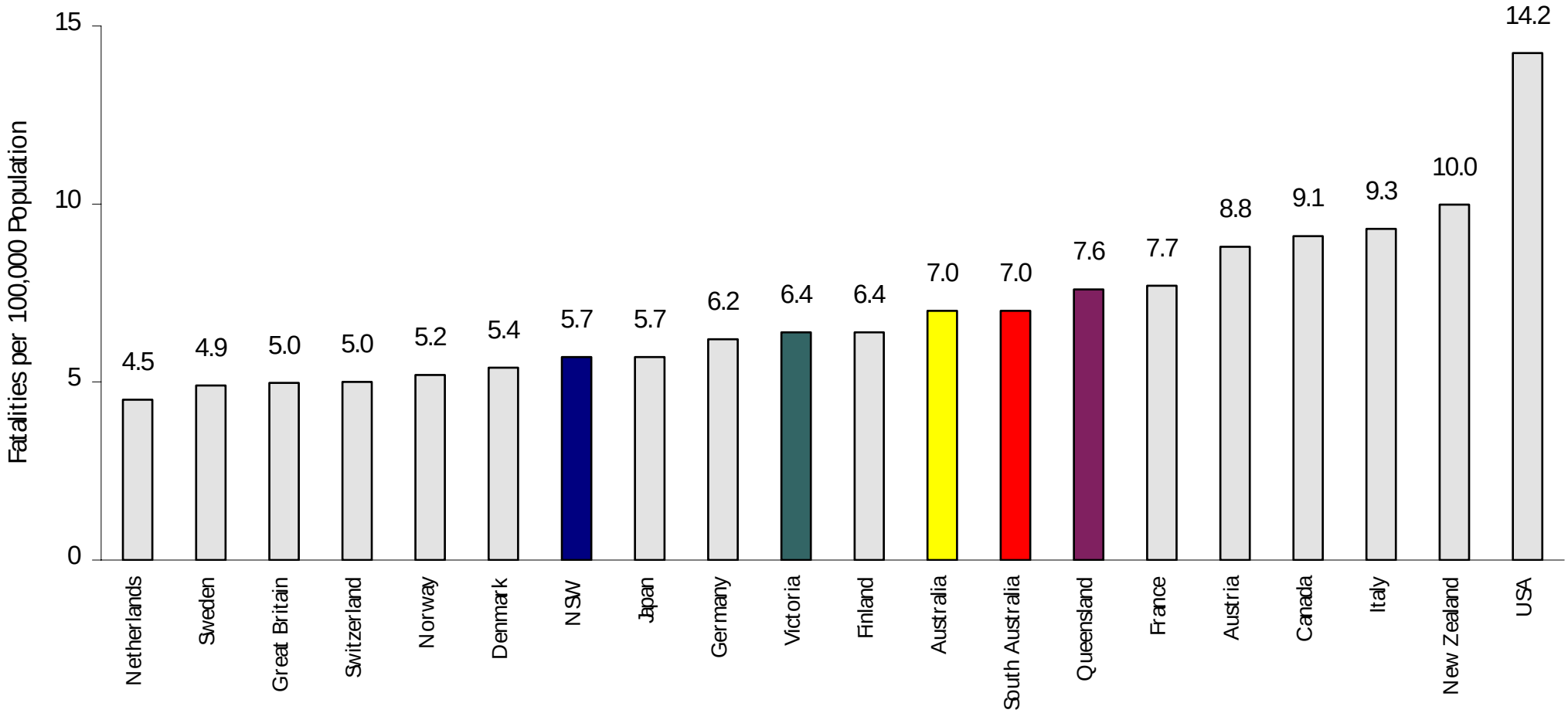
Fatalities per 100,000 Population, NSW , Victoria, Queensland, South Australia, Australia and Selected Countries, 2007/08p ending September (Australia) or Most Recent for Other (mostly 2006)



