



Cost of Road Crashes



March 2012

Overview

From 2006 until 2010, 2,163 people were killed and 124,061 people were injured on NSW roads. Gains have been made in reducing the NSW road toll to the lowest level since records were first compiled in 1908. However, with road safety efforts relying heavily on reducing fatalities, what is often forgotten is the economic cost of crashes to the community.

Road safety is not only considered an important issue that needs addressing in Australia, but also internationally. On 2 March 2010 governments around the world took the historic decision to increase action to address the global road safety crisis over the next ten years.

The United Nations General Assembly resolution proclaimed a Decade of Action for Road Safety 2011-2020 with the goal of stabilising and then reducing the forecasted level of road traffic fatalities around the world by increasing activities conducted at national, regional and global levels. Australia is a signatory to this resolution.

Statistics that show road-traffic injuries are predicted to become the fifth leading cause of death in the world. Australia has seen a considerable reduction in the road toll over the last 30 years; however the rate of progress has slowed in recent years. Australia is seen as a leader of road safety around the world; however, there is more that we can do to further reduce our road toll.

NRMA has analysed the economic cost of road crashes on a number of major highways in NSW. Deaths and injuries on our roads cost the community on average \$2.8 billion each year. The total cost of road crashes over the five-year period was \$13.8 billion. The NRMA believes that the cost of deaths and injuries caused by road crashes is a crucial issue that needs greater consideration when addressing road safety in NSW.

Case Study: NSW Volunteer Rescue Association

In regional NSW, the Volunteer Rescue Association (VRA) participates in responding to road crashes, alongside the police, ambulance and fire services. VRA also provides primary response rescue coverage to more people outside the Sydney, Newcastle and Hunter areas, than any other service.

Often the first face people see when they have been involved in a road crash is a VRA volunteer coming to their rescue. Last financial year, the VRA responded to 804 road crashes.

During the last financial year, the VRA spent 6,293 hours responding to road crashes in regional NSW which involved cutting trapped people out of vehicles. However, the cost to the community for such a vital service is often forgotten.

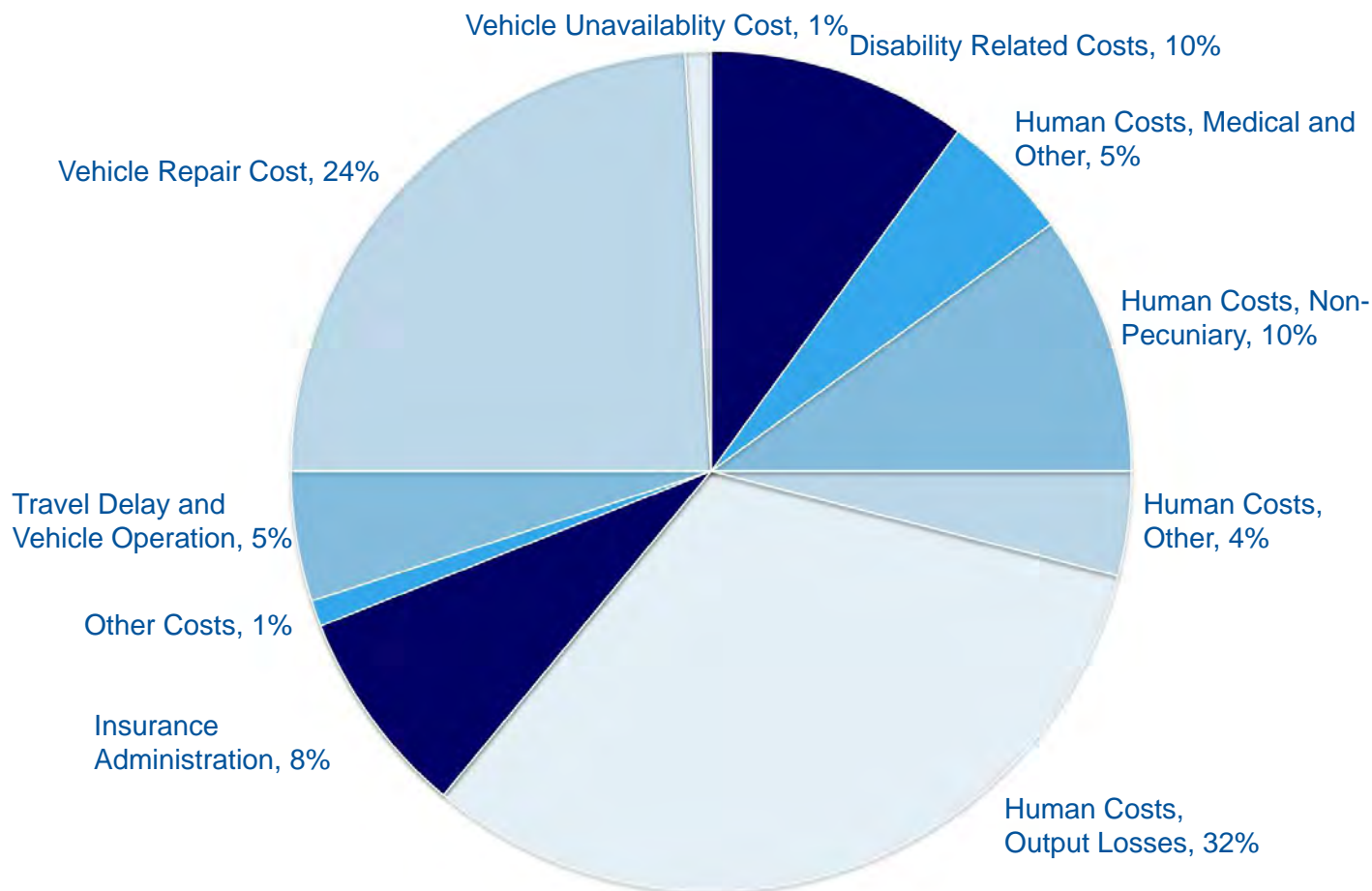
A conservative estimate of the value of time VRA spent last financial year responding to road crashes was \$849,555. However, this does not include the cost of vital rescue equipment such as hydraulic cutters or the amount of time volunteers spend training to be able to respond to road crashes.

