Road traffic injury hospitalisations

This report presents information on hospitalisations caused by road traffic injuries in Aotearoa New Zealand. It is based on data provided to EHINZ by Health New Zealand- Te Whatu Ora in December 2025.

Key facts

- The 2024 traffic injury hospitalisation rate was 72.0 per 100,000 people, down from 77.1 hospitalisations per 100,000 people in 2023.
- Road traffic injury hospitalisation rates were highest for males, Māori, people aged 15–24 and 85+ years, and people living in more deprived areas.
- The rate of hospitalisations for Māori remains statistically significantly higher than for other ethnic groups.
- Motorcyclists had a much greater risk of injury than users of other modes of transport, taking into account time spent travelling and distance travelled.
- The highest road traffic injury hospitalisation rate occurred in the Northland district. The lowest hospitalisation rate was in the Capital and Coast district.

The health impact of road traffic accidents

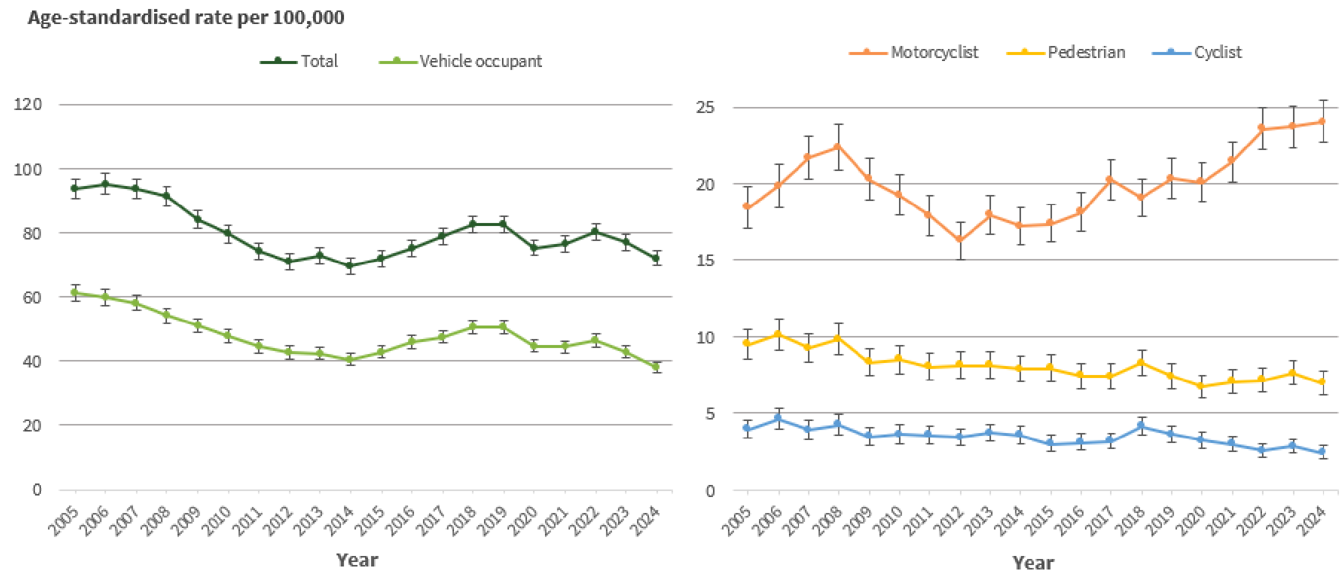
Traffic-related deaths and injuries are the main health impact of road transport in New Zealand (Briggs et al 2016). Traffic injuries may affect all types of road users, although pedestrians, cyclists and motorcyclists are particularly vulnerable as they tend to suffer more severe injuries from collisions, due to a lack of personal protection. By comparison, vehicle occupants are protected by the vehicle body and fitted safety features (such as seatbelts or airbags). Vehicle injury may be related to speed, vehicle type and the age of the vehicle, as newer models often have more and better safety features.

Road traffic injury hospitalisations were lower in 2024 than in 2023

In 2024, there were 4,070 hospitalisations for traffic injuries in New Zealand. The majority of these were for motor vehicle occupants (54.4%, 2,216 hospitalisations). A further 32.1% (1,305 hospitalisations) were motorcyclists, while 9.2% (373 hospitalisations) were pedestrians and 3.7% (149 hospitalisations) were cyclists. The remaining 27 hospitalisations were for other modes of transport.

The total traffic injury hospitalisation rate in 2024 was 72.0 per 100,000 people, down from 77.1 per 100,000 in 2023. Traffic injury hospitalisation rates for vehicle occupants have decreased in each of the past two years, while rates for pedestrians and cyclists also decreased in the most recent year. In contrast, the rate for motorcyclists increased in 2023 and 2024, albeit at a slower rate than in the previous two years (Figures 1a and 1b).

