

road safety issues

Auckland Region

Land Transport New Zealand has prepared this road safety issues report. It is based on reported injury crash data and trends for the 2000–2004 period. The intent of the report is to highlight the key road safety issues and be a resource to identify possible ways to reduce the number of road deaths and injuries in the Auckland Region.

Issues discussed in the body of the report are based on analysis of crashes on the region's local roads only and do not include state highways, which are covered in a separate report. However, state highway crashes are included in the casualty and social cost charts on this page.

The overview section of this report provides details of the main crash characteristics and trends for the region. The four main issues were chosen based on reported numbers of fatal and serious crashes. These approximate deaths and hospitalisations discussed in the *Auckland Regional Road Safety Plan 2004–2010* and for which target reductions have been set for 2010.

The total number of injury crashes has generally been increasing within the Auckland Region over the past five years. It is pleasing to note a reduction in 2004 compared with the previous year, and a 15 percent reduction in the number of fatal or serious crashes since 2002.

Major road safety issues

Auckland Region

Vulnerable road users

Roadside hazards

Poor observation

Crashes at bends

Nationally

Speed

Alcohol

Failure to give way

Restraints



2004 road trauma for Auckland Region



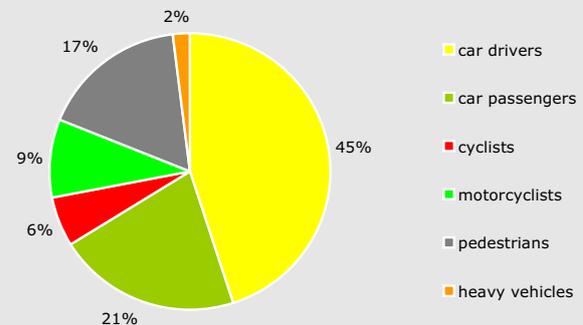
Deaths	80
Serious casualties	512
Minor casualties	3,343



Fatal crashes	69
Serious injury crashes	421
Minor injury crashes	2,512
Non-injury crashes	10,192

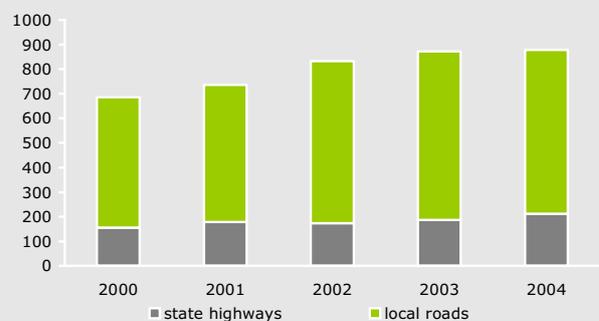
Fatal and serious casualties

User type 2000–2004



Estimated social cost of crashes*

Social cost (\$ million)

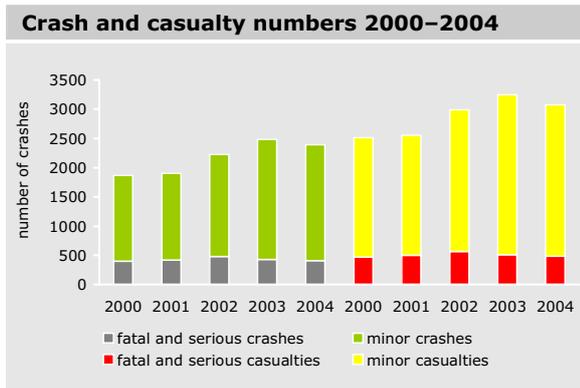


*The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are expressed at June 2004 prices.

Overview

Crash and casualty trends

There was a reduction in the total number of injury crashes and casualties last year compared with the peak in 2003. The combined number of fatal and serious casualties throughout the region has decreased by over 14 percent since 2002.