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Mainstreaming of Road Safety

- Centre for Road Safety is working to become a world-class road safety centre for:
  - Policy Development
  - High level research
  - Advice and delivery of behaviour change strategies
- Partnering with other business units to mainstream road safety
- Partnering with external agencies (Police, Council, transport agencies etc)

Wire Rope Safety Barrier

- First used on NSW roads in the early 1990s
- Flexible barrier, absorbs energy
- Now used as a median treatment

Benefits:

- Reduces head-on and run off road crashes.
- Greatly reduced the severity of crossover crashes
- Benefit Cost Ratio (BCR) of 9.1 over 10 years.
- Lowest risk of injury and damage in cases of a vehicle crashing into a barrier
- Lower crash costs when compared with crashes into other barrier types
- Occupy less space on the road than other barriers

Before the installation of the wire rope safety barrier median Princes Highway

Completion of the installation of the wire rope safety barrier median Princes Highway

Wire Rope Safety Barrier

Motorcyclists:

- No evidence that WRSB types are more dangerous to motorcyclists than other barriers

- Enhances motorcyclist safety by separating opposing traffic flows

Future research:

NSW University Injury Risk Management Research Centre (IRMRC) is undertaking a major study into motorcycle crashes into all types of safety barriers.

Route Reviews

Focuses road safety effort on high risk locations in a short time frame, rather than treating isolated sites

- Pacific Highway
- Princes Highways
- Newell Highway

A strategic approach:

- 'High risk' routes
- Multi-disciplinary
  - engineering works
  - behavioural programs
  - enforcement strategies

The program is developed to supplement planned maintenance treatments and precedes longer term and more costly road upgrades.

Route Reviews

Substantial benefits:

- Pacific Highway, 55 people were killed and 617 injured in 2003 (the year the review began), compared with 25 deaths and 483 injuries in 2006
- Princes Highway, 24 people were killed and 324 injured in 2004 (the year the review began), compared with 4 deaths and 294 injuries in 2006

These figures represent total savings of 50 lives and 164 injuries per year.

Research areas

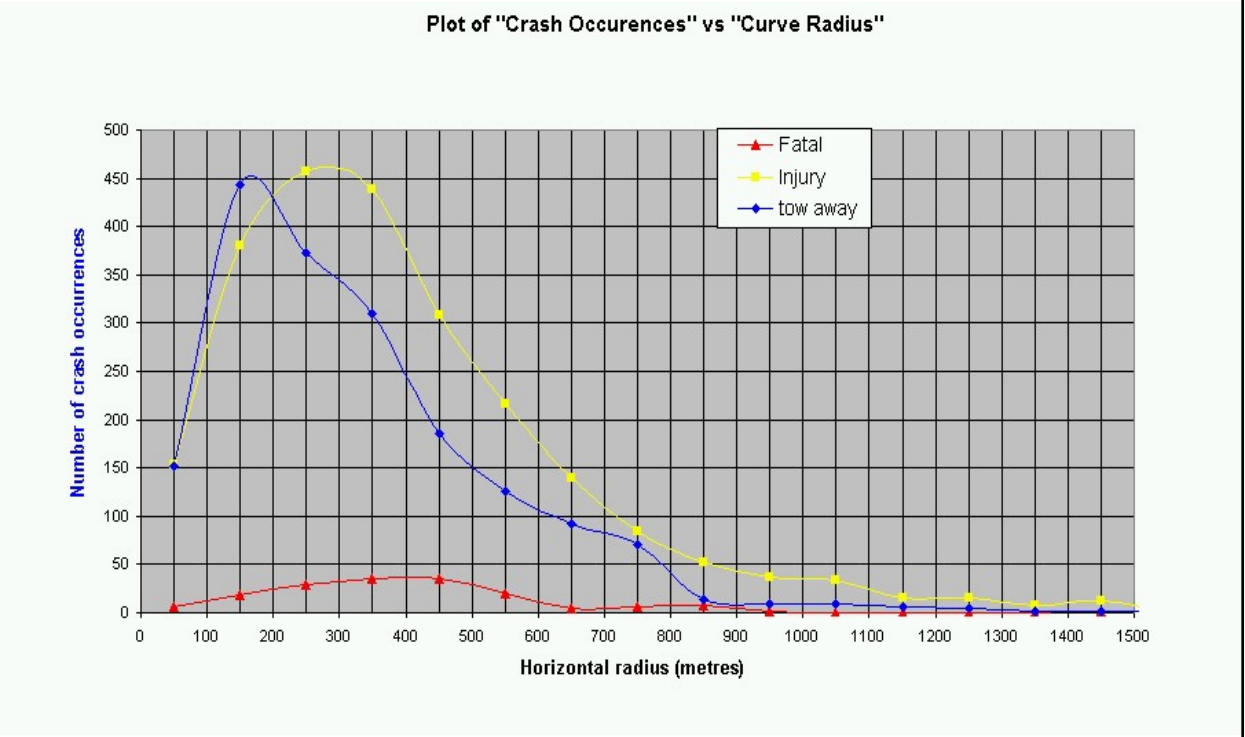
Shoulder widths: Variation in width of shoulder on curves Vs straights