Figures 1a and 1b: Road traffic injury hospitalisation rates, by mode of transport, 2005–2024



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

Motorcyclists were most at risk of injury

Travel by motorcycle carries a substantially higher risk of hospitalisation for injury compared to other modes of transport. In 2023/24, there were 215.3 hospitalisations for motorcycle injuries for every million hours travelled by motorcycle annually. This is a much higher rate than for cyclists (4.5 hospitalisations per million hours cycling), pedestrians (2.4 hospitalisations per million hours walking) and vehicle occupants (1.6 hospitalisations per million hours travelled as a vehicle occupant) (Table 1).

Table 1: Road traffic injury hospitalisation risk, by mode of transport 2023/24

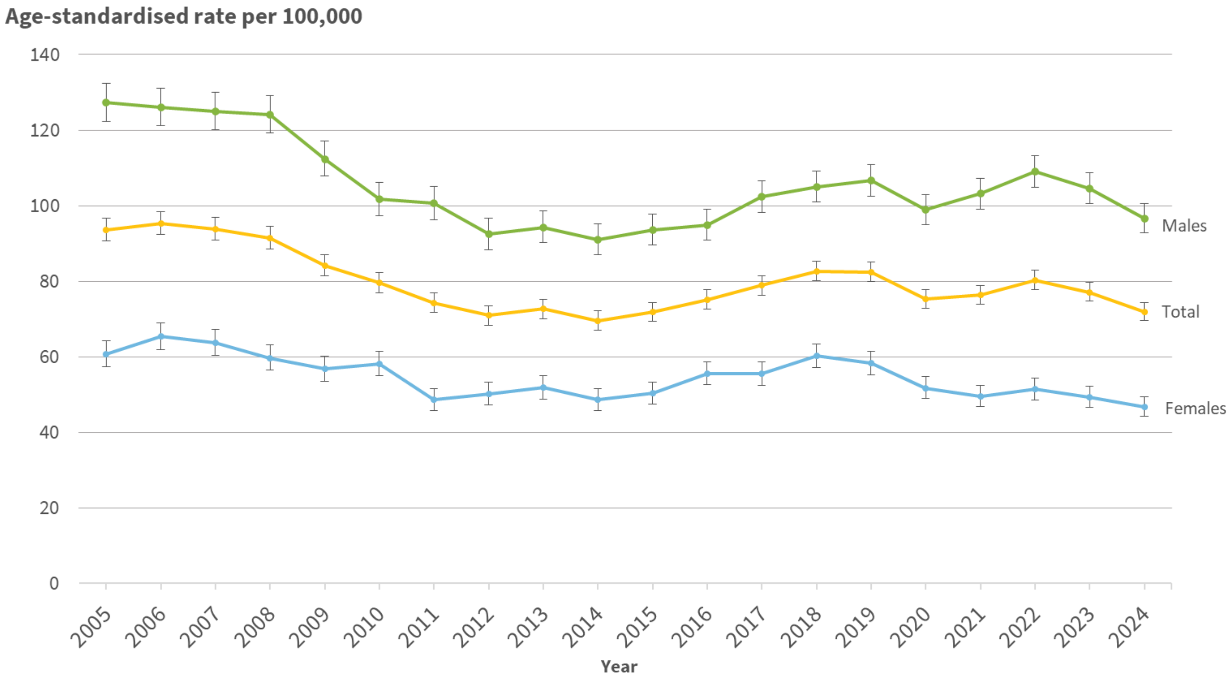
	Vehicle occupant	Motorcyclist	Pedestrian	Cyclist	All traffic
Million hours travelled	1,390	6	165	34	1,612
Million kilometres travelled	50,089	250	615	440	54,362
Number of hospitalisations	2,272.5	1,291.5	390.0	154.5	4,130.0
Hospitalisations per million hours	**1.6**	**215.3**	**2.4**	**4.5**	**2.6**
Hospitalisations per million kilometres	**<0.1**	**5.17**	**0.63**	**0.35**	**<0.1**

Note: The annual average injury hospitalisations was based on calendar years (January 2023–December 2024), while the annual average time and distance travelled was based on the financial year (July 2023–June 2024).
Source: National Minimum Dataset 2025 (Ministry of Health) and the New Zealand Household Travel Survey 2025 (Ministry of Transport)

Males have consistently higher hospitalisation rates

The 2024 injury hospitalisation rate for males was 96.6 per 100,000, down from 104.5 in 2023. The injury hospitalisation rate for females also decreased slightly, from 49.3 per 100,000 in 2023 to 46.7 in 2024 (Figure 2). In 2024, males were twice as likely to be hospitalised with a road traffic injury as females (rate ratio = 2.1, 95%CI 1.9-2.2). The rate for males has been consistently higher than that for females over time.

