

road safety issues

July 2002

The Land Transport Safety Authority (LTSA) has prepared this Road Safety Issues Report. It is based on reported crash data and trends for the 1997–2001 period. The intent of the report is to highlight the key road safety issues and to identify possible ways to reduce the number of road deaths and injuries in the Auckland region.

Overall crash numbers in the Auckland region in 2001 were slightly up on those in 2000. Injury crash numbers have, however, been fairly static over the last four years. Non-injury crash numbers on the other hand have increased over the same four-year period. The spread of crash numbers across local authority boundaries within the Auckland region is shown in the table below:

	Local authority roads	State highways
Auckland	30%	7%
Manukau City	18%	3%
Waitakere City	12%	2%
North Shore City	10%	2%
Rodney district	4%	4%
Papakura district	3%	1%
Franklin district	3%	1%
Total	80%	20%

Major road safety issues:

Auckland region

Loss of control

Intersections

Vulnerable road users

Speed

Nationally

Speed

Alcohol

Failure to give way

Restraints



2001 road toll for Auckland region

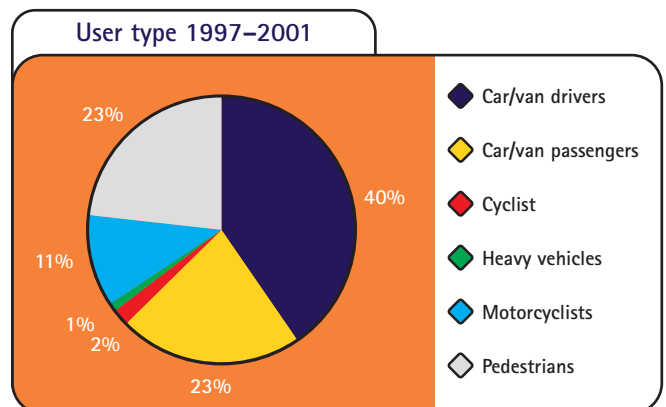


Deaths	65
Serious casualties	528
Minor casualties	2,689

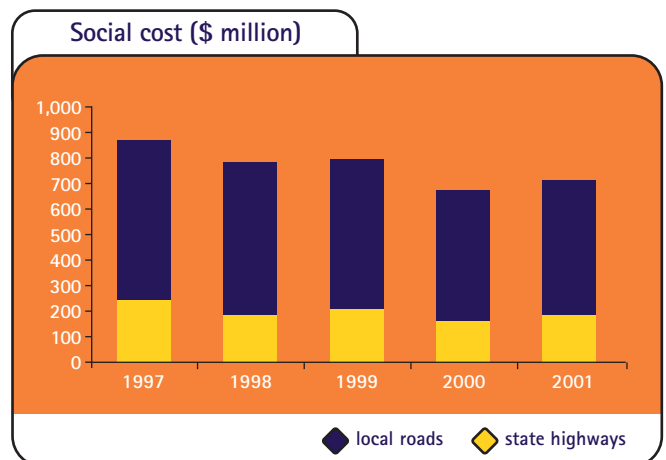


Fatal crashes	62
Serious injury crashes	432
Minor injury crashes	1,944
Non-injury crashes	11,233

Road deaths 1997–2001



Estimated social cost of crashes*



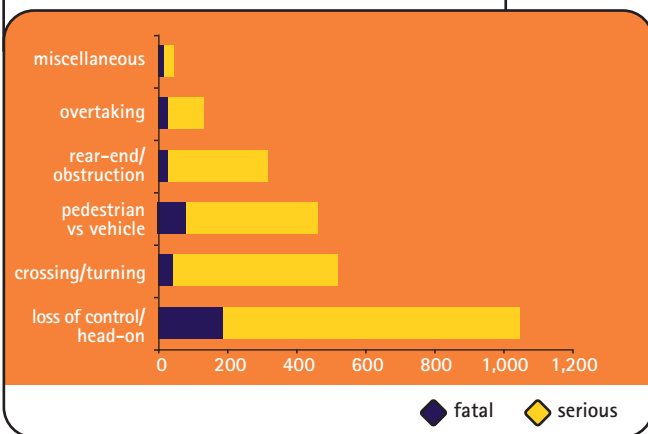
* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are expressed at June 2001 prices.



Loss of control

Analysis of fatal and serious injury crashes in the Auckland region clearly shows that loss of control and head-on crashes contributed significantly to the regional road toll. Almost half of the fatal crashes in the region were loss of control and head-on crashes.