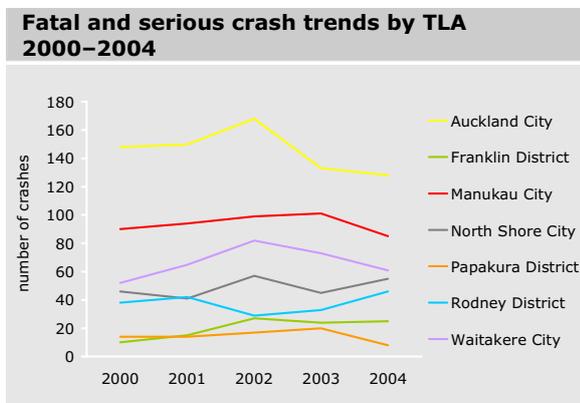


Crashes on local authority roads

The table below shows the percentage of crashes for each of the seven territorial local authorities (TLAs) in the region.

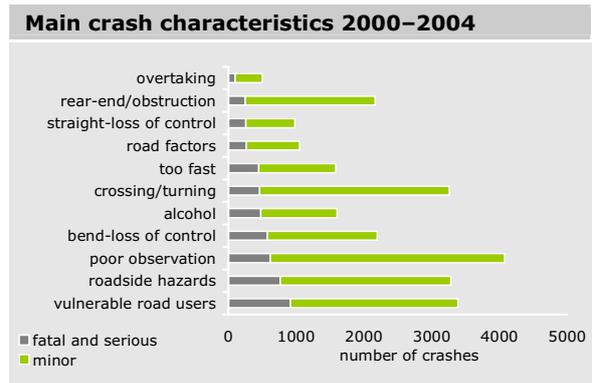
TLA	Injury	Fatal and serious
Auckland City	37%	34%
Franklin District	4%	5%
Manukau City	22%	22%
North Shore City	13%	11%
Papakura District	4%	3%
Rodney District	5%	9%
Waitakere City	15%	16%

The following chart illustrates the five-year trend in fatal and serious crash numbers for each of the TLAs.



Selecting the issues

The four main issues discussed in this report were chosen because they had the highest reported numbers of fatal and serious crashes (as shown in the following chart). Fatal and serious crashes approximate deaths and hospitalisations, which form the basis for the targets set in the national *Road Safety to 2010* strategy, and the *Auckland Regional Road Safety Plan 2004–2010*.



Other issues not covered in this report also need to be addressed in order to reach the targets. Chief among these are alcohol and excessive speed, which were both implicated in a high number of fatal crashes.

Selected crash situations

The table below compares the proportions of injury crashes, as well as crashes resulting in fatal or serious injuries, over a range of crash situations in the region.

Situation	Injury	Fatal and serious
Wet road	27%	28%
Dry road	73%	72%
Dark	34%	40%
Light	66%	60%
Rural road	11%	16%
Urban road	89%	84%
Intersection	46%	38%
Mid-block	54%	62%

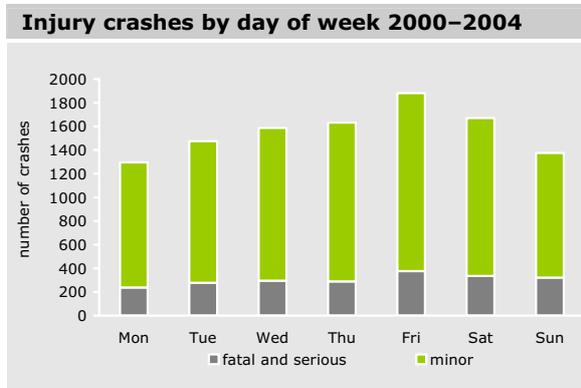
Crashes at night, on rural roads and away from intersections tended to result in greater injury severity. This may be due to the higher speeds generally associated with these crashes.

Vulnerable road users are those who have very little physical protection in the event of a crash and who are therefore more susceptible to severe injuries. As shown below, this was generally the case within the Auckland Region.