Figure 2: Road traffic injury hospitalisation rates, by sex, 2005–2024

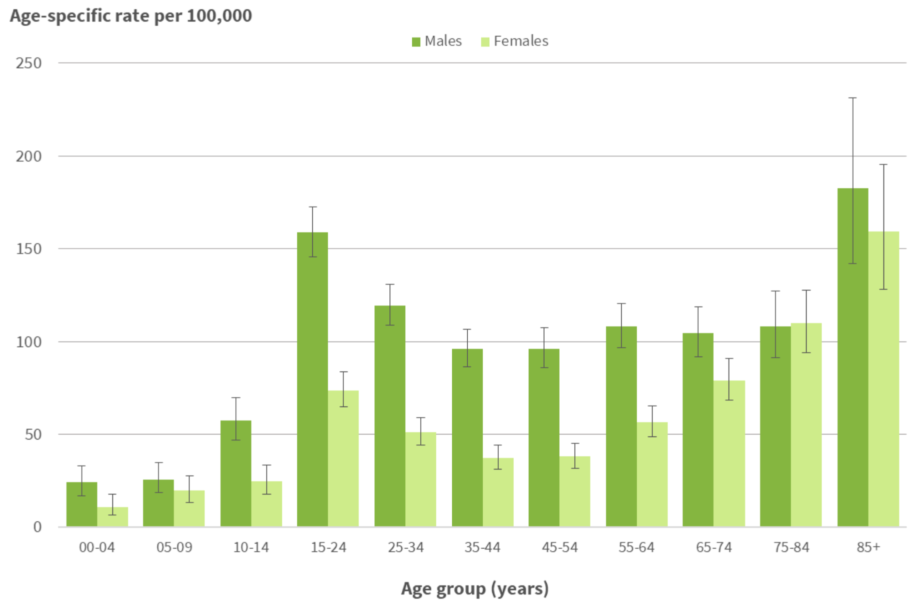


Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

The highest hospitalisation rates were among 15–24-year-olds and 85+ year-olds

Males aged 15–24 years old (158.7 per 100,000) and 85 years and over (182.6 per 100,000) had the highest road traffic injury hospitalisation rates in 2024. Rates for women aged 85 years and over were also high (159.3 per 100,000). Males had higher rates than females for nearly all age groups (Figure 3).

Figure 3: Road traffic injury hospitalisation rates, by age group and sex, 2024

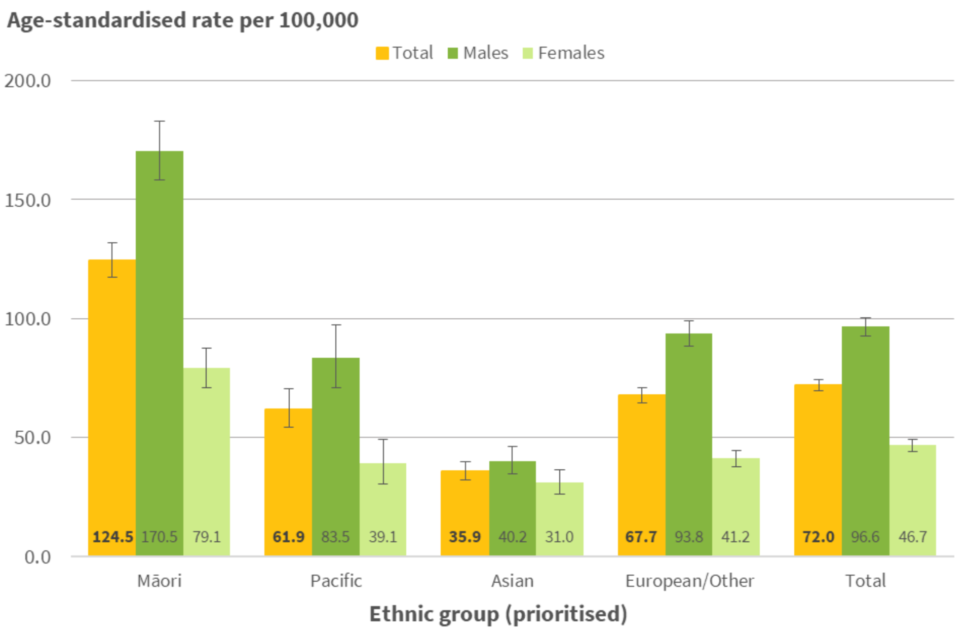


Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

Māori had higher road traffic injury hospitalisation rates

In 2024, Māori had higher age-standardised hospitalisation rates for traffic injuries than other ethnic groups at the total level, as well as for males and females. Males had statistically higher hospitalisation rates than females in all ethnic groups except Asian (Figure 4).

