



Speed 2015

Disclaimer

All reasonable endeavours are made to ensure the accuracy of the information in this report. However, the information is provided without warranties of any kind including accuracy, completeness, timeliness or fitness for any particular purpose.

The Ministry of Transport excludes liability for any loss, damage or expense, direct or indirect, and however caused, whether through negligence or otherwise, resulting from any person or organisation's use of, or reliance on, the information provided in this report.

Under the terms of the New Zealand Creative Commons Attribution 3.0 (BY) licence, this document, and the information contained within it, can be copied, distributed, adapted and otherwise used provided that –

- ▶ the Ministry of Transport is attributed as the source of the material
- ▶ the material is not misrepresented or distorted through selective use of the material
- ▶ images contained in the material are not copied

The terms of the Ministry's [Copyright and disclaimer](#) apply.

Additional information

Enquires relating to crash statistics may be directed to the Ministry of Transport, PO Box 3175, Wellington, or by email on info@transport.govt.nz. For more information about road safety, visit the Ministry of Transport website at www.transport.govt.nz.

A selection of fact sheets is available via the research section of the Ministry of Transport website.

These include:

Crash fact sheets

- ▶ Alcohol and drugs
- ▶ Cyclists
- ▶ Diverted attention
- ▶ Fatigue
- ▶ Motorcyclists
- ▶ Overseas drivers
- ▶ Pedestrians
- ▶ Speed
- ▶ Trucks
- ▶ Young drivers

Travel survey fact sheets

- ▶ Comparing travel modes
- ▶ Cycling
- ▶ Driver travel
- ▶ Motorcycling
- ▶ Public transport
- ▶ Risk on the road
 - ▶ Introduction and mode comparison
 - ▶ Drivers and their passengers
 - ▶ Pedestrians, cyclists and motorcyclists
- ▶ Walking

Contents

Contents	3
Speed and crash risk	4
Key facts	4
Time series	6
Who dies?	7
Drivers involved in fatal crashes	7
Types of crash	10
When do crashes involving speeding occur?	10
Safety belts	11
Mean speeds	12
The recent history of speed-related legislation	13
Terminology	14
References:	14

Speed and crash risk

In this fact sheet speeding is defined as **driving too fast for the conditions**. The faster you go, the more likely you are to crash and the greater your risk of serious injury or death¹. No matter what causes a crash, vehicle speed directly affects the force of impact.

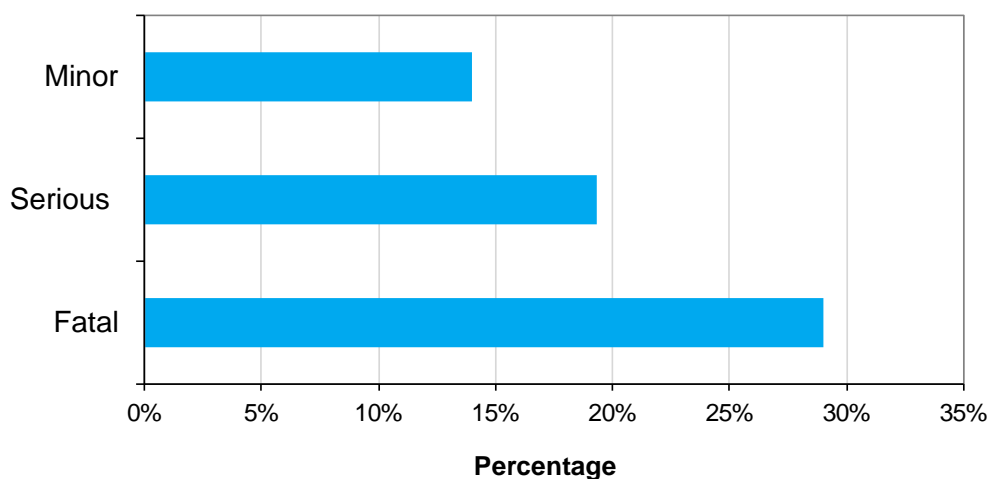
As speed increases, there is an increase in the following factors and, in turn, an associated increase in the risk of crash involvement¹:

- ▶ Stopping distance — both the distance travelled during reaction time and the distance travelled after the brakes are applied
- ▶ The probability of exceeding the critical speed on a curve
- ▶ The chance of other road users misjudging how fast the speeding driver is travelling
- ▶ The probability of a rear-end crash if the driver has not accounted for the increased speed by increasing the following distance.