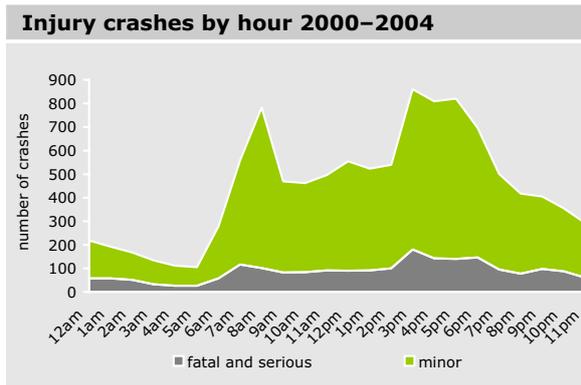
Road users	Injury	Fatal and serious
Pedestrians	17%	24%
Motorcyclists	6%	11%
Cyclists	8%	8%

Crash times

The number of crashes and their injury severity generally increased from Monday through to a peak on Friday, tailing off slightly on Saturday and more so on Sunday.



Most crashes occurred from 3 pm to 5 pm with another peak around 8 am; however, proportionally more fatal and serious crashes occurred from midnight to 3 am.



A number of crash characteristics were over-represented at night. The figures in the table below compare with a regional average of 34 percent for all injury crashes that occurred at night.

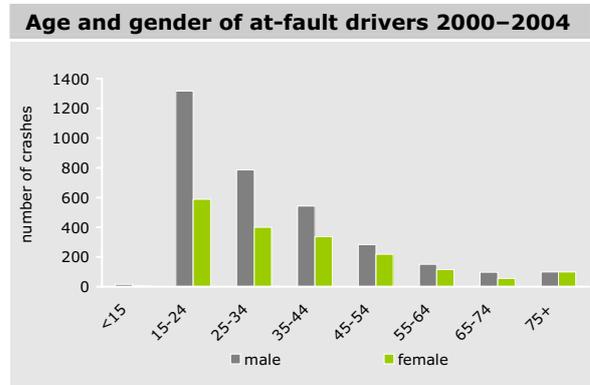
Crash characteristic	Crashes at night
Alcohol	77%
Fatigue	52%
Excessive speed	52%
Straight-loss of control	51%
Roadside hazard struck	49%
Bend-loss of control	48%
Weekend	48%

Drivers at fault

The following chart shows the gender and age distribution of drivers found to have been at fault in crashes. Most crashes (64 percent) were caused by male drivers, and these crashes typically resulted in more severe injuries than those with female drivers. Male drivers were primarily responsible for crashes involving:

- alcohol
- excessive speed for the conditions
- overtaking
- loss of control
- poor handling
- fatigue.

Female drivers were disproportionately represented in crashes involving failure to give way or stop, or poor observation.



The table below compares at-fault drivers with all drivers involved in crashes for different classes of driver licence.

Licence status	All drivers	At-fault drivers
Full	69%	59%
Learner/restricted/overseas	25%	29%
Disqualified/expired/forbidden/never licensed/wrong class	6%	12%

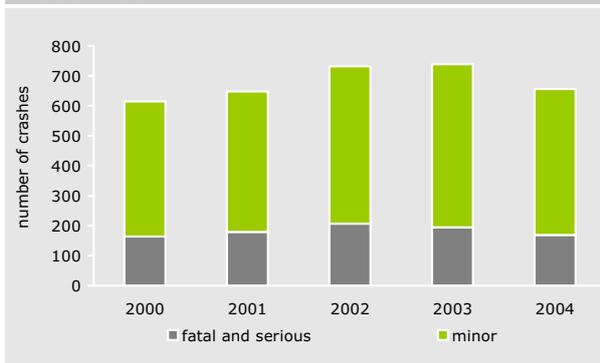
A higher proportion of unlicensed or disqualified drivers and also drivers with conditional licences were at fault in crashes than drivers holding a full licence.

Vulnerable road users

Vulnerable road users are those who have very little physical protection in the event of a crash. Motorcyclists have been included in the analysis for this year's report, in addition to pedestrians and cyclists, who were reported on last year.

Vulnerable road users were involved in 31 percent of the region's injury crashes and 43 percent of the fatal or serious crashes from 2000 to 2004. In this period, they accounted for 90 fatalities, 835 serious injuries and 2,607 minor injuries.