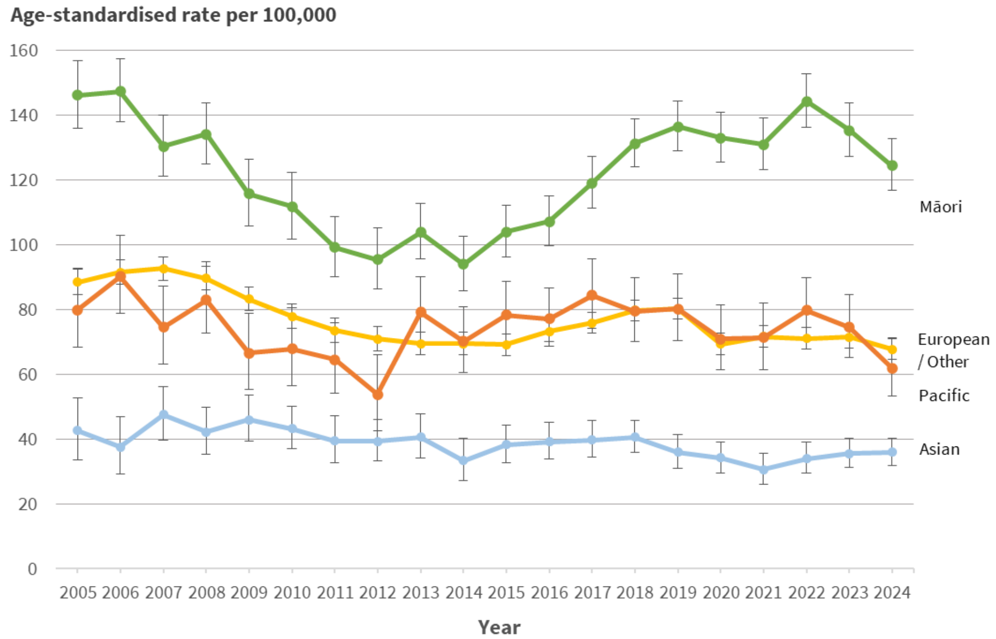
Figure 4: Road traffic injury hospitalisation rates, by ethnic group (prioritised) and sex, 2024



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

The hospitalisation rate for Māori has been consistently higher over time than for other ethnic groups. The rate for Māori increased between 2014 (93.9 per 100,000, 95%CI 86.6–101.5) and 2022 (144.3 per 100,000, 95%CI 136.4–152.5) before decreasing to 124.5 per 100,000 (95%CI 117.2–132.0) in 2024 (Figure 5).

Figure 5: Road traffic injury hospitalisation rates, by ethnic group (prioritised), 2005–2024



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

People living in more deprived areas had higher hospitalisation rates for road traffic injuries

Hospitalisation rates for road traffic injuries in 2024 were much higher in the most socioeconomically deprived areas (NZDep2023 quintile 5) than in the least deprived areas (quintile 1), for both males and females (Figure 6). After standardising for age, people living in the most deprived areas were nearly twice as likely to be hospitalised for a road traffic injury than those in the least deprived areas (rate ratio = 1.8, 95%CI 1.6–2.0).

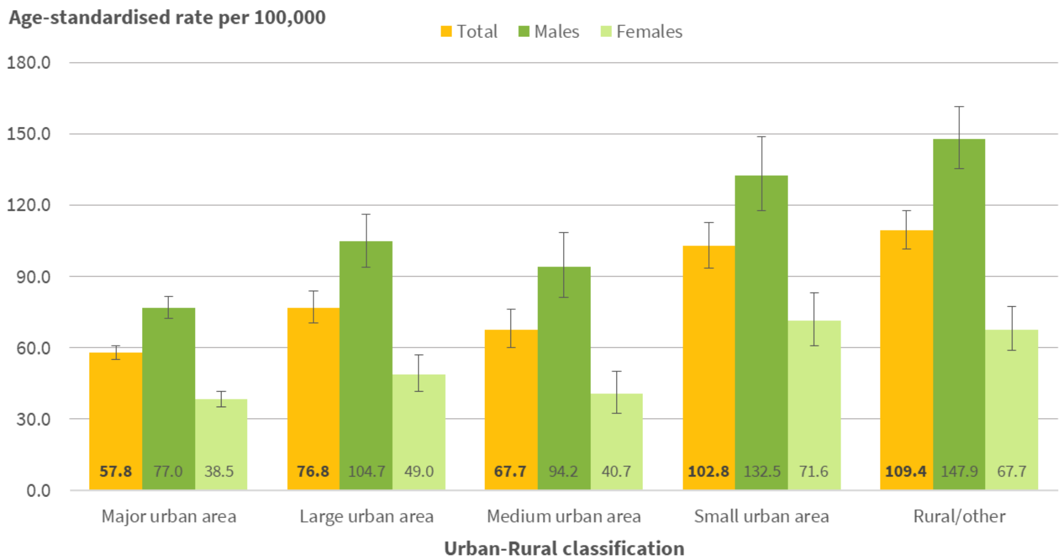
Figure 6: Road traffic injury hospitalisation rates, by NZDep2018 quintile and sex, 2024

Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

Higher rates of traffic injury hospitalisation for residents of rural areas

Traffic injury hospitalisation rates for 2024 were higher for residents of rural areas (109.4 per 100,000) than residents of major urban areas (57.8 per 100,000). This equates to residents of rural areas being nearly twice as likely to have a traffic injury requiring hospitalisation (rate ratio = 1.9, 95%CI 1.7–2.1). There was a clear difference between male and female rates across all urban/rural categories. The rate for males in all categories was around twice that of females (Figure 7).