Remedial treatments may be used in combination to achieve maximum safety benefits.

Research areas

Relationship between curve radii and crash severity on high speed roads

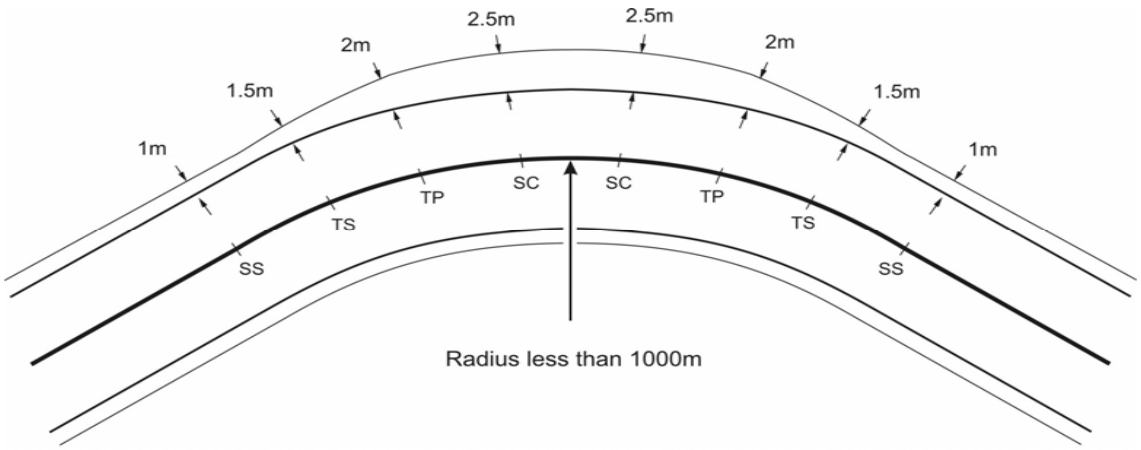
- Road alignment of less than 1000m radius comprises only 21% of the total length of NSW State roads,
- Yet 60% of rural crashes occur on these curves
- Probability of certain types of crashes occurring is proportionately much higher than for similar type crashes on straight or large radius curve alignments.



Research areas

Shoulder widths: Variation in width of shoulder on curves Vs straights

Where the horizontal alignment is made up of long straights and single isolated curves then the outside of all curves in both directions with a radius less than 1000 metres should be identified and prioritised



Generally straight horizontal alignment with single isolated curves

Research areas

Incremental Clear Zone widths

- Analysis of a number of overseas studies on Clear Zones indicated that up to 85% of the safety benefits of Clear Zones were captured within the first 6 metres. RTA research supports this.
- For new roads, we want maximum clear zones
- For existing roads with insufficient space, compromise is better.