Key facts

In 2014, speeding was a contributing factor in 78 fatal crashes, 357 serious injury crashes and 995 minor injury crashes. These crashes resulted in 84 deaths, 455 serious injuries and 1,468 minor injuries. The total social cost² of crashes involving drivers speeding was about \$740 million, which is approximately 23 percent of the social cost associated with all injury crashes.

Figure 1: Percentage of crashes with driving too fast for the conditions cited as a contributing factor (2012–2014)

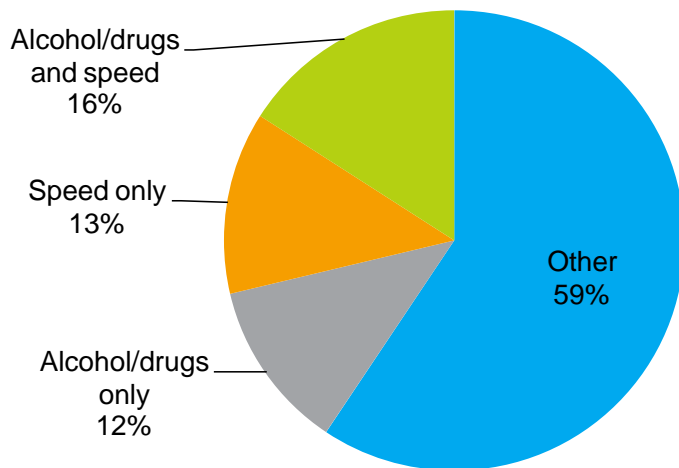


¹ Patterson, Frith and Small (2000).

² Definitions for fatal, serious and minor injuries and social cost are in [Terminology](#) at the end of the fact sheet.

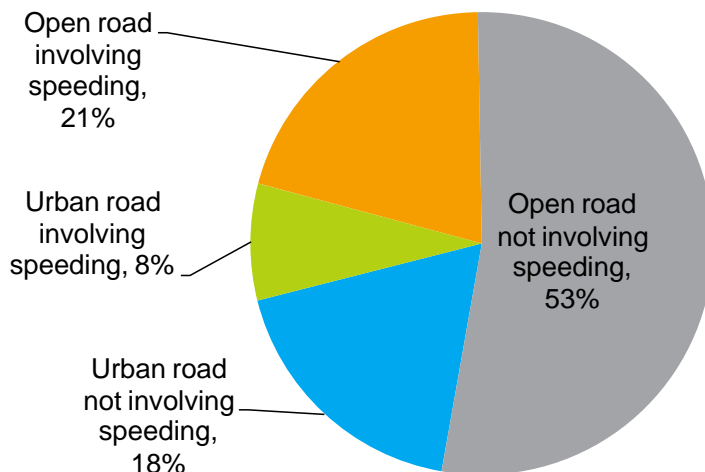
The more serious the crash, the more likely it is that speed was a contributing factor. In New Zealand, for the years 2012 to 2014, driver speed was a factor in 29 percent of fatal crashes, 19 percent of serious injury crashes and 14 percent of minor injury crashes.

Figure 2: Speed and alcohol/drugs in fatal crashes (2012–2014)



As shown in the graph, the combination of speeding and alcohol/drugs contributed to 16 percent of fatal crashes. Speeding alone contributed to 13 percent, and alcohol/drugs alone to 12 percent, of fatal crashes. So speeding and/or alcohol/drugs are contributing factors in 41 percent of all fatal crashes.

Figure 3: Speeding in fatal crashes by road type (2012–2014)



Twenty-one percent of all fatal crashes are open road (speed limits 80km/h and over) crashes that involve speeding as a contributing factor. A further 8 percent are urban (speed limits 70km/h or below) crashes in which speeding is a contributing factor.

Speeding was a contributing factor in 31 percent of urban fatal crashes and 28 percent of open road fatal crashes.

