



Motorcycling

Household Travel Survey

v1 created May 2010

The New Zealand Household Travel Survey is an ongoing survey of household travel conducted for the Ministry of Transport. Each year, people in 4600¹ households throughout New Zealand are invited to participate in the survey by recording all their travel over a two-day period. Each person in the household is then visited and interviewed about their travel. Participants are also asked about their alcohol consumption and other travel-related information.

This fact sheet examines motorcyclists on New Zealand roads. This includes travel on motorcycles, mopeds and scooters. It uses data from 25 471 people in 10 244 households, collected between July 2003 and June 2009. Of these 2934 people had a motorcycle licence, 715 had ridden 100km or more in the past year, and 206 were surveyed riding a motorcycle during their travel days. The information will be updated as new data become available. Professional driver trips² have been excluded from this analysis.

Words shown in blue (other than headings) are defined in the glossary at the end of this sheet. Click on the word or phrase to go directly to the glossary.

As the survey covers periods starting July in a given year and finishing in June, it should be noted that 2003 – 2009 refers to the six year time period (July 2003 – June 2009), as periods are labelled with the start and finish year.

Highlights

- Motorcycle riders are nearly 16 times more likely to be killed or injured than car/van drivers per 100 million km travelled.
- About 120 thousand people each year motorcycled more than 100km in the previous year.
- There are more than 4 times as many New Zealand motorcycle licence holders as there are motorcycles in New Zealand.
- Pillion passenger trips make up one in seven motorcyclist trip legs.
- 65% of motorcycling trip legs are commuting to work or school, compared to 30% of car driver trip legs for this purpose.
- Motorcycling for social or recreational reasons makes up 18% of the trip legs by those 45 years or over and 49% of the distance travelled.
- Open road motorcycling makes up 74% of the distance motorcycled by those 45 years and over, whereas it makes up 55% of the distance motorcycled by those 15-29 years old.
- Nearly 50% of the distance motorcycled by 15-29 year olds is on bikes of less than 600 cc.
- Over 50% of the distance motorcycled by those 45 years and older is on bikes of more than 1000 cc.

¹ Prior to 2008, 2200 households per year were sampled.

² Professional driver trips are those done to transport goods or people as a professional eg courier trips, taxi driver trips, bus driver trips, paper route delivery trips.

Overall mode share

Figure 1: Overall mode share (2003 – 2009)

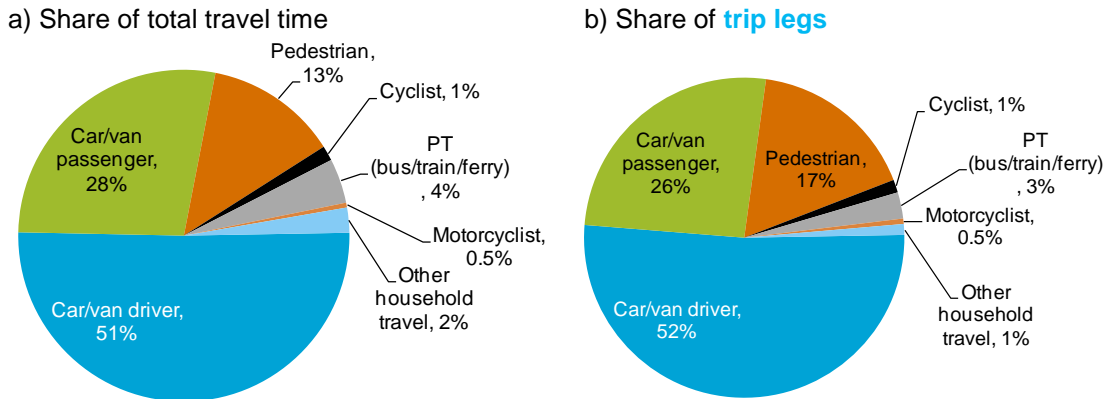


Table 1: Mode share of time, distance and trip legs (2003 – 2009)

