KAIPARA DISTRICT

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 Kaipara district.

Each year about 80 people are killed or injured in crashes in the Kaipara district. This is a significant social cost to the district and to the country as a whole. The social cost of crashes in the Kaipara district in 2001 has been calculated at $26.73 million or $2.2 million each month.

In 2001, the number of people killed or injured on Kaipara district roads reduced to 65. Four people died, all of them in crashes on the open road. This was less than in previous years, but more were seriously injured in crashes (29 people) than in previous years. In Kaipara, there is a higher than average proportion of fatal and severe crashes.

Between 1997 and 2001, most injury crashes on the open road involved a driver losing control on a curve. Nearly 90 percent of the fatal crashes in Kaipara were loss of control crashes and nearly 80 percent of all the injury crashes occurred on the open road. On urban roads, losing control on curves was also the most common crash type, followed by intersection crashes and pedestrian crashes.

Injury crash numbers reached their peak in spring and autumn. The more vulnerable road users were at risk in Kaipara. Car passengers, children, older people and motorcyclists (in urban areas) were involved in a higher proportion of crashes than in other parts of the country.

Major road safety issues:

Kaipara district

- Loss of control on curves
- Alcohol
- Road factors
- Passengers

Nationally

- Speed
- Alcohol
- Failure to give way
- Restraints

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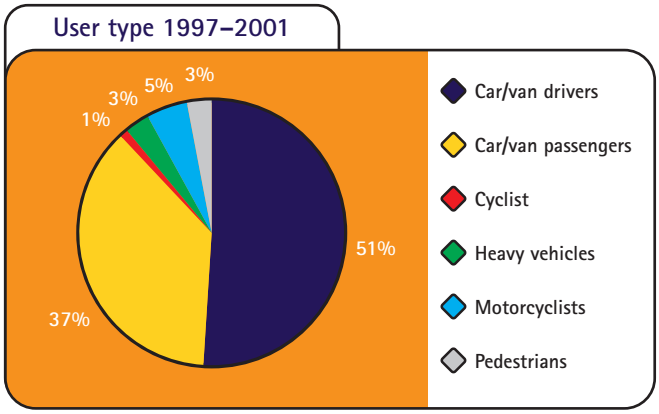
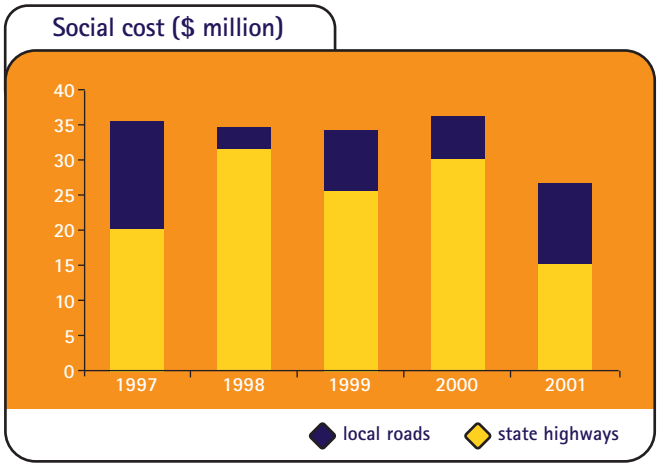
2001 road toll for Kaipara district

Deaths	4
Serious casualties	29
Minor casualties	32
Fatal crashes	3
Serious injury crashes	17
Minor injury crashes	19
Non-injury crashes	89

Road casualties 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.

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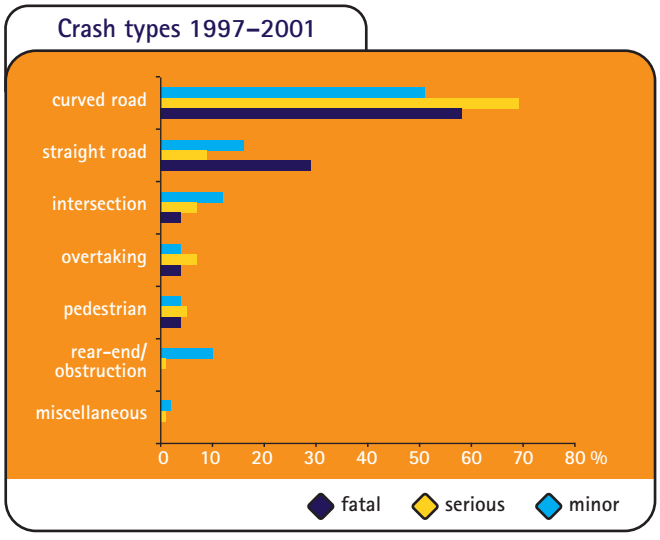
Loss of control on curves