Note: Percentages may not add to 100 percent due to rounding.

Time series

Table 1: Crashes and casualties with speeding as a contributing factor

Year	Crashes involving speed				Casualties from crashes involving speed			
	Fatal		Injury		Deaths		Injuries	
	Number	% of all fatal crashes	Number	% of all injury crashes	Number	% of all deaths	Number	% of all injuries
1986	192	29%	2,024	16%	224	29%	3,544	19%
1987	251	37%	2,253	18%	292	37%	3,904	21%
1988	231	37%	2,204	19%	267	37%	3,650	21%
1989	257	40%	2,146	19%	311	41%	3,624	22%
1990	224	35%	2,041	17%	265	36%	3,422	19%
1991	190	34%	2,108	18%	225	35%	3,383	20%
1992	195	36%	1,918	17%	241	37%	3,164	20%
1993	192	37%	1,712	16%	228	38%	2,801	19%
1994	191	39%	1,816	16%	228	39%	2,982	18%
1995	182	36%	1,827	16%	221	38%	2,988	18%
1996	153	34%	1,684	17%	177	34%	2,806	19%
1997	137	29%	1,461	16%	162	30%	2,508	19%
1998	140	32%	1,415	17%	162	32%	2,427	20%
1999	124	29%	1,180	15%	153	30%	2,095	18%
2000	87	23%	1,122	15%	102	22%	1,923	18%
2001	123	31%	1,298	15%	141	31%	2,197	18%
2002	108	30%	1,431	15%	126	31%	2,339	17%
2003	140	35%	1,644	16%	167	36%	2,601	18%
2004	138	37%	1,632	16%	172	39%	2,624	19%
2005	112	33%	1,700	16%	130	32%	2,670	19%
2006	107	31%	1,734	16%	126	32%	2,746	18%
2007	116	31%	1,905	16%	132	31%	2,949	18%
2008	110	33%	1,726	15%	126	34%	2,629	17%
2009	100	30%	1,635	15%	113	29%	2,461	17%
2010	108	32%	1,500	14%	131	35%	2,293	16%
2011	75	29%	1,422	15%	83	29%	2,117	17%
2012	68	26%	1,356	15%	85	28%	1,898	16%
2013	74	31%	1,293	14%	83	33%	1,863	16%
2014	78	29%	1,352	16%	84	29%	1,923	17%

Note: The police Traffic Crash Report form was modified in 2001. The speeding ('too fast for conditions') data since this change are not strictly comparable to earlier data.

Who dies in crashes involving speeding?

For every 100 drivers or riders who died in road crashes in which speeding was a contributing factor, 50 of their passengers and another 11 road users died with them.

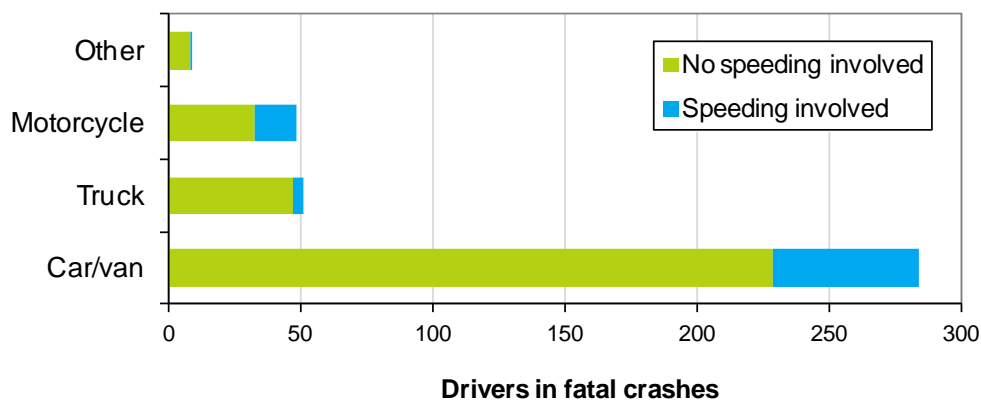
Table 2: Deaths in crashes in which speeding was a contributing factor (2012–2014)