Fatal and serious crashes 1997–2001



When considering all reported injury crashes in the region between 1997 and 2001 there were 3,957 loss of control and head-on crashes. The majority of these occurred in the urban areas on bends as can be seen in the following table:

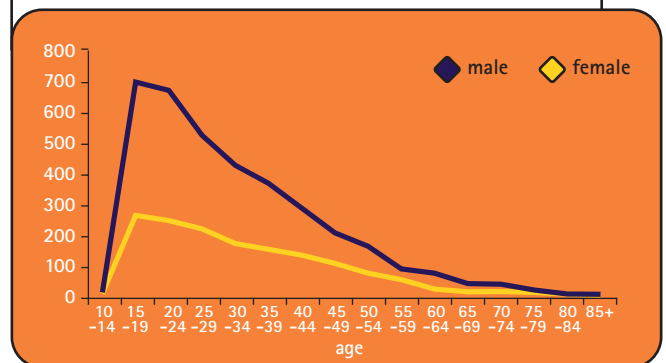
	Urban road	Open road
Bend	1,469	1,038
Straight	908	536

These crashes resulted in 206 deaths, 1,175 serious injuries and 4,485 minor injuries. Almost three quarters of these occurred on local roads. There was a small reduction in the annual numbers on both local and state highway roads, from 879 in 1997 to 776 in 2001.

The majority of these crashes involved loss of control, with the single most common crash type being loss of control while turning right (26 percent). Loss of control while turning left was the second most common (19 percent), followed by running off a straight road to the left (16 percent). Over two thirds of these crashes were single vehicle crashes.

There is clear evidence that young male drivers were well over-represented in these crashes. A quarter of all drivers were males aged 15 to 24 years.

Loss of control and head-on crashes 1997–2001



Speed and alcohol were the two most commonly reported contributing crash factors. Poor handling skills were the next most common crash factor.