Travel mode	Trip legs in sample	Million km per year	Million hours per year	Million trip legs per year
Car/van driver	106 174	29 712	799.5	3 236.8
Car/van passenger	55 673	17 526	438.3	1 627.1
Pedestrian	34 156	824	204.4	1 063.6
Cyclist	3 174	277	23.1	81.9
Public Transport (bus/train/ferry)	4 863	1 540	68.8	167.0
Motorcyclist	992	224	7.5	34.3
Other household travel	2 013	684	38.5	68.4
Total	207 045	50 788	1 580.0	6 279.1

Note: Distance estimates are available for road-based modes only. Totals may not add exactly due to rounding.

Motorcycling makes up approximately 0.5% of travel by share of total time and 0.5% by share of trip legs (Figure 1). This adds up to 224 million km per year and 7.5 million hours per year (Table 1).

Who uses motorcycles?

There are a variety of sources of data about motorcycles and motorcyclists in New Zealand. As of 4 July 2009, there were 488 000 motorcycle licence holders in New Zealand: 57 000 learner licence holders, 13 000 restricted licence holders and 418 000 full licence holders³. This is about 15% of the population of New Zealand who are 15 years or older. There were 32 000 mopeds and 109 000 motorcycles on the Motor Vehicle Register as of 30 June 2009. Of these, 27 000 mopeds and 74 000 motorcycles were primarily for on road use and not covered by an exemption or restoration licence³. It is thought that in 2008 there were 111 000 motorcycles in the New Zealand fleet⁴. This indicates there are more than 4 times as many motorcycle licence holders as there are motorcycles in New Zealand.

³ National Register of Driver Licences (maintained by NZ Transport Agency).

⁴ 2009 New Zealand Vehicle Fleet Annual Statistics

<http://www.transport.govt.nz/research/newzealandvehiclefleetstatistics/>

Of the population surveyed in the Household Travel Survey in a year, about 450 thousand people have a motorcycle licence. However this does not necessarily mean they have ridden a motorcycle recently. About 120 thousand people per year report motorcycling more than 100km in the previous year. This reflects the large proportion of people who get a licence and actively motorcycle when they are young, but are no longer riding when they get older. 15 – 24 year olds make up 3% of the population with motorcycle licences, but 16% of those who have motorcycled in the last year, whereas those aged 55 years or more make up 36% of licence holders but 19% of those who have motorcycled in the last year.

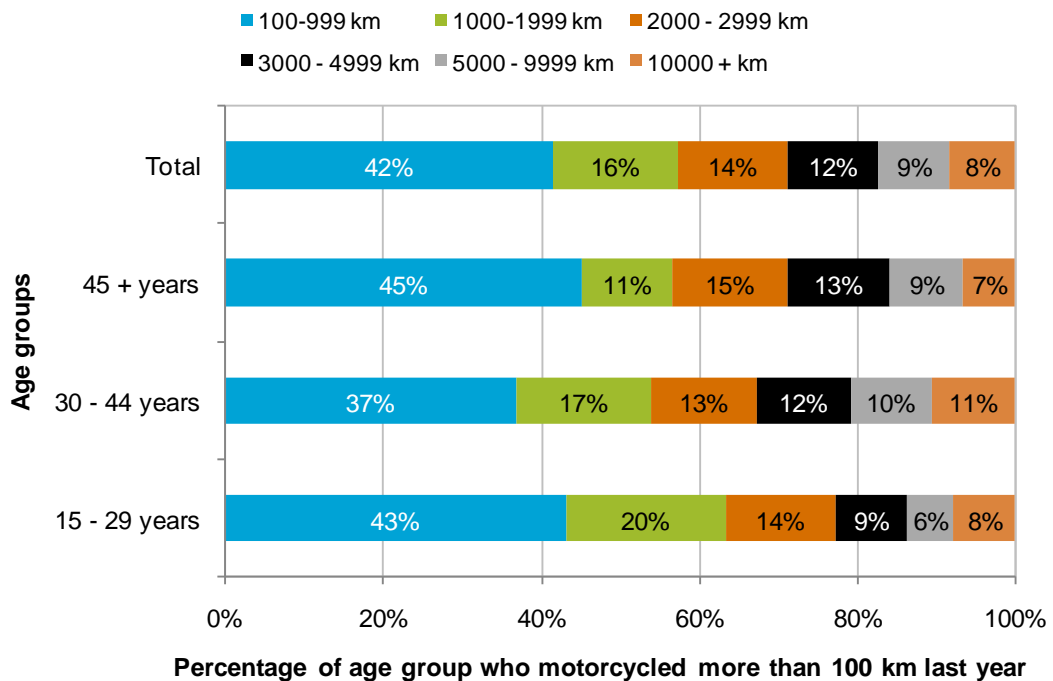
Of the 120 thousand people per year who reported that they motorcycled more than 100km in the previous year, 18% were female and 82% male. 30-44 year olds and those 45 years and over made up the greatest proportion of these riders, at 38% each. People aged 15-29 made up 25%.