Age	Speed-involved drivers	Passengers with speed-involved drivers	Other road users	Percentage of all deaths in age group
0-14	0	5	0	16%
15-19	15	26	0	45%
20-24	32	10	2	46%
25-29	21	11	2	44%
30-39	28	6	2	38%
40-49	27	8	2	33%
50-59	20	4	6	28%
60+	14	6	3	10%
Total	157	79	18	30%

Note: Totals may include casualties of unknown age

Drivers involved in fatal crashes

Figure 4: Drivers involved in fatal crashes by vehicle type (annual average 2012–2014)



From 2012 to 2014, speeding was a contributing factor in fatal crashes for 19 percent of car and van drivers, 33 percent of motorcyclists and 8 percent of truck drivers.

Figure 5: Speeding drivers in fatal crashes by age group (annual average 2012–2014)

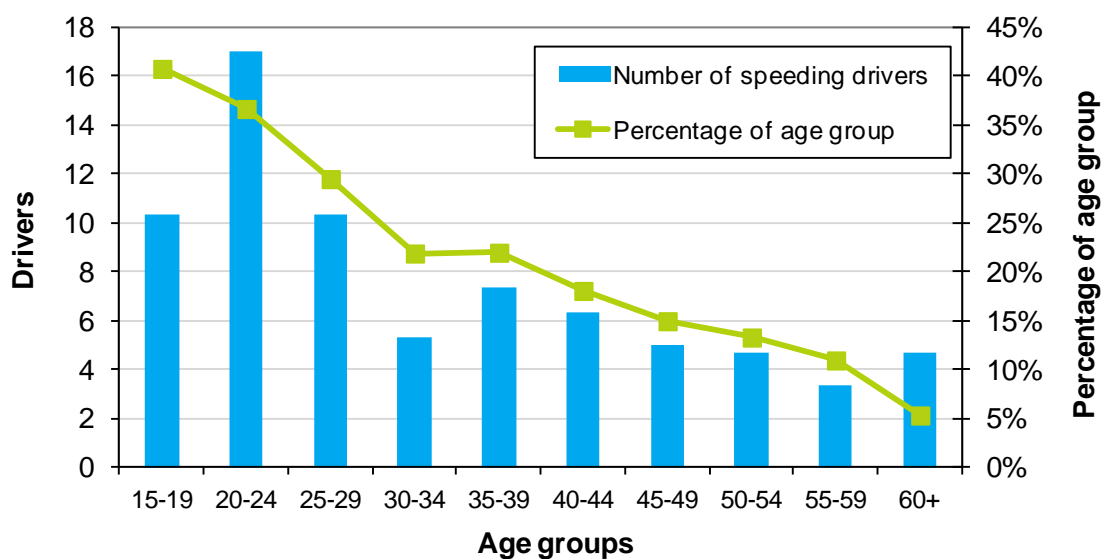


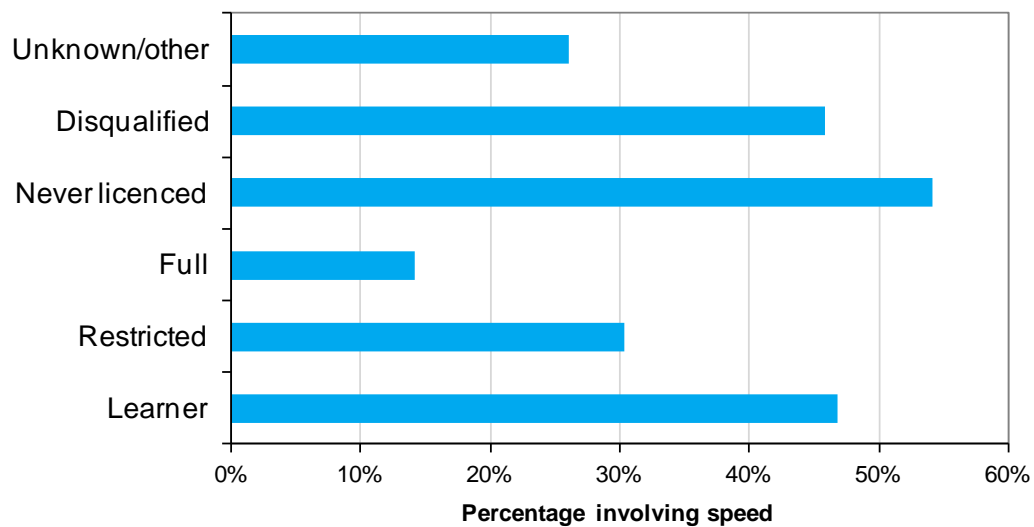
Table 3: Speeding drivers in fatal crashes by age and sex (2012–2014)