Crash factors

Speed, not alcohol	21%
Alcohol, not speed	21%
Alcohol and speed	10%
Other	48%

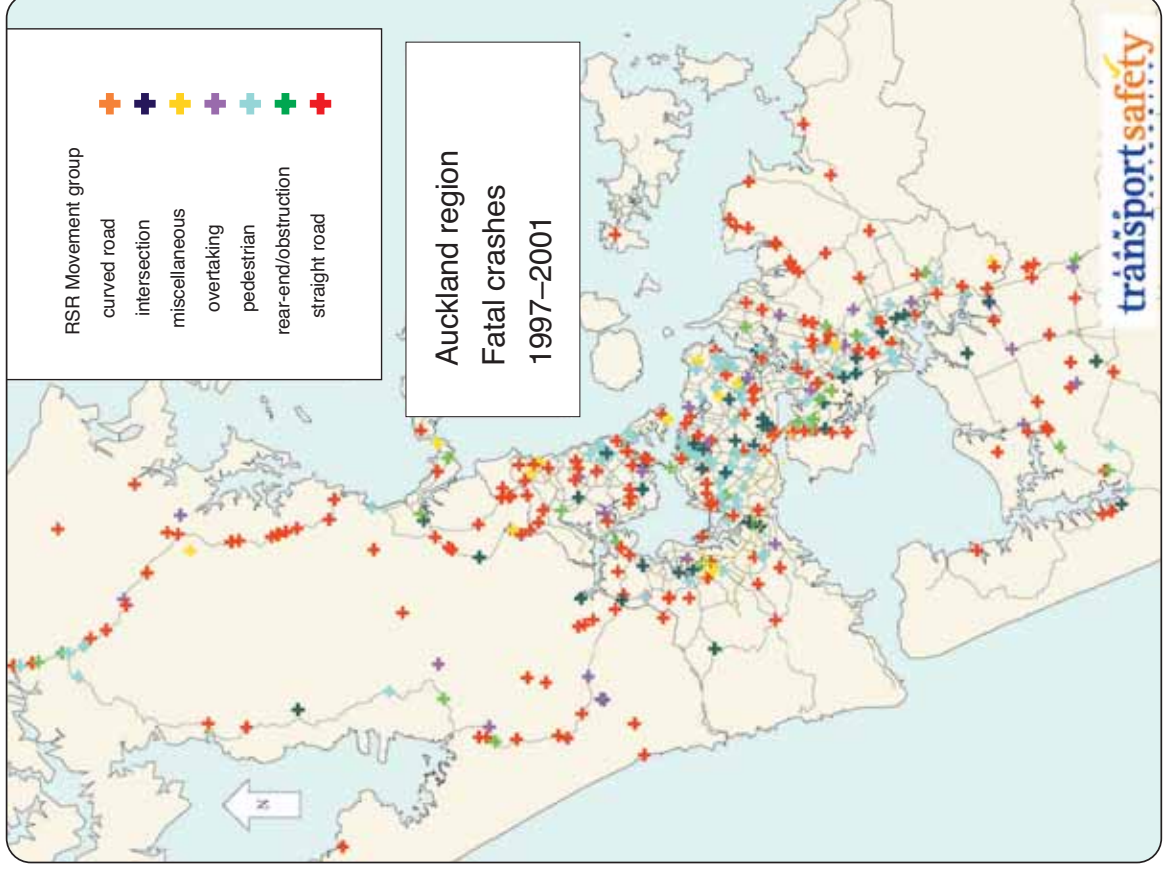
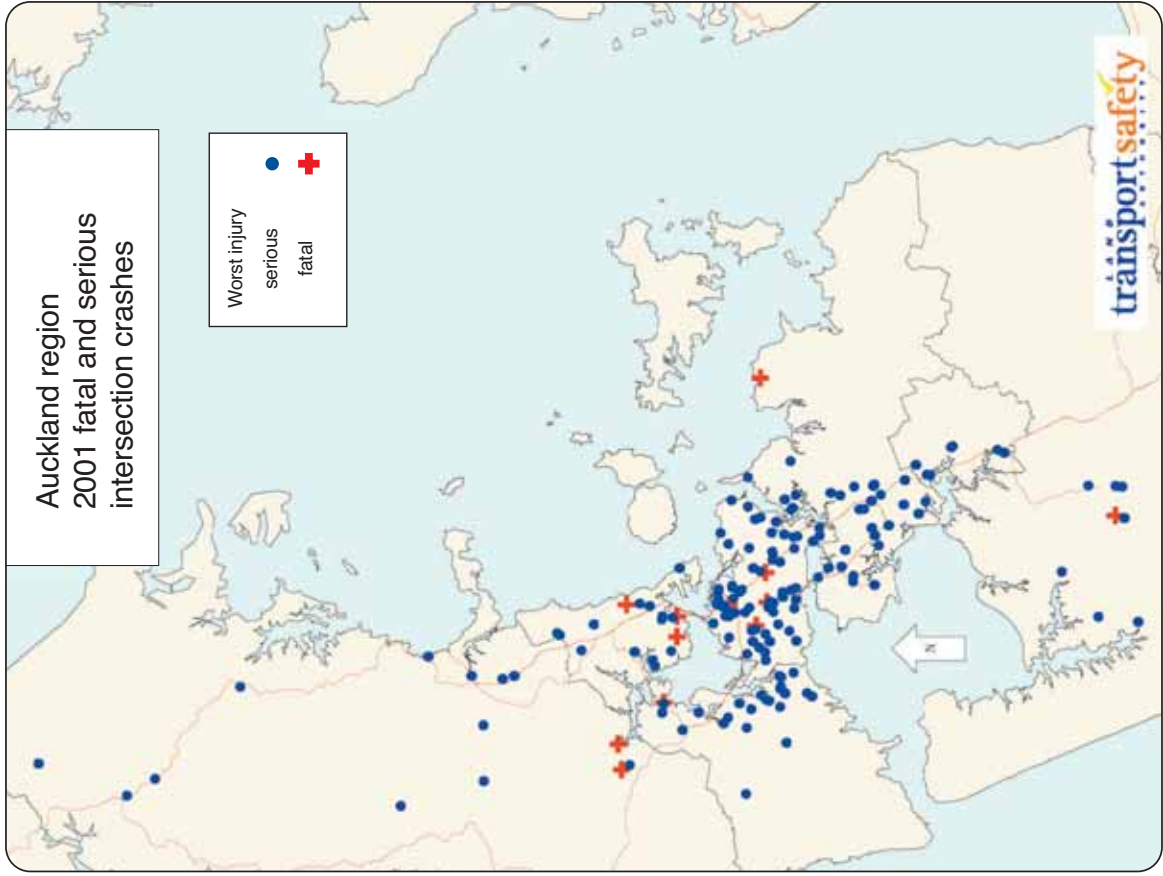
Environmental conditions also contributed to these crashes. A high proportion of crashes occurred at night (48 percent). A considerable proportion also occurred on wet roads (38 percent).