67% of those who reported riding more than 100 km in the last year held a current motorcycle licence when surveyed. A further 32% held a current car licence but no motorcyclist licence, making it legal to ride only if the vehicle was classed as a moped and had an engine capacity of less than 50cc. Only about 2% had a motorcycle licence but no car licence. 2% had no current car or motorcycle licence.

As part of the survey, all people over 15 year old were asked how much motorcycling they had done in the last year. 96% responded that they had travelled 99 km or less on a motorcycle in the last year.

30-44 years olds are most likely to have motorcycled the furthest of the 3 age groups examined (Figure 2). Only 37% of those who motorcycled more than 100km in the last year, motorcycled less than 1000km. 11% of those who motorcycled more than 100km, reported motorcycling more than 10 000km in the last year.

Figure 2: Previous years' motorcycling experience (self reported) by age group (2003 - 2009).



How much do motorcyclists travel?

Pillion passengers

On the surveyed travel days, pillion passenger trips make up 14% of the surveyed motorcyclist trip legs. However such a small sample size means that the numbers don't permit further analysis of pillion passenger travel. For the rest of this fact sheet we will limit the analysis to motorcycle riders and exclude pillion passengers.

Motorcyclist riders

Table 2 shows the trip legs, time and distance travelled by motorcyclists (excluding pillions) per year.

Table 2: Travel by motorcyclist riders per year (2003 – 2009) (excludes pillion passengers).

Age	Trips in sample	People who rode a motorcycle within the travel days	Million hours per year	Million km per year	Million trip legs per year	Mean distance per trip leg (km)
15 - 29 years	187	39	1.3	40	6	6.5
30 - 44 years	325	61	3.1	90	12	7.1
45 + years	362	79	2.3	70	11	6.4
Total	874	179	6.7	200	29	6.7

NB: Small sample sizes mean there are large uncertainties associated with these values.