Age	Males		Females		Total	
	Number	%	Number	%	Number	%
15-19	31	50%	0	0%	31	41%
20-24	43	40%	8	26%	51	37%
25-29	27	34%	4	16%	31	30%
30-34	16	29%	0	0%	16	22%
35-39	18	22%	4	21%	22	22%
40-44	14	18%	5	19%	19	18%
45-49	13	17%	2	8%	15	15%
50-54	11	14%	3	13%	14	13%
55-59	10	14%	0	0%	10	11%
60+	10	5%	4	6%	14	5%
Total	193	22%	31	11%	226	19%

Note: Rows and columns do not add up to the totals because the age or sex of some drivers was not recorded.

The 15-19 and 20-24 year age groups had the greatest number of drivers in fatal crashes involving speeding. In these age groups, about 40 percent of the drivers in fatal crashes had speed involvement. Males have a higher proportion of involvement in speed-related crashes.

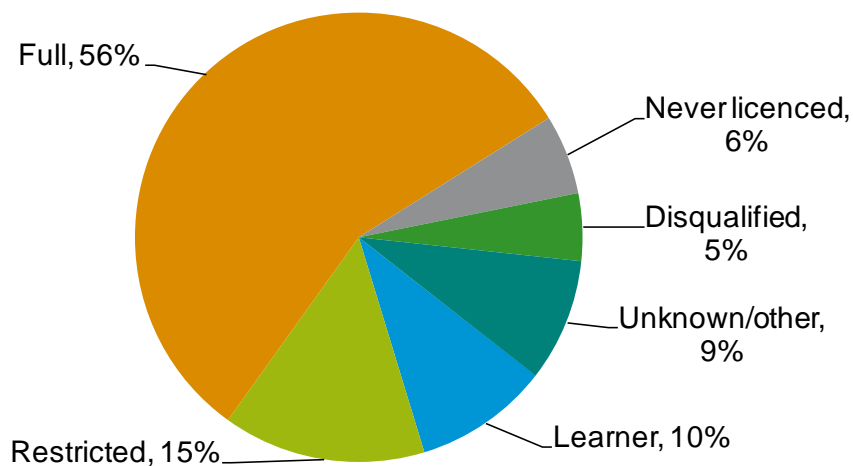
Figure 6: Speeding drivers in fatal crashes: percentage of each licence type (2012–2014)



Note: Unknown/other includes drivers with an expired, unknown or incorrect licence class. Disqualified includes drivers who have been forbidden to drive.

Disqualified and never licensed drivers in fatal crashes are much more likely to be speeding (46 percent and 54 percent, respectively) than drivers with a full licence (14 percent). Drivers with restricted or learner licences are more likely to be in speed-involved fatal crashes than those with full licences. However, this group falls into the younger age categories where speeding is a big contributor to fatal crashes, and this accounts for some of the difference.