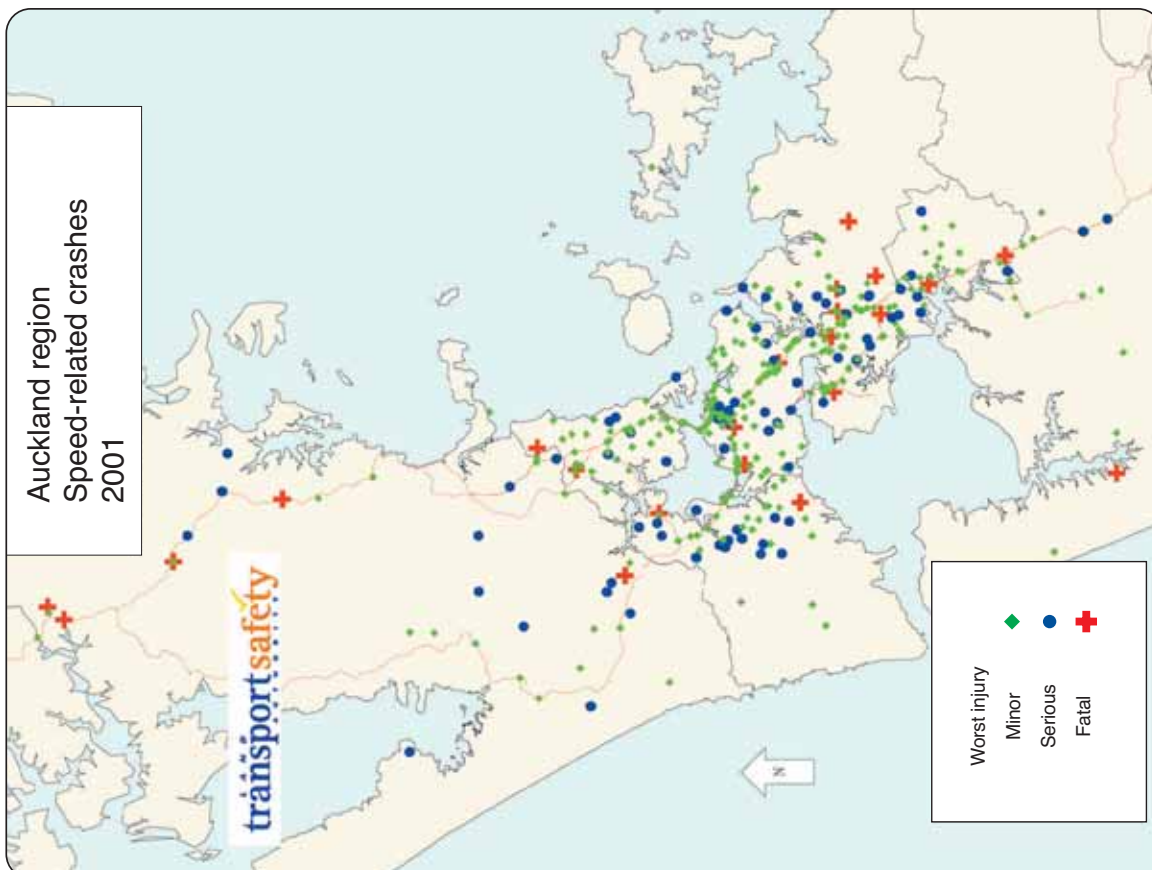
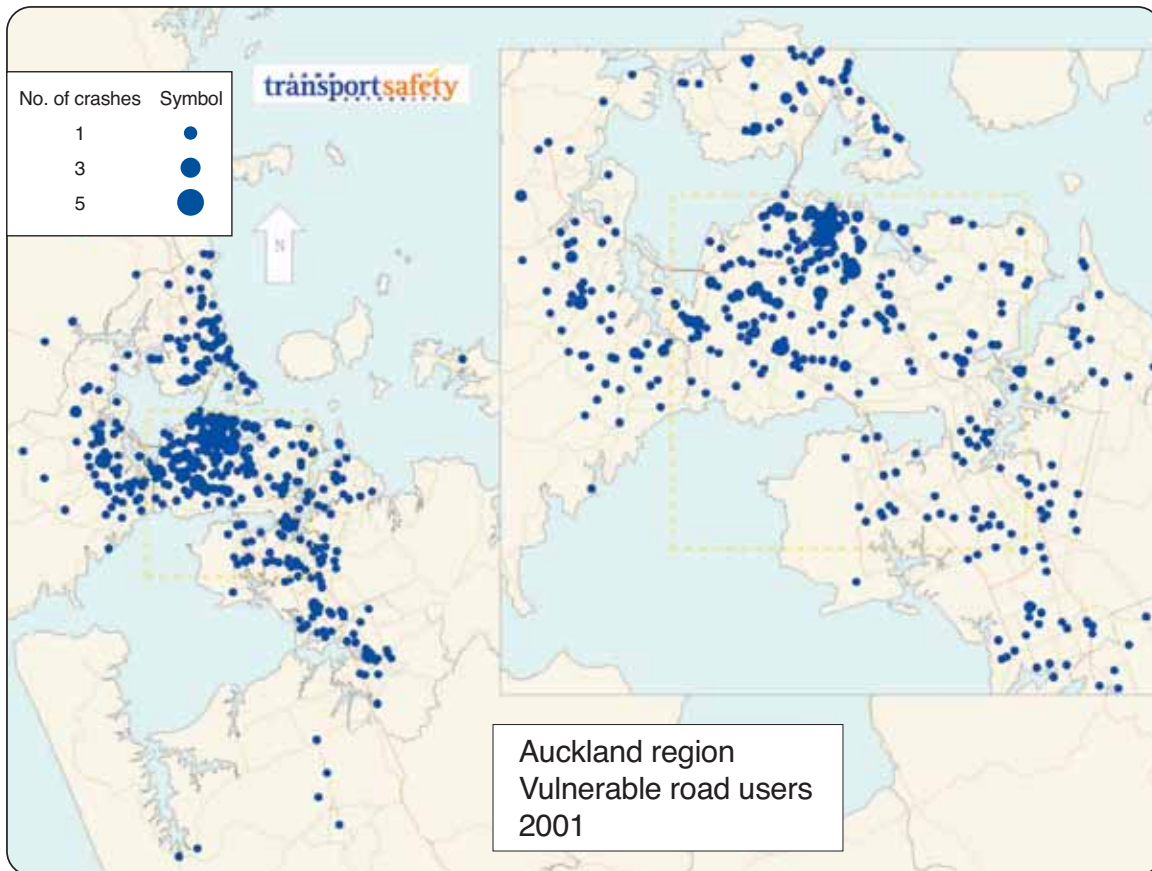
The majority of loss of control crashes resulted in a vehicle leaving the road and colliding with a roadside object. Many of these objects can be very unyielding and cause unnecessary injuries. The most common objects struck were:

- posts or poles
- fences
- trees
- upright cliffs or banks.

➔ Recommended actions

- Encourage road controlling authorities to:
 - adopt safety audit as a tool for identifying and improving deficiencies on existing routes
 - eliminate or protect service poles and other hazards within the road environment
 - control the placement of trees in hazardous locations
 - continue to support the crash reduction study programme.
- Continue to support enforcement campaigns targeted at driving too fast for the conditions, and alcohol.
- Continue to encourage community projects aimed at reducing speed, driving to the conditions and improving drivers' cornering skills, especially young male drivers.





Intersections

There were 5,181 reported crashes at intersections in the Auckland region from 1997 to 2001. Last year's figure of 1,015 – slightly up on the previous year's 1,009 – resulted in 12 fatalities, 195 seriously injured casualties and 1,159 people receiving minor injuries.

They occurred predominately on local authority roads in urban areas (85 percent of crashes).

The most common movement types were:



followed by right-angle collisions (12 percent), cornering (12 percent), pedestrians (10 percent) and rear-end crashes (eight percent).

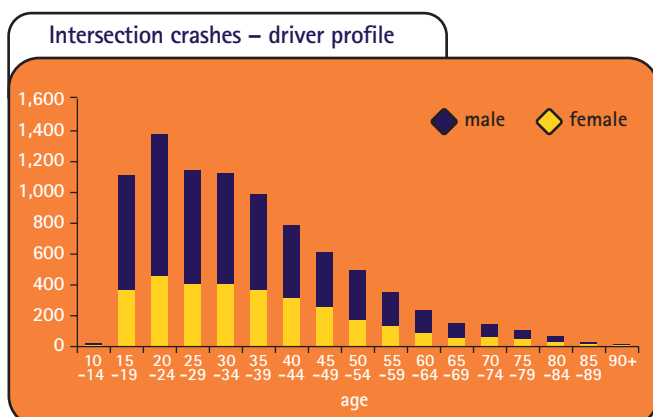
Proportionately more crashes occurred during weekday evening peaks than at other times.