Figure 7: Road traffic injury hospitalisation rates, by sex and urban/rural classification, 2024

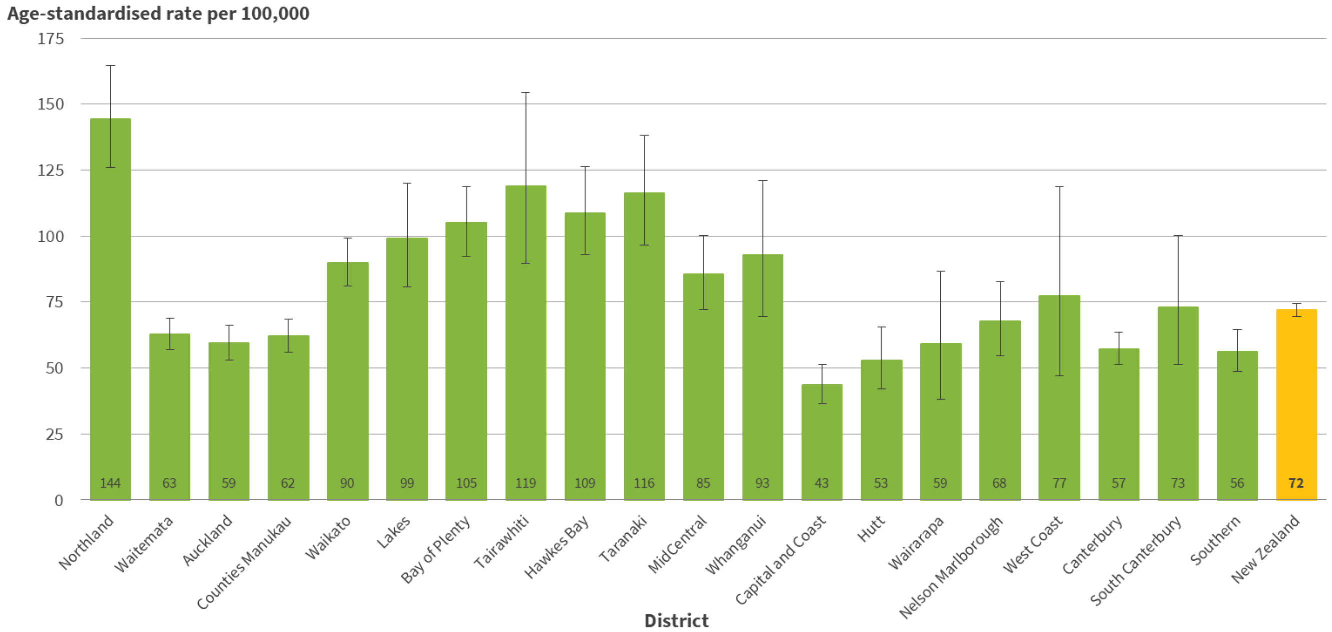


Note: 95% confidence intervals have been presented as vertical bars. The Statistics NZ urban-rural classification for 2023 has been used.
Source: National Minimum Dataset 2025

High road traffic injury rate in Northland district

In 2024, the Northland district had a high hospitalisation rate for all forms of traffic injury (144.4 per 100,000). The Capital and Coast district had a low rate (43.4 per 100,000) (Figure 8).

Figure 8: Road traffic injury hospitalisation rates, by district, 2024

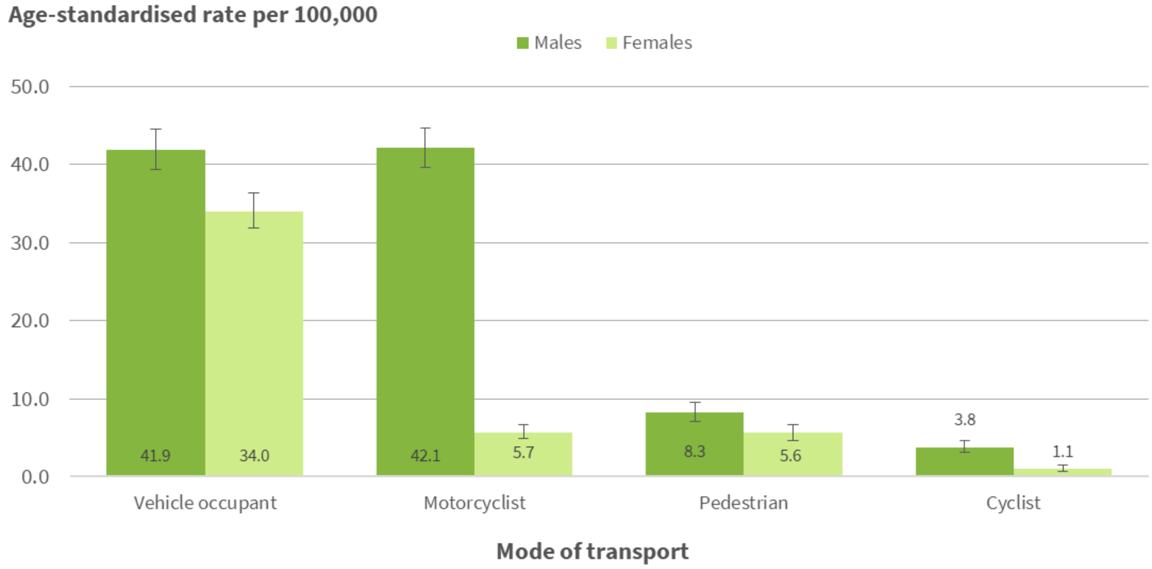


Note: Districts refer to areas formerly known as District Health Boards (DHBs). 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

Road traffic injury hospitalisation rates by road user type

In 2024, males had statistically significantly higher hospitalisation rates than females across all modes of transport, particularly motorcyclists (Figure 9).