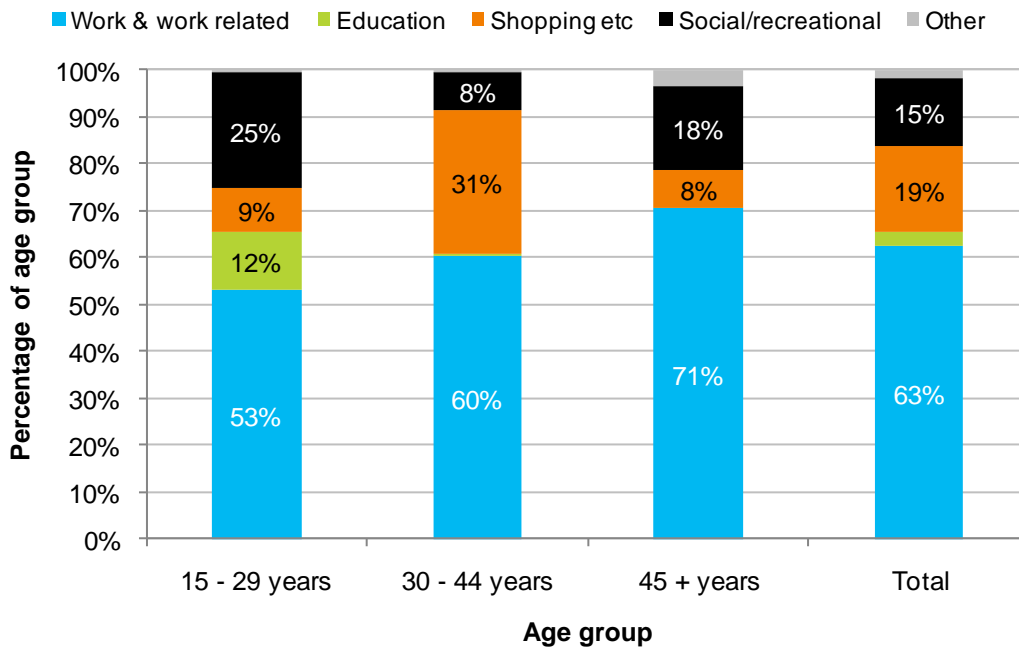
30-44 year olds motorcycle the most, in terms of trip legs, distance and time spent motorcycling. Their average trips are longer, with a mean distance per trip leg of 7.1 km and duration of 15 minutes.

Female riders made 23% of the trip legs but only took up 11% of the total time spent motorcycling and 8% of the distance travelled. Their trips were on average shorter, with the average trip leg distance of 2km compared to 8km for male riders. Unfortunately the small sample size of female rider trips means that that no age trends can be discerned.

Where do motorcyclists ride?

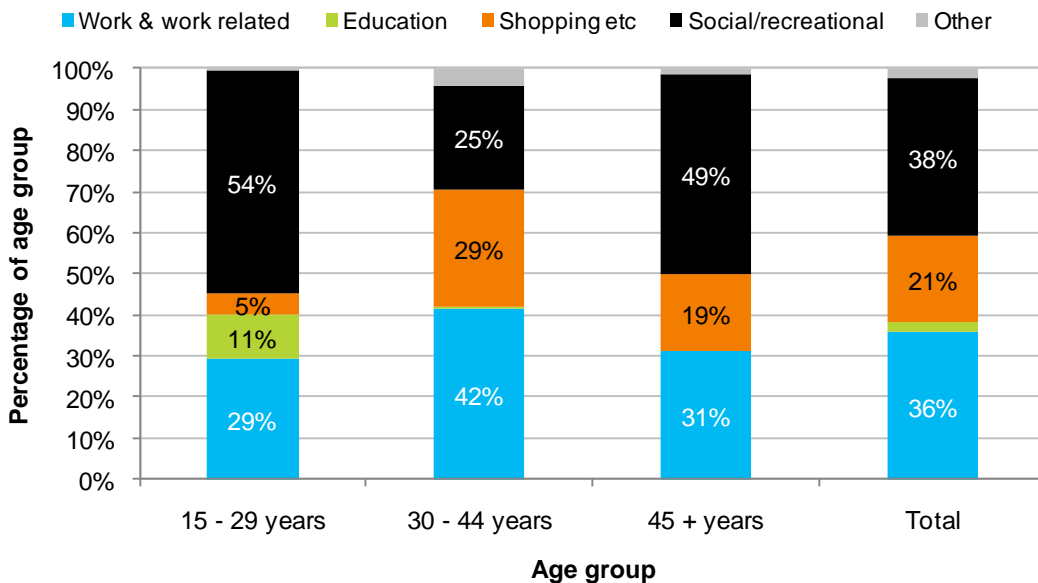
People travel for a range of reasons at different points in their lives, but 65% of motorcycling trip legs are for commuting: for work or education. This is a much higher fraction for this purpose than car driver trip legs (about 30%). Figure 3 and Figure 4 show the trip leg purposes given for the available motorcycle trips.

Figure 3: Percentage of trip legs by purpose and age group (2003 - 2009).