The invaluable work VRA volunteers do, often in very trying circumstances, could be lessened if more was spent on preventing road crashes occurring in the first instance.

How is the Cost of Crashes Calculated?

The Bureau of Infrastructure, Transport and Regional Economics (BITRE, 2009) estimated the cost of road crashes in Australia for 2006. The valuation of road crashes involved analysing the total number of crashes and injuries, then quantifying the cost of specific crash components comprising of human cost, loss of life, treatment of injuries and ongoing care of persons with disabilities, property costs and general costs.

Below is the percentage breakdown of the cost categories used by BITRE (2009).



BITRE (2009) estimated a set of average cost of road crashes for the following categories for NSW for an individual as follows:

Fatality:	\$3,180,598*
Serious injury:	\$316,869*
Injury:	\$17,511*

*Adjusted to current 2011 Quarter 3 prices.

Using this method, the cost of road trauma in NSW was calculated for fatalities and injuries on NSW roads from 2006 until 2010.

The assumptions used in these calculations were:

- The value placed on a fatality, serious injury and injury for an individual were adjusted to current 2011 Quarter 3 prices.
- Included all road users.
- Roads & Maritime Services injury data is not broken down as serious injury and non-serious injury categories. Calculations are based on BITRE (2009) data as follows:
 - 12.6% serious injury (3,205).
 - 87.4% non serious injury (22,234).

The Cost of Crashes for NSW

From 2006 to 2010, 2,163 people were killed and 124,061 people were injured on NSW roads. Deaths and injuries on our roads cost the community on average \$2.8 billion each year. The total cost of road crashes over the five-year period was \$13.8 billion.

Table 1: The Cost of Road Trauma in New South Wales

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$6.9b	\$5.0b	\$1.9b	\$13.8b
Annual Average	\$1.8b	\$1.0b	\$0.4b	\$2.8b

The Cost of Crashes on Key NSW Roads

Analysis of the cost of crashes was also calculated for key highways across NSW.

Princes Highway (Sydney to Victorian Border)

Each year, road trauma on the Princes Highway costs on average \$82.8 million. The total cost of road crashes over the five-year period was over \$400 million.

Table 2: The Cost of Road Trauma on the Princes Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$216.3m	\$143.0m	\$54.8m	\$414.1m
Annual Average	\$43.3m	\$28.6m	\$11.0m	\$82.8m

Pacific Highway (North Sydney to Tweed Heads)

Each year, road trauma on the Pacific Highway costs on average \$168.1 million. The total cost of road crashes over the five-year period was over three-quarters of a billion dollars.

Table 3: The Cost of Road Trauma on the Pacific Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$547.1m	\$212.1m	\$81.3m	\$840.5m
Annual Average	\$109.4m	\$42.4m	\$16.3m	\$168.1m

Mitchell Highway (Bathurst to Dubbo)

Each year, road trauma on the Mitchell Highway costs on average \$14.7 million. The total cost of road crashes over the five-year period was \$73.3 million.