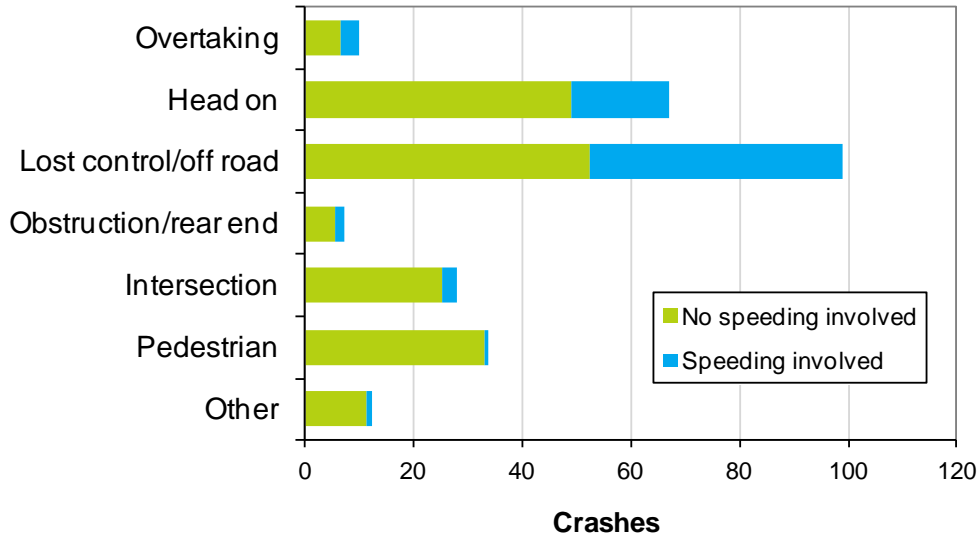
Figure 7: Licence status of speeding drivers in fatal crashes (2012–2014)



Together, disqualified and never licensed drivers comprise 11 percent of all drivers in speed-related fatal crashes.

Types of crash

Figure 8: Types of fatal crashes where speeding was a factor (annual average 2012–2014)



Loss of control and head-on crashes are the most common types of fatal crash involving speeding. Over four-fifths of the fatal crashes in which speed was a factor fall into these categories.

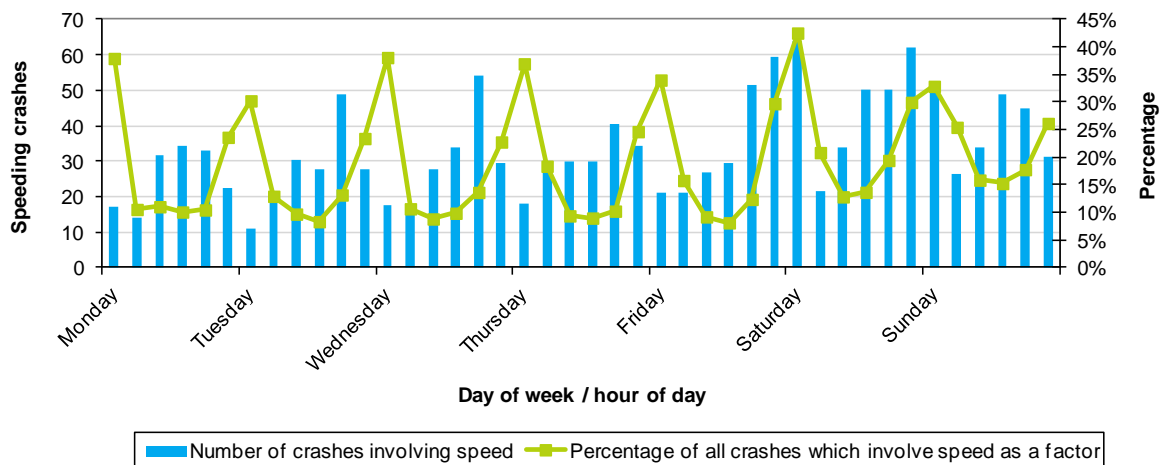
When do crashes involving speeding occur?

Table 4: Fatal crashes involving speeding by time of day and day of week (2012–2014)

Day	Day (0600–1759)		Evening (1800–2159)		Night (2200–0559)	
	Number	%	Number	%	Number	%
Monday	14	20%	6	35%	2	18%
Tuesday	13	17%	7	64%	8	42%
Wednesday	10	16%	7	50%	13	59%
Thursday	15	18%	6	33%	8	31%
Friday	16	25%	12	44%	19	54%
Saturday	17	25%	9	50%	14	30%
Sunday	15	28%	2	17%	7	47%
Total	100	21%	49	42%	71	41%

Note: On the day shown, night begins at 2200 and finishes the following day at 0559.