From Figure 3, the majority of trip legs (excluding those returning home and professional driver/rider trips) are for travel to work or for work related activities. Travel to or for work makes up between 53-71% of trip legs. Shopping/personal business/medical and social/recreational are next most common reasons for motorcycling, with the amounts varying between age group. Education is also a major reason for motorcycle trips, but only amongst those 15-29 years old.

Figure 4: Percentage of distance motorcycled by purpose and age (2003 - 2009).



Looking at the distance motorcycled by the trip purpose (Figure 4, again excluding travel home and professional driver trips) gives a slightly different picture. Travel to or for work is only 29-42% of the distance travelled and the distance travelled for social / recreational reasons is a far greater proportion of travel. It is approximately 50% for those 15-29 years old

and 45+ years old. Even for 30-44 year olds, social/recreational trips are 8% of the trip legs, but 25% of the distance travelled, implying longer touring trips.

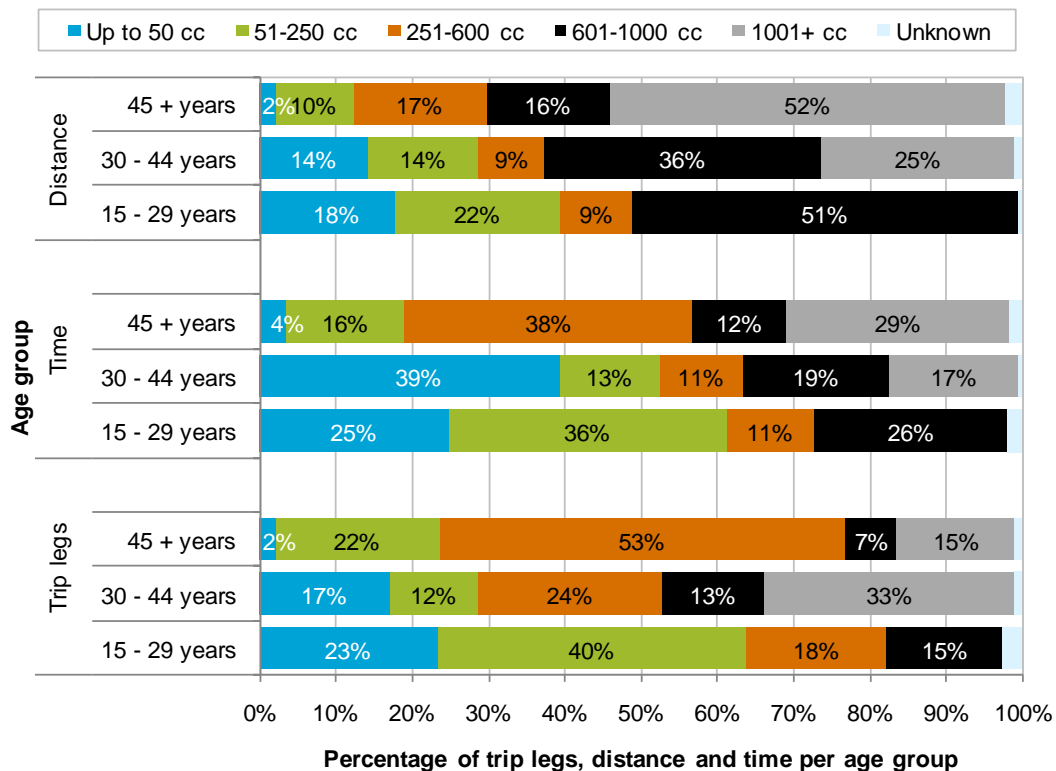
What types of motorcycles are ridden?

As stated in the introduction, the definition of motorcycling used here includes motorcycles, mopeds and scooters. We can get some idea of the power of the vehicle involved based on the vehicle **cc rating**.

The higher powered machines (more than 600 cc) are used for approximately 30% of the trip legs and for about 36% of the time travelled, but cover over 60% of the distance motorcycled. Conversely, the lower powered vehicles are used for shorter, slower trip legs.