Most of the injury crashes (73 percent) in the Kaipara district were loss of control crashes and the majority of these (79 percent) occurred on a curve. Over half of the crashes on curves in the Kaipara district were serious or fatal crashes.

Loss of control on curves was the most common crash type on the open roads and also on urban roads. Other authorities usually reported intersection crashes as the most common type on their urban roads.

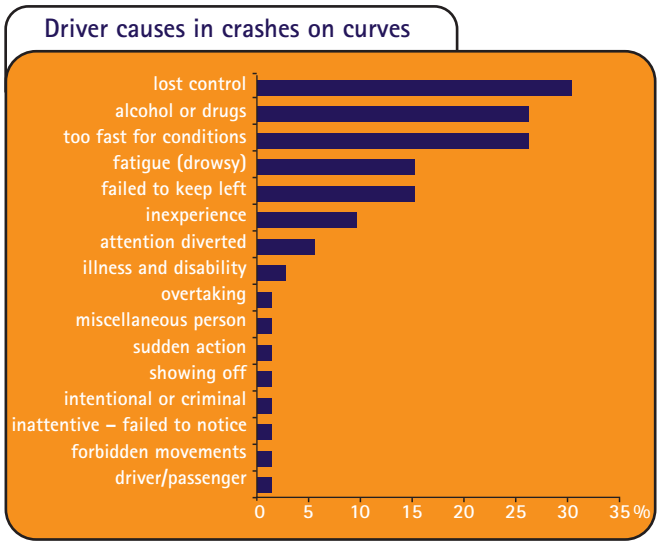
Crashes on curves accounted for five or six of the fatal crashes each year and also 30 to 40 other injury crashes. More of these crashes were on the state highway network than on the local authority roads and most occurred on the open road. In the 143 injury crashes on curves between 1997 and 2001, 127 roadside objects were hit. Hitting a roadside object often increased the severity of the injuries suffered by the vehicle occupants. The object struck was usually a ditch and these were hit in over 20 percent of all open road crashes in the Kaipara district. Cliffs, banks, fences and trees were also often hit.



Drivers lose control on curves due to a variety of factors, but common factors in Kaipara were speed and alcohol. On the open road, failure to keep left was a common cause and drivers were often affected by tiredness. Problems with the road surface and slippery conditions were also regularly mentioned as contributing factors.

The driver involved was most commonly male. Driver age varied across a wide range, between 15 and 40 years.

Most loss of control crashes occurred in the afternoon or early evening. They occurred throughout the year but with fewer occurring in the winter months (June to August).



Many of the crashes were on the state highways near Brynderwyn (SH1), Maungaturoto (SH12) and Topuni-Kaiwaka (SH1), as well as Maropiu-Dargaville (SH12) and Hoanga area (SH14).

The three main movement types associated with these crashes were:

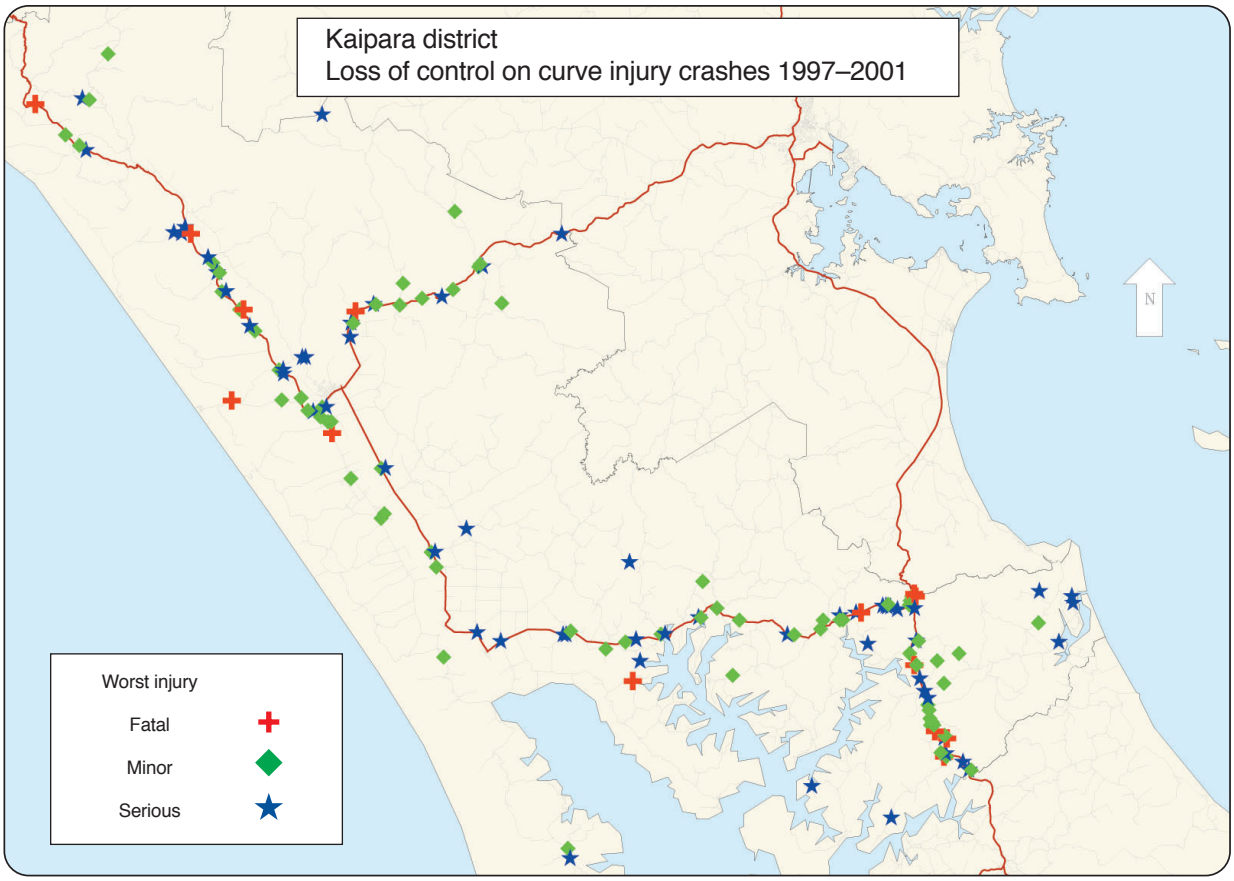

39%

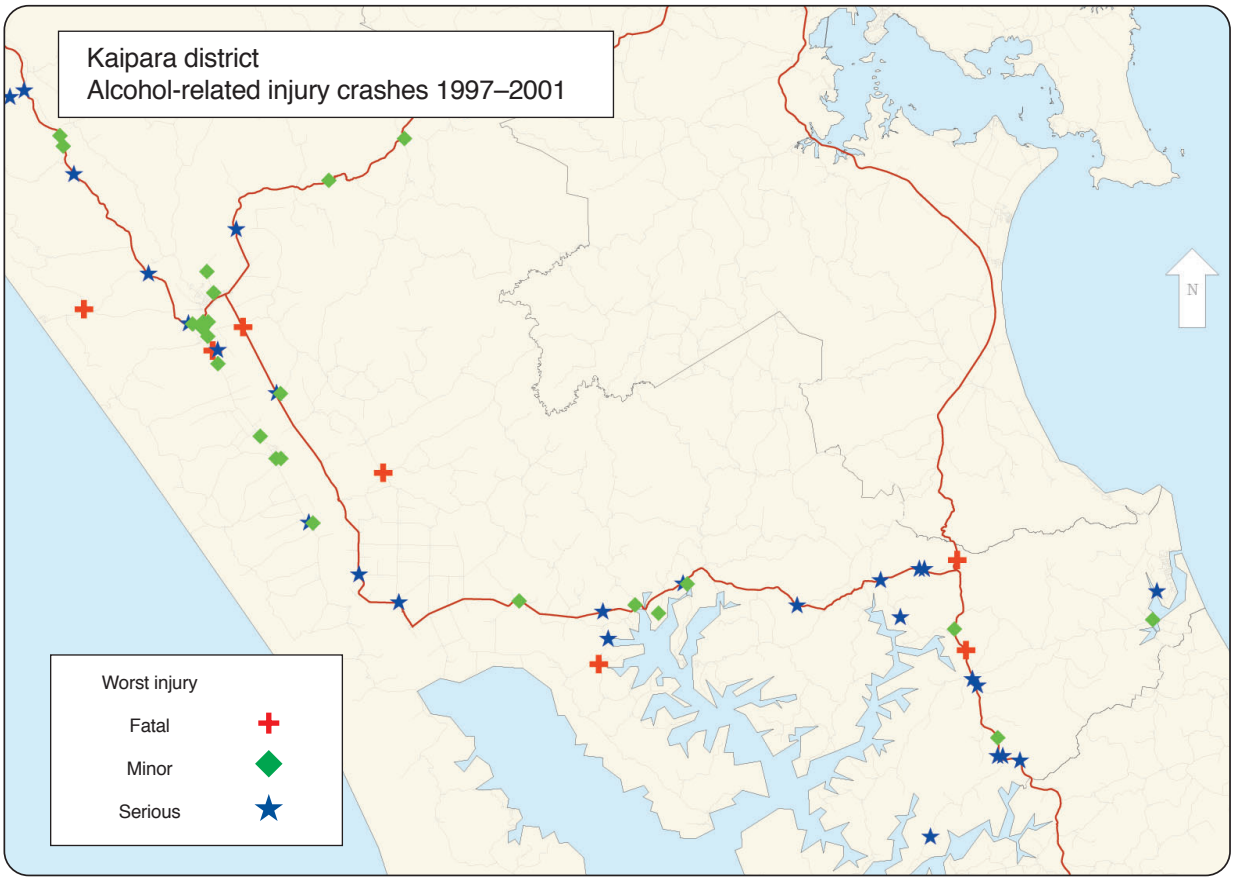

38%


12%

Recommended actions

- Conduct safety audits targeting curve delineation, clear zones, sealed shoulder width, drainage, surface friction and road condition.
- Identify substandard curves and set up a programme of safety improvement projects.
- Conduct crash reduction studies on high-risk spots and routes.