Figure 9: Fatal and injury crashes with drivers speeding as a factor, by time of day and day of week (annual average 2012–2014)



Note: The week is divided into 4-hour blocks, beginning 0000–0359 Monday, with days labelled at 0000 hours.

For fatal and injury crashes with driver speeding as a factor, the highest number of crashes from Sunday through to Thursday occurs in the early evening. On Friday and Saturday the high numbers extend into the late evening and early morning. The highest proportion of driver speeding crashes occurs in the late evening and early morning.

Safety belts

Drivers in speed-related crashes are less likely to wear safety belts than drivers in crashes in which speed is not a factor. Between 2012 and 2014, at least 33 percent of the car and van drivers who died in speed-related crashes were not restrained at the time of the crash. This compares with 15 percent for drivers in fatal crashes that did not involve speed. Restraint use was not recorded for about 20 percent of driver deaths, so the level of restraint use could be even lower than indicated

Mean speeds

The following graphs show the results of surveys that monitor speeds of unimpeded vehicles in both 100km/h speed limit areas and urban 50km/h areas³. Monitoring the speeds of unimpeded vehicles measures drivers' choice of speed. This measure provides information on the effectiveness of speed management measures and information for developing safety policies.

Figure 10: Open road speed (2000–2014)

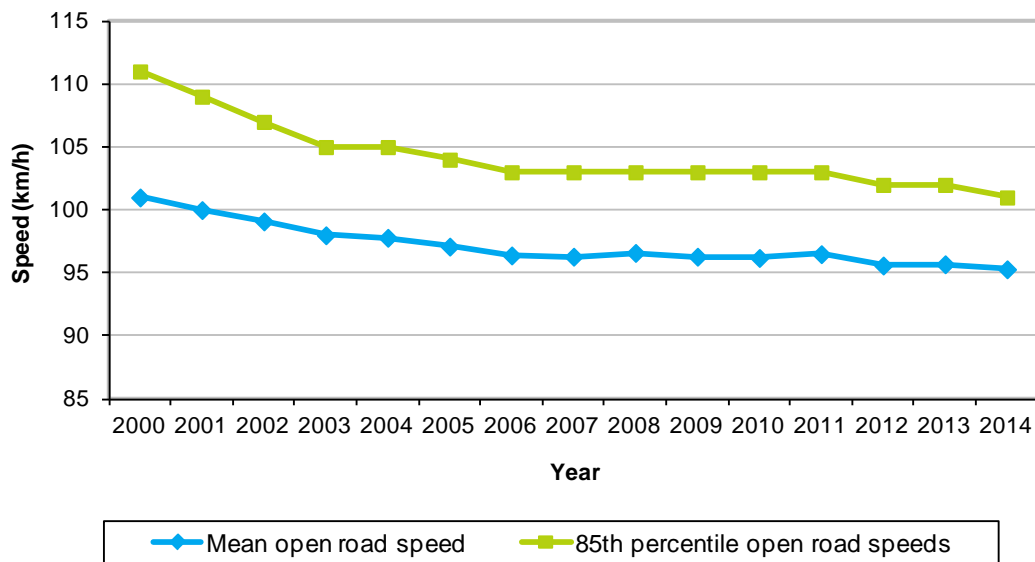
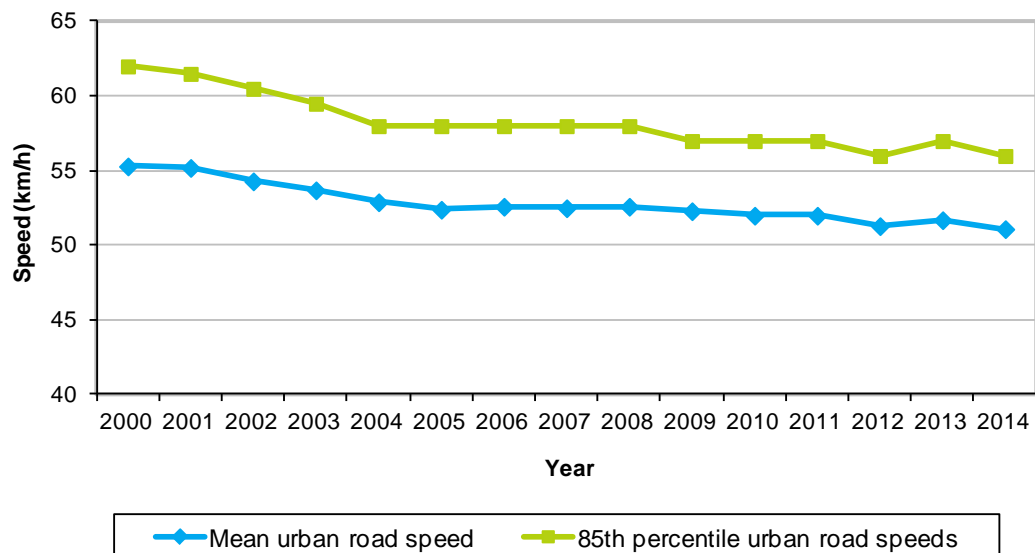