Vulnerable road user injury crashes 2000–2004



After several years of increases, there was a significant drop in crash numbers in 2004.

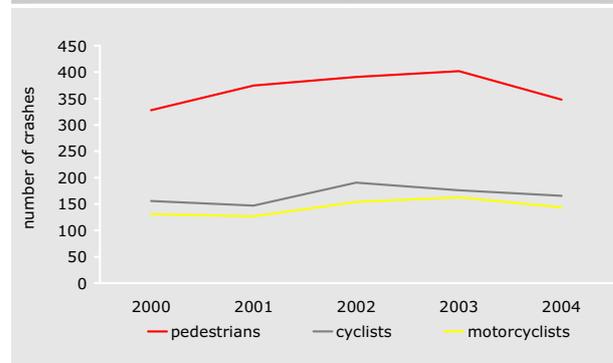
The table below compares the proportion of injury crashes for pedestrians, cyclists and motorcyclists over a range of road situations.

Situation	Pedestrian	Cyclist	Motorcyclist
Wet road	20%	12%	15%
Dry road	80%	88%	85%
Dark	27%	17%	28%
Light	73%	83%	72%
Rural road	1%	2%	12%
Urban road	99%	98%	88%
Intersection	34%	54%	48%
Mid-block	66%	46%	52%

Compared with regional averages, a much lower proportion of crashes occurred on wet roads, in the dark or on rural roads (with the exception of motorcycle crashes). Approximately two pedestrian crashes were at mid-block locations for every crash at an intersection, while cyclist and motorcyclist crashes were fairly evenly divided between intersections and mid-block locations.

The chart below shows the relative numbers and the crash trends of the three vulnerable road user categories. Pedestrians were involved in more crashes than cyclists and motorcyclists combined.

Vulnerable road user categories 2000–2004



Pedestrians

Almost one in every 10 crashes was the result of a pedestrian being in the wrong place at the wrong time, for instance, being near the roadside and struck as a result of a collision between vehicles. The majority of the remaining crashes involved pedestrians attempting to cross the road, with most being struck by a vehicle travelling from their right side (giving the driver little time to react and stop). Common crash causes are shown below.

Crash cause	Crashes
Running/walking heedless of traffic	59%
Vehicle failed to give way at a crossing	7%
Vehicle failed to give way in other situations	5%
Stepped out from behind a parked car	6%
Unsupervised child	9%
Pedestrian intoxicated	6%
Pedestrian not complying with traffic signals or school patrol	4%

Just under half of the pedestrians injured were aged 19 or less, with peak crash times coinciding with school start and finish times on weekdays.

Cyclists

Sixty percent of cyclist crashes involved crossing or turning movements, mostly at intersections. The remaining crashes were generally rear-end or overtaking types and occurred primarily in mid-block locations. The most common crash causes are listed below.

Crash cause	Crashes
Failure to give way at a driveway	10%
Failure to give way or stop in other situations	45%
Inadequate checking before giving way	43%
Riding on the footpath	9%

Over three quarters of cyclist crashes involved males, with the peak age group being 10 to 14 year olds. There was a reasonably even spread of crashes among the remaining age groups up to 50 years old. Most crashes occurred on weekdays with peak times being around 8 am and 4 pm to 6 pm.