Failure to give way or stop was the main driver factor, with 'inadequate check' the main explanation given (30 percent of crashes).

Some other factors were alcohol (13 percent), speed (10 percent), pedestrians (seven percent), poor handling (six percent), incorrect lane or position (six percent) and poor judgement (five percent).

The main environmental cause of intersection crashes was 'road slippery' (197) and rain (150). One hundred and twenty four crashes occurred while someone was entering or leaving a premise. Limited visibility was the next highest (115), with parked vehicles and crests the largest single contributors. 'Dazzling sun' was a factor in 86 crashes, heavy rain in 42, inadequate street lighting in 20 and fog or mist in 19.

Just over twice as many male drivers were involved in intersection crashes as female. Males tend to dominate the statistics even further with crash types associated with speed and illegal activities, as well as fatigue. The gap between the sexes narrowed in crashes involving poor observation or judgement and use of vehicle controls, with proportionately more women involved in these types of crashes.



Recommended actions

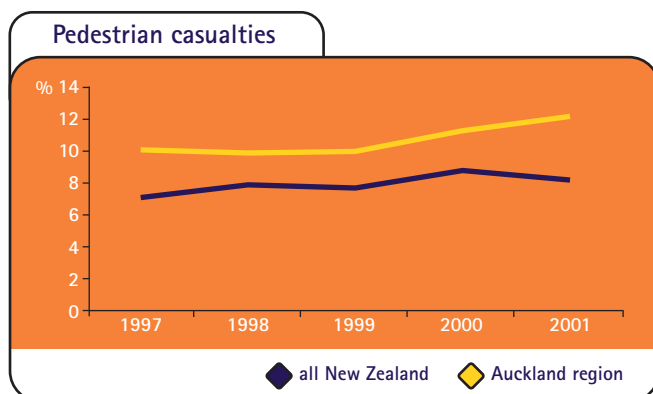
- Support education programmes focusing on the right-of-way rules.
- Encourage education programmes to address driving at an appropriate speed, keeping a safe distance, signalling intentions, choosing a safe gap and checking for pedestrians and cyclists.
- Encourage local road controlling authorities to:
 - use the monthly Code Red tips in news media (community newspaper, radio and advertising boards)
 - carry out improvements in visibility at problem intersections
 - ensure the priority of traffic at intersections fits in with the overall road network plan
 - research why drivers are failing to notice and give way to other vehicles.
- Consider police enforcement of speeds at a lower margin of tolerance in wet conditions than in dry conditions.
- Support the presence of visible police patrols at identified problem spots.

Vulnerable road users

Vulnerable road users, particularly pedestrians, continued to be the second most likely group to suffer a fatal injury while using roads in the Auckland region. Eighteen of the 65 fatalities in the region in 2001 involved the death of a road user on foot (eight in Auckland city).

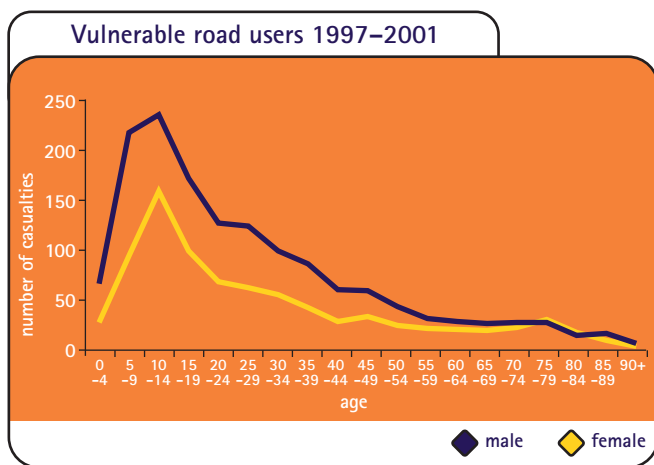
As a percentage of all casualties, those resulting from a crash between a pedestrian and a vehicle showed an upward trend in the Auckland region (from 10 percent of all casualties in 1997 to 12 percent in 2001).