Figure 9: Road traffic injury hospitalisation rates, by sex and mode of transport, 2024



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

For vehicle occupant injuries, young adults (15–24 years) and older people (75 years and over) had the highest hospitalisation rates (Figure 10a). Motorcyclist hospitalisation rates were high among most age groups of legal driving age except for those 75 years and over (Figure 10b). For pedestrian injuries, the highest hospitalisation rates were among people aged 85 years and over (Figure 10c).

Cyclist injury hospitalisation rates fluctuate from year to year due to the lower numbers involved. This uncertainty is shown by the wider 95% confidence intervals for these rates (represented by vertical bars on the graphs). For 2024, the highest rates were for people aged 55–64 years (Figure 10d).

Figures 10a – 10d: Road traffic injury hospitalisation rates, by age group and mode of transport, 2024

Figure 10a: Vehicle occupant hospitalisations

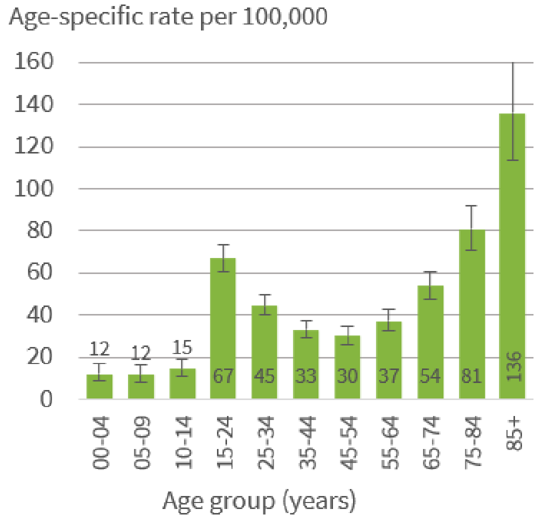


Figure 10b: Motorcyclist hospitalisations

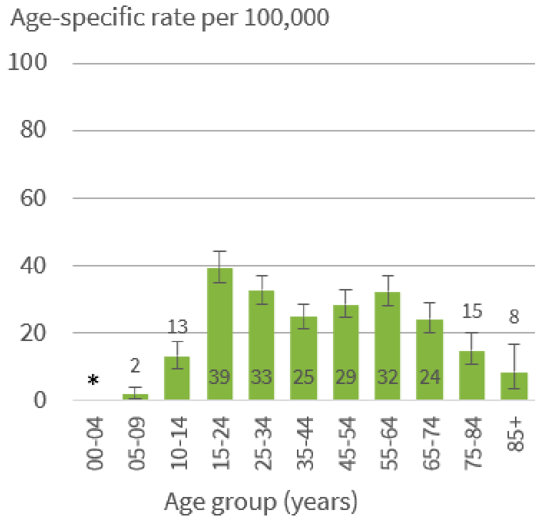


Figure 10c: Pedestrian hospitalisations

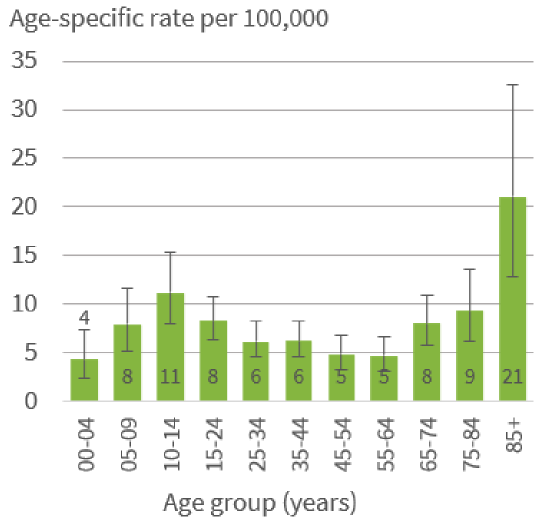
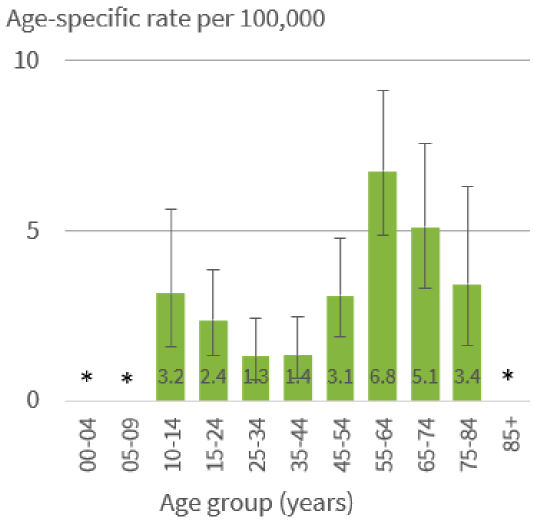