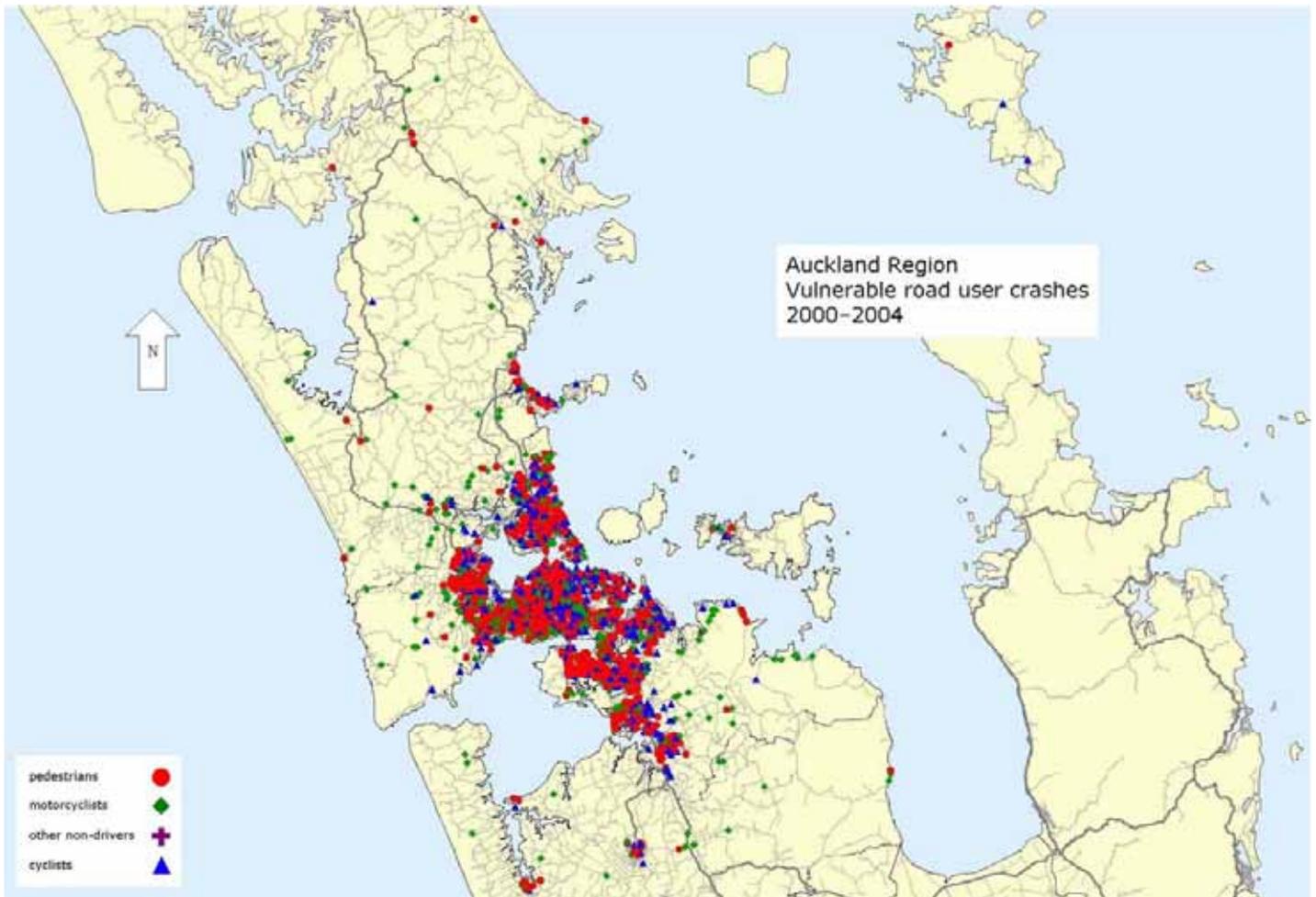
Motorcyclists

Over 40 percent of motorcycle crashes involved crossing or turning movements, with around three quarters of these being at intersections. The remaining crashes were fairly evenly divided between loss of control and rear-end movements, most of these occurring at mid-block locations. The most common crash causes are shown below.

Crash cause	Crashes
Poor observation	52%
Failure to give way or stop	42%
Excessive speed for the conditions	11%
Poor handling	13%
Road factors	17%

Road factors primarily involved a slippery surface due to rain or loose material and poor visibility.

Eighty-eight percent of motorcyclist injuries involved males, the peak groups being between 20 and 34 years old. Crashes were spread evenly throughout the week apart from a peak on Friday.