Examining the type of travel on different engine sizes by different age groups (Figure 5), those under 30 years old have the lowest proportion of travel on higher powered vehicles.

Figure 5: Percentage of trip legs, distance and time per age group by vehicle cc rating (2003 - 2009)



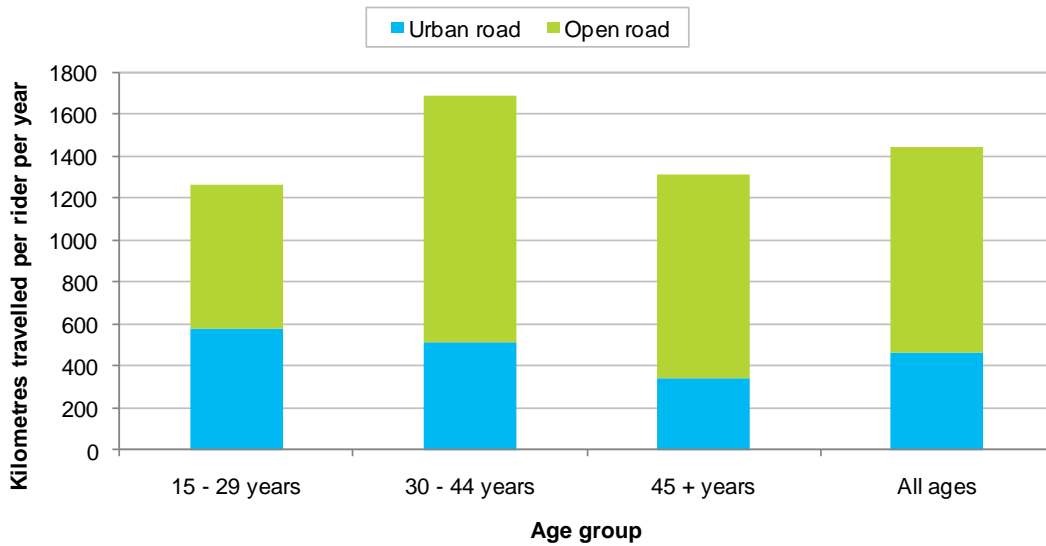
For those motorcyclists 45 years and over, while only 15% of trip legs are on high powered motorcycles (1001+ cc), these trip legs cover 52% of the distance travelled.

More information on the New Zealand fleet is available from <http://www.transport.govt.nz/research/NewZealandVehicleFleetStatistics/>.

Open Road/Urban road

On average between 2003 and 2009, motorcyclists travelled about 54 million km per year on urban roads (speed limit of 70km/hr or less) and 115 million km per year on open roads (speed limit of over 70km/hr).

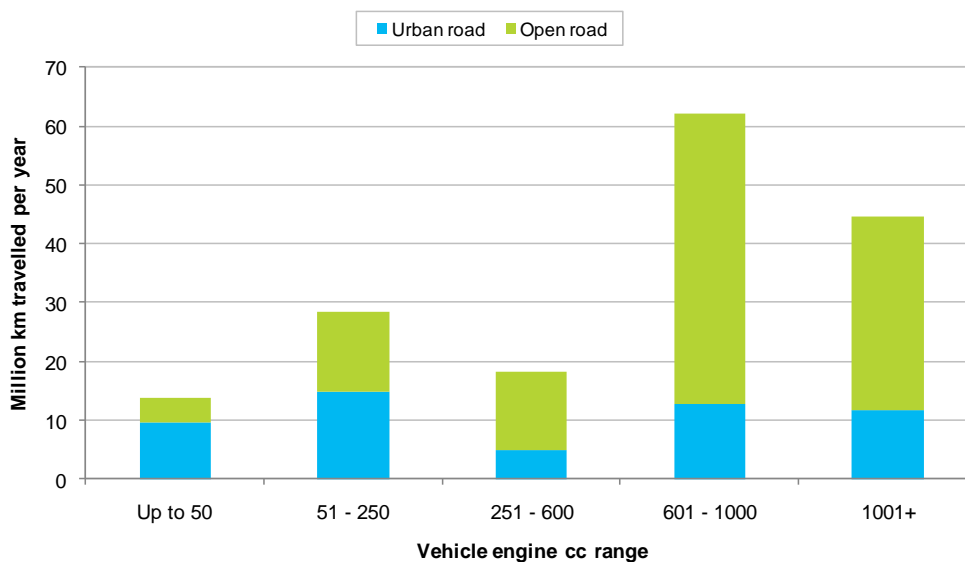
Figure 6: Distance travelled per rider* per year by age group and road type (2003 - 2009).