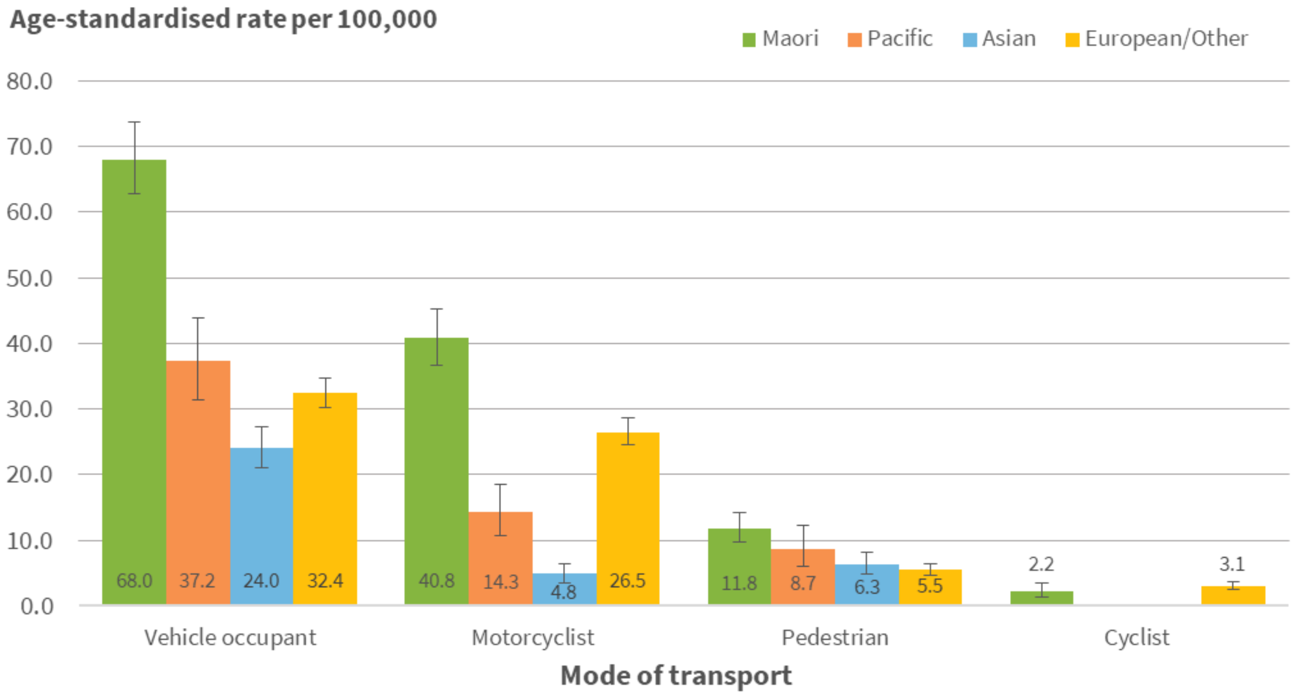
Figure 10d: Cyclist hospitalisations



Note: An asterisk (*) shows that the rate has been suppressed due to low numbers. 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

In 2024, Māori had substantially higher hospitalisation rates for vehicle occupant and motorcyclist injuries than other ethnic groups (Figure 11).

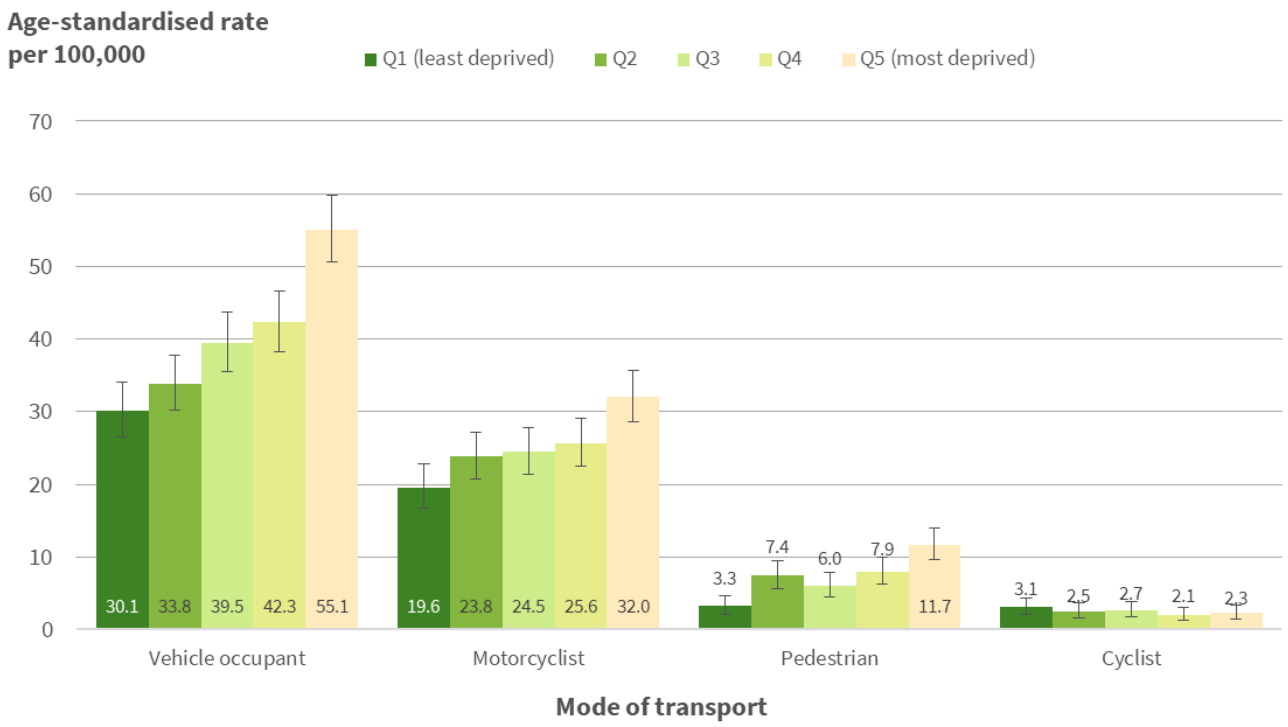
Figure 11: Road traffic injury hospitalisation rates, by ethnic group (prioritised) and mode of transport, 2024