Roadside hazards

Roadside hazards were struck in 36 percent of fatal or serious crashes and 30 percent of injury crashes from 2000 to 2004. While overall numbers increased last year, fatal or serious crash numbers reduced.



In total, 4,639 roadside hazards were struck in 3,281 crashes in the last five years. These crashes resulted in 132 fatalities, 793 serious injuries and 3,474 minor injuries. The roadside hazards most frequently struck are tabled below.

Roadside hazard	Number of strikes
Post/pole	770
Parked vehicle	757
Fence	626
Tree	565
Cliff/bank	337
Ditch	236
Kerb	200
Traffic sign	175

Of these hazards, proportionally more fatal or serious injuries occurred when trees, cliffs, ditches and poles were struck. Water was the most dangerous hazard, although crash numbers were relatively low (24 incidents resulting in 11 fatal or serious injuries).

Some of the main characteristics of roadside hazard crashes are set out below.

Crash characteristic	Crashes
Loss of control of vehicle	69%
Crash at a bend	49%
Urban road	81%
Mid-block location	71%
Single vehicle	73%
Excessive speed	31%
Alcohol	31%
Road factors	17%
Poor handling	25%
Fatigue	9%

In the overview section of this report, the table shows roadside hazard crashes over-represented at night compared with all crashes in the region. The following table shows examples of individual characteristics of these crashes that occurred disproportionately at night or in the wet.

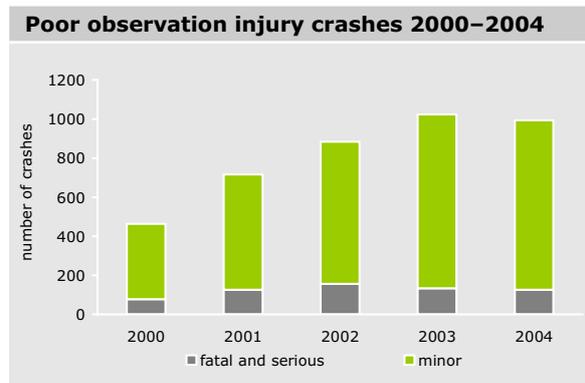
Description	Night	Wet
Alcohol	80%	33%
Excessive speed	62%	40%
Road factors	42%	73%
Poor handling	47%	41%
Fatigue	60%	26%

Road factors primarily involved a slippery surface, although the condition of the road surface itself and restricted visibility along the road were also concerns.

Male drivers were at fault in 69 percent of crashes and 82 percent of drivers were aged between 15 and 44 years. The number of crashes each day rose steadily throughout the week with the worst days being Friday, Saturday and Sunday.

Poor observation

Poor observation contributed to 29 percent of crashes resulting in fatal or serious injuries, and 37 percent of all injury crashes between 2000 and 2004. In this period 58 fatalities, 625 serious injuries and 4,666 minor injuries were attributed to crashes where poor observation was a factor. Crash numbers reduced slightly in 2004.



Most crashes involving poor observation were due to either crossing or turning movements or rear-end collisions.

Crossing or turning crashes

Crossing or turning crashes generally involved drivers failing to give way by not checking properly for other traffic at intersections or driveways. The following table shows the most common factors associated with these crashes.

Crash factor	Crashes
Checked too late when required to give way to traffic from another direction	75%
Failure to give way to non-turning traffic when turning	39%
Failure to give way at Give Way sign	23%
Failure to give way at Stop sign	13%
Failure to give way at driveway	9%

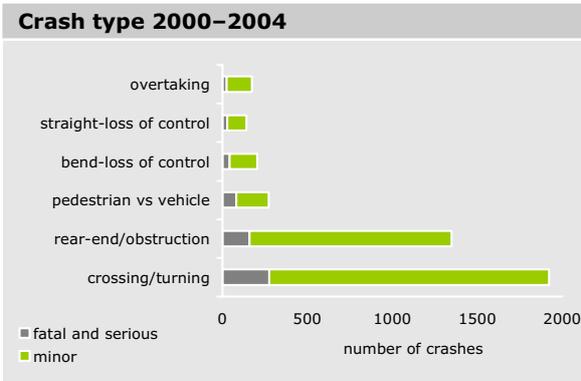
A disproportionate number of cyclists and motorcyclists were involved in these crashes, possibly due to them being difficult to see in busy traffic. Female drivers were at fault in half of these crashes, the peak age group being 15 to 24 year olds. Peak times for crashes were from 7 am to 9 am, midday and from 3 pm to 6 pm. Crash numbers generally increased throughout the week from Monday to Friday, with the lowest numbers on weekends.