* Riders defined to be those who have motorcycled more than 100km in the past year.

From Figure 6, 30-44 year olds travel furthest per rider per year with the largest amount of travel on the open road. This correlates with the greater mean trip distances and durations observed in this age group earlier (Table 2). In contrast 15-29 year olds do the smallest amount of motorcycling per rider per year and around 45% is on urban roads.

Figure 7: Motorcyclist distance travelled per year by road type and engine cc (2003 - 2009).



Examining the road types and distances with respect to the engine cc (Figure 7), the less powerful engines travel more in urban areas, whereas for the more powerful engine types (600+ cc), around 70% of the distance travelled is on open roads.

Risk

Figure 8: People killed or injured in motor vehicle crashes per million hours spent travelling, 2003-08 for all ages.

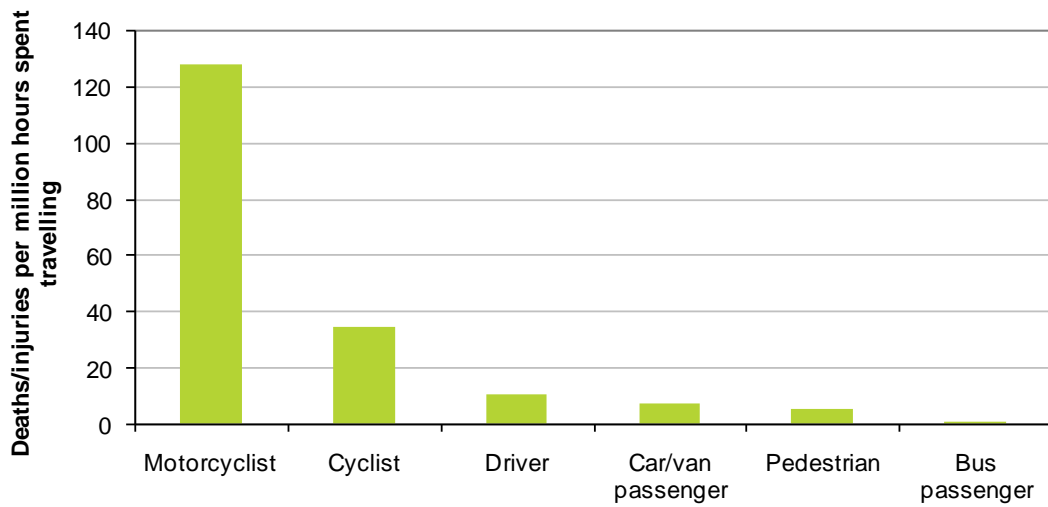


Figure 8 shows the number of people killed or injured in motor vehicle crashes per million hours spent travelling. Motorcycling is the riskiest travel mode by time (128 deaths/injuries per million hours travelled), followed by cycling (34). A similar trend is observed per distance travelled. The main risk factors are decreased stability, a much lower level of occupant protection than is provided by a car, and the fact that a motorcycle is less visible to other road users than a car or a truck.

More information on motorcyclist risk is found in the *Risk on the Road fact sheet* (linked off <http://www.transport.govt.nz/research/LatestResults/>)

Additional information:

Transport Monitoring Indicator Framework

<http://www.transport.govt.nz/ourwork/TMIF/Pages/default.aspx>

Motorcyclist crash fact sheet (Motorcyclists involved in motor vehicle crashes)

<http://www.transport.govt.nz/research/motorcyclecrashfacts/>

New Zealand vehicle fleet statistics (including motorcycle fleet)

<http://www.transport.govt.nz/research/NewZealandVehicleFleetStatistics/>

Comparing Modes Fact Sheet for information about travel to school and travel to work.