Table 4: The Cost of Road Trauma on the Mitchell Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$44.5m	\$20.8m	\$8.0m	\$73.3m
Annual Average	\$8.9m	\$4.2m	\$1.6m	\$14.7m

Great Western Highway (Sydney to Bathurst)

Each year, road trauma on the Great Western Highway costs on average \$69.6 million. The total cost of road crashes over the five-year period was \$347.9 million.

Table 5: The Cost of Road Trauma on the Great Western Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$152.7m	\$141.1m	\$54.1m	\$347.9m
Annual Average	\$30.6m	\$28.2m	\$10.8m	\$69.6m

Oxley Highway (Port Macquarie to Nevertire)

Each year, road trauma on the Oxley Highway costs on average \$12 million. The total cost of road crashes over the five-year period was \$60.2 million.

Table 6: The Cost of Road Trauma on the Oxley Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$35.0m	\$18.2m	\$7.0m	\$60.2m
Annual Average	\$7.0m	\$3.6m	\$1.4m	\$12.0m

Newell Highway (Tocumwal to Goondiwindi)

Each year, road trauma on the Newell Highway costs on average \$46.4 million. The total cost of road crashes over the five-year period was \$231.8 million.

Table 7: The Cost of Road Trauma on the Newell Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$197.2m	\$25.0m	\$9.6m	\$231.8m
Annual Average	\$39.4m	\$5.0m	\$1.9m	\$46.4m

Sturt Highway (Hume Highway near Gundagai to Mildura)

Each year, road trauma on the Sturt Highway costs on average \$26.4 million. The total cost of road crashes over the five-year period was \$132.1 million.

Table 8: The Cost of Road Trauma on the Sturt Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$111.3m	\$15.0m	\$5.8m	\$132.1m
Annual Average	\$22.3m	\$3.0m	\$1.1m	\$26.4m

New England Highway (Hexham to Wallangarra)

Each year, road trauma on the New England Highway costs on average \$47.9 million. The total cost of road crashes over the five-year period was \$239.7 million.

Table 9: The Cost of Road Trauma on the New England Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$168.6m	\$51.4m	\$19.7m	\$239.7m
Annual Average	\$33.7m	\$10.3m	\$3.9m	\$47.9m

Hume Highway (Ashfield to Albury)

Each year, road trauma on the Hume Highway costs on average \$88.8 million. The total cost of road crashes over the five-year period was almost half a million dollars.

Table 10: The Cost of Road Trauma on the Hume Highway

Year	Fatality	Serious Injury	Non-serious Injury	Total
2006-2010	\$270.4m	\$125.4m	\$48.1m	\$443.9m
Annual Average	\$54.1m	\$25.1m	\$9.6m	\$88.8m

Case Study: Police Responding to Crashes

Police responding to road crashes also involves considerable time and resources which is often forgotten. According to Steadman and Bryan's (1988) study it takes two police officers 180 hours to respond to a fatal crash involving two vehicles, one death and a rescue situation and the subsequent investigation.

This includes attendance at the scene, examination of vehicles and interviewing witnesses. Using the average hourly pay rate of a NSW police officer this equates to \$15,580 for two police officers attending and investigating a fatal crash in NSW. In many cases more than two police officers would attend a fatal crash.



9A York Street
Sydney NSW 2000
Australia

Mail to:
PO Box 1026
Strathfield NSW 2135

T +61 2 8741 6000
F +61 2 8741 6123
W mynrma.com.au

References

- Bureau of Infrastructure, Transport and Regional Economics (BITRE). (2009). Road crash costs in Australia 2006. Report 118.
- NSW Centre for Road Safety. (2009). Road traffic crashes in New South Wales: Statistical Statement for the year ended 31 December 2009.
- NSW Centre for Road Safety. (2008). Road traffic crashes in New South Wales: Statistical Statement for the year ended 31 December 2008.
- NSW Centre for Road Safety. (2007). Road traffic crashes in New South Wales: Statistical Statement for the year ended 31 December 2007.
- Roads and Traffic Authority of NSW. (2006). Road traffic crashes in New South Wales: Statistical Statement for the year ended 31 December 2006.
- Roads and Traffic Authority of NSW. (2000) Road Safety 2010: A framework for saving 2,000 lives by the year 2010 in NSW.
- Steadman, L. A., & Bryan, R. J. (1988). Cost of Road Accidents in Australia. Canberra, Australia.
- Transport for NSW. (2010). Road traffic crashes in New South Wales: Statistical Statement for the year ended 31 December 2010.