This may not be surprising, as the metropolitan nature of the region means that people and communities are operating and interacting within a bustling road-based transport network. The proportion of pedestrian casualties has continued to be over-represented in the Auckland region compared with national figures.



Interestingly, the other vulnerable group – cyclists – at around six percent of all casualties, are under-represented compared to the rest of the country. This may be explained by a lower number of cyclists per capita in relation to other metropolitan areas and also that cycle-only crashes are not reported. It is, however, discouraging to note that the cycle helmet wearing rate in the region has dropped, from a high of 91 percent in 2000 to 79 percent in a 2002 survey.

The age distribution of vulnerable users injured in the Auckland region clearly shows that young children are at most risk. Children aged five to 14 represent 30 percent of all vulnerable road user casualties, especially young males.



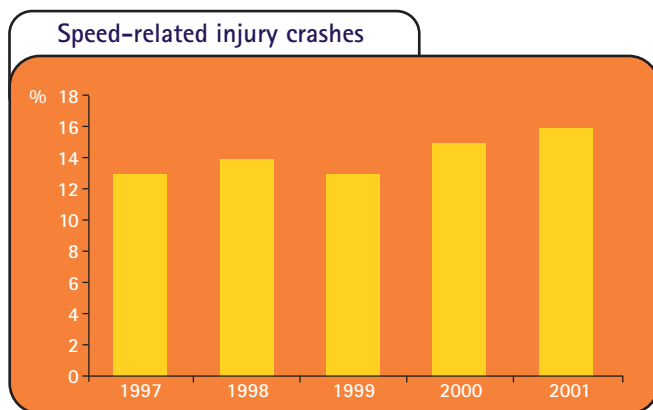
The most common times these crashes occurred were 3pm to 4pm and 8am to 9am, clearly during the trip to and from school. Just six percent of these crashes occurred at a marked pedestrian crossing and only 0.4 percent of the injuries occurred at a school patrol. The majority of incidents occurred in urban areas at midblock (58 percent). Of these, almost 40 percent involved a pedestrian stepping out from the left-hand side of the road in front of a vehicle.

Recommended actions

- Continue to support and encourage pedestrian and cyclist initiatives.
- Promote town-planning strategies that prevent communities being severed by major arterial roads.
- Continue to develop and support programmes aimed at improving pedestrian discipline.
- Encourage community projects aimed at improving cycle helmet wearing rates.
- Support enforcement initiatives aimed at targeting urban speed, especially during the beginning and end of the school day.
- Continue to support the pedestrian power project.

80 Speed

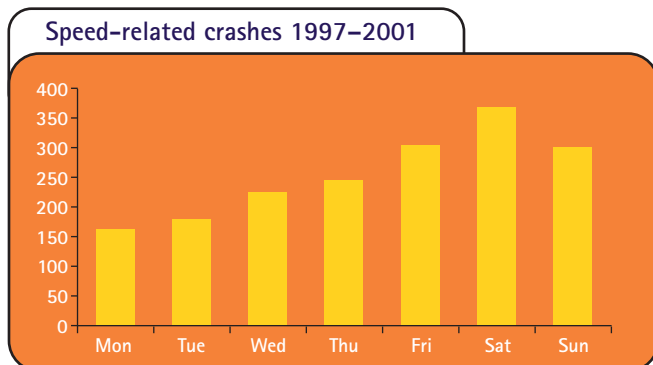
The proportion of crashes involving going too fast for the conditions in the region appears similar to that for all New Zealand and similar districts. What is disturbing, however, is a clear upward trend in the last few years. The largest increase has been in the rural areas, where speed was a factor in almost a quarter of all crashes in 2001.



The chances of being fatally or seriously injured is much greater in speed-related crashes:

Auckland region		
Injury	Speed-related	All crashes
Fatal	6.50%	3%
Serious	21%	17%

In fact, speed was identified as a contributing factor in 30 percent of all fatal crashes in the region. In the 1,774 speed-related injury crashes recorded in the region between 1997 and 2001, 125 people were killed, 518 received serious injuries and 2,115 received minor injuries. At least 10 crashes involved multiple fatalities. The worst crash resulted in two deaths, three serious injuries and one minor injury. There was a concentration of crashes during the Friday, Saturday and Sunday period, making up 55 percent of the weekly total.