Note: An asterisk (*) shows that the rate has been suppressed due to low numbers. 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

In 2024, the hospitalisation rates for motor vehicle occupants, motorcyclists and pedestrians were all higher for people living in the most socioeconomically deprived areas (NZDep2023 quintile 5) than for those living in the least deprived areas (quintile 1). For pedestrians, those living in the most deprived areas were more than twice as likely to be hospitalised with a transport injury than those living in the least deprived areas (rate ratio=3.6, 95%CI 2.4-5.4) (Figure 12).

Figure 12: Road traffic injury hospitalisation rates, by NZDep2018 quintile and mode of transport, 2024



Note: 95% confidence intervals have been presented as vertical bars.
Source: National Minimum Dataset 2025

Data for this indicator

Data for this indicator comes from the National Minimum Dataset, published by the Ministry of Health. The indicator includes all injury hospital discharges (ie, those with a principal diagnosis of ICD-10AM S00-T78), with the following external causes of injuries:

- Vehicle occupant [V30–V79] (.4–.9), [V83–V86] (.0–.3);
- Motorcyclist V20-V28[.3-.9], V29[.4-.9];
- Pedal cyclist V12-V14[.3-.9], V19[.4-.6];
- Pedestrian V02-V04[.1-.9], V09.2;
- Other V80[.3-.5], V81.1, V82.1;
- Unspecified V87[.0-.8], V89.2.

These ICD codes are consistent with the classification of external cause of injury used by the Centers for Disease Control and Prevention (2002). Hospitalisations have excluded deaths, day cases, short Emergency Department stays, transfers, overseas visitors, and readmissions (Langley et al, 2002; Ministry of Health, 2006, 2015).

Age-standardised rates (using the WHO population) have been presented, where possible, to account for the differences in age structure across population groups.

Rate ratios provide a way of comparing two rates, and give the size of the relative difference between the two rates. A rate ratio higher than 1 indicates the rate is higher in the group of interest than in the comparison group. We have used 95% confidence intervals to decide if the rate ratio is statistically significantly different from 1 (where 1 indicates no difference because the two rates are the same). If the 95% confidence interval does not include 1, then the rate ratio is statistically significant (at the 5% probability level).

The Statistics NZ urban-rural classification for 2023 has been used. Major urban areas are major towns and cities with a population of 100,000 or more. Large urban areas are smaller centres with a population of 30,000–99,999. Medium urban areas are towns with a population of 10,000–29,999. Small urban areas are towns with a population of 1,000–9,999. Rural areas include rural centres and surrounding rural areas.

For additional information, see the Metadata sheet.

References

Briggs D, Mason K, Borman B. 2016. Rapid assessment of environmental health impacts for policy support: The example of road transport in New Zealand. *International Journal of Environmental Research and Public Health* 13:61.

Centers for Disease Control and Prevention. 2002. *ICD Framework: External Cause of Injury Mortality Matrix.* Retrieved 18/03, 2015, from http://www.cdc.gov/nchs/injury/ice/matrix10.htm

Langley J, Stephenson S, Cryer C, Borman B. 2002. Traps for the unwary in estimating person-based injury incidence using hospital discharge data. *Injury Prevention*, 8(4), 332–337.

Ministry of Health and ACC. 2013. *Injury-related Health Loss: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2013*. Wellington: Ministry of Health.

Ministry of Health. 2006. *Hospital Throughput 2003/04 for DHBs and their Hospitals*. Wellington: Ministry of Health.

Ministry of Health. 2015. *Factsheet: Short stay emergency department events.* Retrieved 23/6/2017, from https://www.tewhatuora.govt.nz/for-health-professionals/data-and-statistics/nz-health-statistics/national-collections-and-surveys/collections/national-minimum-dataset-hospital-events/factsheet-short-stay-emergency-department-events

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