Research areas

Shoulder widths: Variation in width of shoulder on curves Vs straights

- On straight sections of undivided, high speed, rural roads, off road to the left crashes contribute to 25% of the total off road crashes, with off road to the right contributing 15% of the total.
- These numbers are lower than for curves despite the fact that straight sections of alignment form the major proportion of most rural roads.
- Straight sections of road with no sealed shoulders have a crash rate of 42.5 crashes per hundred million vehicle kilometres (100mvkt).
- If shoulders are sealed to a width of 0.5m then the crash rate falls to 31.8 crashes per 100mvkt (25% reduction).
- If shoulder seal width is 1.0m the crash rate reduces to 26.4 crashes per 100mvkt (38% reduction).
- If shoulder seal width is 1.5m the crash rate reduces to 24.5 crashes per 100mvkt (42% reduction).

Most of the crash reduction from sealed shoulders on straight sections of two lane rural road is gained within the first metre of seal. Sealing wider than 1 metre or more provides only a limited improvement in crash reduction. If there is already a wide pavement consideration should be given to separating opposing traffic flows by providing a "median" – even if it is only painted.

This information will input directly into Brownfield and Greenfield road design policy.

Safer Vehicles

•ANCAP: Australasian New Car Assessment Program:

- ANCAP evaluates frontal, side, and side-pole crash worthiness as well as pedestrian protection
- ANCAP does not currently evaluate rollover crash worthiness.