Rear-end crashes

Rear-end crashes typically involved drivers not responding appropriately to situations around them in the traffic stream. The most common factors are shown below.

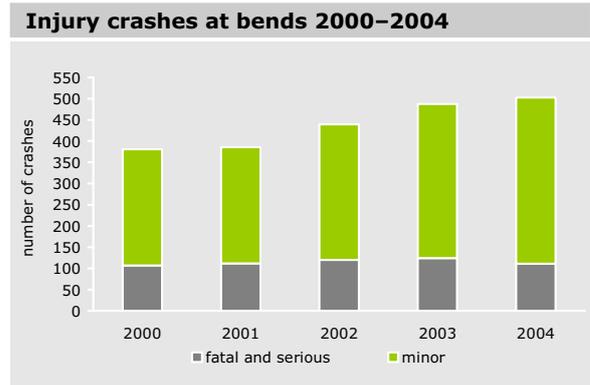
Crash factor	Crashes
Failure to notice car slowing	38%
Didn't check behind when changing lanes	20%
Alcohol	8%
Attention diverted – driver dazzled by sun/lights	6%
Attention diverted by other traffic	5%
Didn't check behind when reversing	5%

Female drivers were at fault in 44 percent of rear-end crashes. Young drivers in the 15 to 24 year age group were over-represented. Peak crash times were around 8 am and 3 pm to 6 pm. The number of crashes generally increased throughout the working week, with the highest numbers on Friday and lower numbers during the weekend.



Crashes at bends

Between 2000 and 2004, 27 percent of crashes resulting in fatal or serious injury and 20 percent of all injury crashes occurred at bends. These crashes resulted in 97 fatalities, 640 serious injuries and 2,471 minor injuries. Although total injury crashes increased in 2004, the number of fatal or serious crashes reduced.



Most crashes at bends involved a driver losing control of their vehicle. The following lists the main characteristics.

Crash factor	Crashes
Single vehicle	68%
Head-on collision	25%
Roadside hazard struck	71%
Alcohol	30%
Excessive speed	45%
Road factors	29%
Poor handling	34%
Urban road	70%

Crash numbers at bends were higher at night (48 percent) and on wet roads (42 percent) compared with the regional average. Some of the individual characteristics of these crashes were also over-represented.

Description	Night	Wet
Head-on 	35%	64%
Alcohol	78%	34%
Excessive speed	55%	46%
Road factors	36%	74%

Road factors generally involved a slippery road surface, although the condition of the road surface itself and restricted visibility along the road also featured.

At-fault drivers were young males in almost three quarters of these crashes and almost half were aged between 15 and 24 years. Crash numbers generally rose throughout the week from Monday to Saturday, with a slight drop on Sunday. The distribution of crashes throughout the day is shown below.

Crashes at bends by hour 2000–2004



Road environment

The Land Transport New Zealand crash reduction monitoring database shows that works implemented as a result of crash reduction studies have reduced crashes at the study sites by 31 percent in the Auckland Region (43 percent at state highway sites and 25 percent at local road sites).

Recommendations from recent studies should be implemented as soon as possible. Analysis of the crashes at all completed sites should be undertaken regularly to ensure that safety has been improved and sites re-examined if no improvement has occurred. Further crash reduction studies should be undertaken to continue the reduction of crashes.

Where to get more information

For more specific information relating to road crashes in the Auckland Region, please refer to the 2000 to 2004 road safety data report, the Land Transport New Zealand crash analysis system or contact the office listed opposite at the bottom of the page.

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