Loss of control and head-on crashes were the most common speed-related type of crash, representing 68 percent of the crashes. Over 80 percent of these occurred on curves. Over half the 2,833 vehicles involved in these crashes received extensive damage, 267 rolled over and 18 caught fire.

High proportions of these crashes occurred at night and in wet conditions:

	Dark	Day	
Wet	19%	21%	40%
Dry	30%	29%	
	49%		

The majority of drivers involved in these crashes were male (71 percent), with those in the 15 to 19 year-old age group featuring prominently. The peak female driver age was 20 to 24 years old.

In addition to the crash factor – speed too fast for the conditions – there were three other commonly reported factors in these crashes: alcohol, poor handling and inadequate checking.

Recommended actions

- Support enforcement campaigns aimed at speed control, especially during:
 - dark and wet conditions
 - the Friday to Sunday period.
- Continue to educate the public to:
 - be more aware of the risks of speed
 - advocate for stricter enforcement of limits
 - identify appropriate speeds for conditions
 - improve attitudes to fast driving.

New Zealand Road Safety Programme

Reducing trauma involves a multi-pronged approach, which includes education, engineering and enforcement. The New Zealand Road Safety Programme (NZRSP) provides funding to educate road users to change their behaviour through projects delivered by road safety co-ordinators and community groups. The programme also funds New Zealand Police for their targeted enforcement activities and support of community road safety projects. Transfund New Zealand provides funding to local authorities for roading projects through its National Roading Programme.

Community projects

Community funding of road safety projects aims to encourage local involvement and ownership of issues, and target local resources and effort to local risks. Central to community programmes is the need to develop and motivate local partnerships in road safety to help reduce the number of deaths and injuries in Auckland region.

Funding for regional community projects in the Auckland region from the NZRSP for the 2002/2003 year includes:

Project	Funding
Road safety co-ordinator	\$38,000
Speed	\$53,000
Alcohol	\$22,500
Pedestrian safety	\$20,000
Committee-run community projects	\$20,000
Kia Tika Te Huarahi	\$28,000
Health Pacifica car restraints promotion project	\$5,000
Mai Roadshow R.I.S.K.Y on the Road (reckless in speed kills you on the road)	\$49,550
Te Oranga Huarahi Class 1 Learner and restricted	\$20,000
Pasifika Festival and Polynesian Festival Networking and checkpoints for safety belts and child restraints	\$5,000
Driver licence education programmes for the Pacific nations	\$10,000
Pacific nations pedestrian safety programme	\$10,000
Pacific nations forum network	\$6,000
Pacific nations church-based road safety programmes	\$10,000
Road safety flip chart development	\$10,000
Pasifika road safety radio campaign – Kidsafe week	\$20,000

Police enforcement

There will be 3,660 police hours spent regionally on city and district-based community projects, a further 501,020 police hours will be delivered by police in Auckland region as follows:

Project	Hours
Strategic – alcohol/drugs, restraint, speed and visible road safety enforcement	342,890
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	129,570
School road safety education	17,430
Police community services	11,130

Road environment

The LTSA's Crash Reduction Monitoring database shows that work implemented as a result of crash reduction studies has reduced crashes at the study sites by 27 percent in the Auckland region (43 percent at state highway sites and 21 percent at local road sites).

References

Auckland Region Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in the Auckland region, please refer to the 1997 to 2001 Road Safety Report or the LTSA Accident Investigation System, or contact the people or organisations listed below:

Land Transport Safety Authority

Regional Manager
Peter Kippenberger

Regional Education Advisor
Rae-Anne Kurucz

Regional Engineer
Brian McSwigan

See LTSA staff contact details at bottom of page

New Zealand Police

Traffic Safety Managers
North Shore/Waitakere/
Dick Trimble

Phone 09 441 3700

Auckland City

George Fraser
Phone 09 375 4650

Counties/Manukau

Sandy Newsome
Phone 09 259 0200

Auckland Motorways

David Walker
Phone 09 481 0300

Transit New Zealand

Regional Manager
Wayne McDonald
CPO Box 1459, Auckland
Phone 09 368 2000

Traffic Safety Engineer
Brian Rainford
Phone 09 368 2013

Road Safety Co-ordinator

Andrew Bell
Auckland Regional Council
Private Bag 92 012, Auckland
Phone 09 373 9967

Auckland Regional Office

Level 6, 1 Queen Street

Private Bag 106 602, Auckland

Phone 09 377 3400, Fax 09 357 1615

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