• Stopping the 'raising' of vehicles

• NSW Government Fleet Policy

Speeding

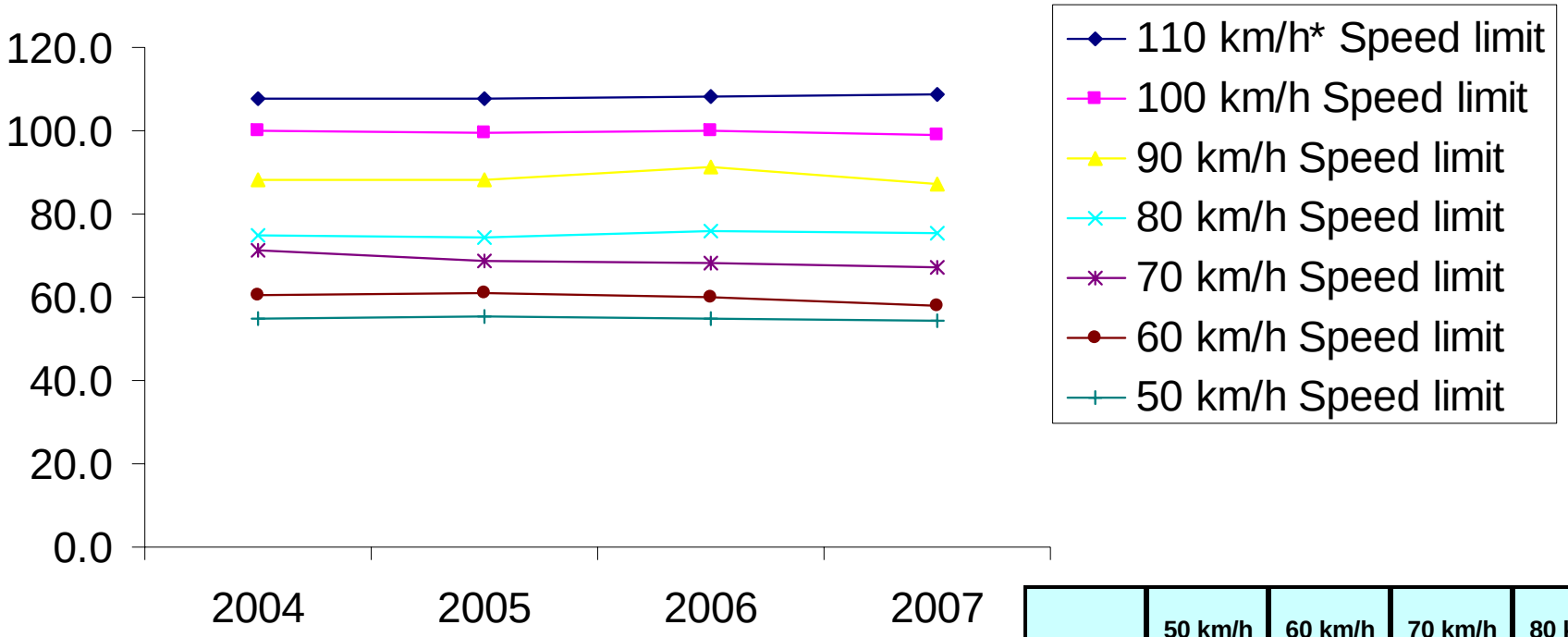
- Major public education campaigns

  - Pinky Campaign: "Speeding – No-one thinks big of you"

- Extra speed cameras, especially in school zones


NSW - Total number of fatalities in crashes where speeding was involved as a contributing factor
Number of fatalities
300
250
200
150
100
50
0
2002
2003
2004
2005
2006
2007
Year

Mean speeds of all vehicles by speed limit, RTA annual speed surveys, 2004-2007



	50 km/h Speed limit	60 km/h Speed limit	70 km/h Speed limit	80 km/h Speed limit	90 km/h Speed limit	100 km/h Speed limit	110 km/h* Speed limit
2004	*55.0*	*60.3*	*71.1*	*74.9*	*88.1*	*99.8*	*107.8*
2005	*55.4*	*60.9*	*68.5*	*74.2*	*88.1*	*99.6*	*107.9*
2006	55.1	59.9	68	75.8	91.1	100.1	108
2007	54.6	57.8	67.2	75.6	87.2	98.8	108.9

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Changes for young drivers

Young drivers are up to three times more likely than other drivers to be involved in a fatal crash. To improve road safety new initiatives came into effect from 1 July 2007.

- Licence suspension for any P1 speeding offence.
- A ban on all mobile phone use for learner, P1 drivers and provisional riders.
- Peer passenger restrictions for P1 drivers.
- Display of L and P plates only on the outside of vehicles.
- 120 hours of supervised driving for learner drivers.

These changes were supported by a public education and enforcement campaign.

- Introduction of demerit points for learner drivers.

Changes for young drivers (cont.)

Speed related fatal crashes and fatalities have declined as have fatalities of young drivers and their involvement in speed related crashes.

- The number of speed related fatalities decreased from 205 in 2005-06 to 135 in 2007-08 (**34% decrease**)
- **31**% of fatal crashes in 2007 involved excessive or inappropriate speed (an improvement over 2006 - **40**% of fatalities were speed related)
- While 46% of P1 drivers involved in fatal crashes in 2005-06 were found to be speeding, this figure **decreased to 31**% in 2007-08 (provisional data)
- The number of P1 drivers involved in fatal crashes decreased from 41 in 2005-06 to 26 in 2007-08, a 37% decrease (28 in 2006-07)(provisional data)

Drink and Drug Driving

- RBT and Enhanced Enforcement (EEP)
- Random Drug Testing for 3 drugs
- Evaluation / Advertising
- Sober Driver Program – 45% reduction in reoffending

164 DRINK DRIVERS CAUGHT.

Over three months,* 164 drivers in the local area have been arrested, charged and will face court for driving while over the legal limit. Every police car is a Mobile RBT. So if you are worried about getting caught... you should be.

*June, July, Aug 2008.

MOBILE RBT. YOU WON'T KNOW WHERE. YOU WON'T KNOW WHEN.

NSW Police Force

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