Figure 11: Urban road speed (2000–2014)



Note: 85th percentile speed means 15 percent of the vehicles surveyed were travelling faster than this speed.

³ This is where vehicles are unimpeded by the presence of other vehicles (that is, there is at least 4 seconds headway between the measured vehicle and the vehicle in front of it) or by environmental features such as traffic lights, intersections, hills, corners or road works.

The recent history of speed-related legislation

- ▶ In 1967, driving at an 'unreasonably slow speed' became a traffic offence.
- ▶ In 1971, the Speeding Infringement System was introduced.
- ▶ On 4 December 1973, the maximum open road speed limit was reduced from 55mph to 50mph (80km/h) as part of fuel conservation measures.
- ▶ In 1975, speed limit and road signs were changed over to the metric system.
- ▶ On 1 July 1985, the open road speed limit was increased from 80km/h to 100km/h for all vehicles except heavy motor vehicles, articulated vehicles and vehicles towing trailers.
- ▶ In 1989, a new schedule of infringement fees was introduced, including increased fees for speeding infringements.
- ▶ In October 1993, speed cameras were introduced.
- ▶ On 1 March 1999, a new provision of the Land Transport Act came into force allowing roadside suspension for driving at 50km/h or more above the posted speed limit.
- ▶ In 2001, the Land Transport (Road Safety Enforcement) Amendment Act 2001 removed legal impediments to the operation of urban speed cameras.
- ▶ In 2003, the Land Transport (Unauthorised Street and Drag Racing) Amendment Act created offences for street racing, wheel spinning and pouring slippery substances on the road to allow wheel spinning. Offenders can have their vehicles impounded for 28 days.
- ▶ On 25 February 2003, the Setting of Speed Limits Rule was signed, which set out the procedures for road controlling authorities to set enforceable speed limits.
- ▶ On 3 May 2004, the open road speed limit for all heavy vehicles was standardised at 90 km/h (except school buses, which remains at 80km/h). The speed limit for light vehicles towing trailers was also increased to 90 km/h.
- ▶ On 16 January 2006, a new provision of the Land Transport Act came into force allowing roadside licence suspension for driving at 40km/h or more above the posted speed limit.

Terminology

Fatal injuries: injuries that result in death within 30 days of the crash.

Serious injuries: fractures, concussions, internal injuries, crushings, severe cuts and lacerations, severe general shock necessitating medical treatment and any other injury involving removal to and detention in hospital.

Minor injuries: injuries of a minor nature such as sprains and bruises.

Social cost: a measure of the total cost of road crashes to the nation. It includes: loss of life and life quality; loss of productivity; and medical, legal, court, and property damage costs.

Casualty: person who sustained fatal, serious or minor injuries.

References:

Archer, J., Fotheringham, N., Symmons, M. and Corben B. (2008) *The Impact of Lowered Speed Limits in Urban and Metropolitan Areas* Monash University Accident Research Centre report 276.

Patterson, T.L., Frith, W.J., and Small, M.W. (2000) *Down with Speed: A review of the literature, and the impact of speed on New Zealanders* Accident Compensation Corporation and Land Transport Safety Authority. Wellington. www.transport.govt.nz/research/Documents/ACC672-Down-with-speed.pdf