Risk fact sheet for information about risk on New Zealand roads.

Both linked off:

<http://www.transport.govt.nz/research/LatestResults/>

For more information about the background to the survey see the Ministry of Transport website at <http://www.transport.govt.nz/research/TravelSurvey/>

Glossary

cc rating: Capacity of vehicle engine measured in cubic centimetres.

Driver: in this fact sheet includes all drivers of private light 4 wheeled vehicles such as cars, utes, vans, SUVs etc.

Household: group of people living at the same address, sharing facilities but not necessarily financially interdependent. May be an individual, couple, family, flatmates or a combination of these (eg family plus boarder).

Passenger: passenger in a private vehicle (car, van, ute, SUV, truck). Passengers in buses, trains and taxis are coded under those categories. Aircraft and boat passengers are included in the 'Other' category.

Professional driver: someone who is employed to transport goods or people, including couriers, truck drivers, bus and taxi drivers. Trips by professional drivers in the course of their work are excluded. Other travel by professional drivers (including travel from home to work) is included. If a person drives a lot for work, but this is not the primary purpose of the job (eg a plumber, real estate agent, district nurse), then all trips by this person are recorded (he or she is not a professional driver).

Public transport: (PT). Passenger in local bus, train or ferry. Distances are currently only available for bus and train trips. Local bus, train trips have been defined to be 60 km or less, local ferry 1hr or less. Bus/train/ferry trips of longer than this distance/duration have been coded to 'other household travel'.

Travel: includes all on-road travel by any mode; any walk which involves crossing a road or walking for 100 metres or more along a public footpath or road; cycling on a public road or footpath; some air and sea travel. Excludes off-road activities such as tramping, mountain biking, walking around the mall or around the farm.

Travel mode: the method of travel. Includes vehicle driver, vehicle passenger, pedestrian, cyclist, motorcycle rider or passenger, bus or train passenger, ferry or aeroplane passenger and so forth.

Trip distance: For road-based trips, distances are calculated by measuring the distance from the start address along the roads to the finish address. If an unusual route was used, the interviewer records an intermediate point to indicate the route; otherwise, the journey is assumed to follow the quickest available route.

Trip leg: a single leg of a journey, with no stops or changes in travel mode. For example, driving from home to work with a stop at a shop, is two trip legs; one ending at the shop and one ending at work. This does not include trips where people walk less than 100m without crossing a road, trips on private property that start and end at the same place without crossing a road, and off-road round trips.

Trip purposes / destinations:

Return home includes any trip to the home address or any trip returning to the place they are going to spend the night.

Work includes travel to main place of work and travel to any other jobs.

Employer's business: includes work-related travel other than to and from work (eg travelling to meetings or clients).

Education is for travel by students only and includes institutions such as primary and secondary schools, universities etc. It does not include preschool education such as kindergarten, Play centre, crèche, kōhanga reo etc which are included under *social visit / entertainment*.

Shopping is entering any premises that sells goods or hires them for money. A purchase need not be made.

Social visit / entertainment includes entertainment in a public or private place e.g. eating out at a restaurant or food court, picnics etc.

Recreational includes active or passive participation in sporting activities and travel for which the main goal is exercise.

Personal business includes stops made to transact personal business where no goods were involved. This includes stops made for medical or dental needs and for dealing with government agencies involved with social welfare.

Accompany or transport someone covers when the reason of the travel is to go somewhere for someone else's purpose.

Change mode of travel covers when the purpose of the stop was only to change to another mode of transport.

Walk: Includes walkers, joggers, users of mobility scooters and children on tricycles.

For more information about the background to the survey see the Ministry of Transport website at www.transport.govt.nz/ongoing-travel-survey-index/

Prepared by the Transport Monitoring team of the Ministry of Transport, May 2010.