- Ensure the enforcement programme focuses on speed and alcohol while targeting high-risk locations.
- Conduct education campaigns targeted primarily at young male drivers, highlighting the need for appropriate speed, particularly on curves.


Kaipara district
Loss of control on curve injury crashes 1997–2001
N
Worst injury
Fatal
Minor
Serious

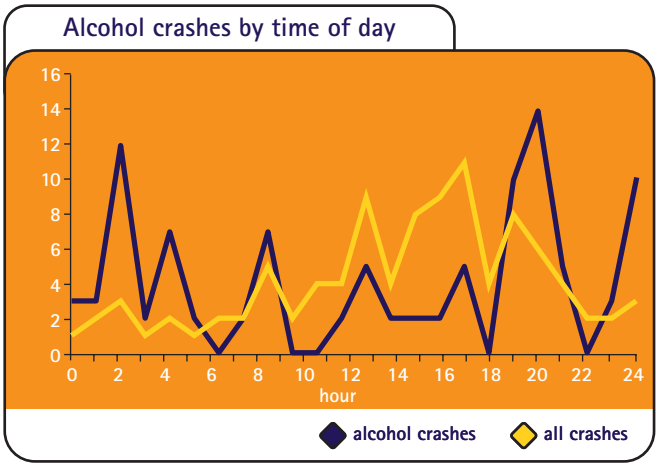

Kaipara district
Alcohol-related injury crashes 1997–2001
N
Worst injury
Fatal
Minor
Serious

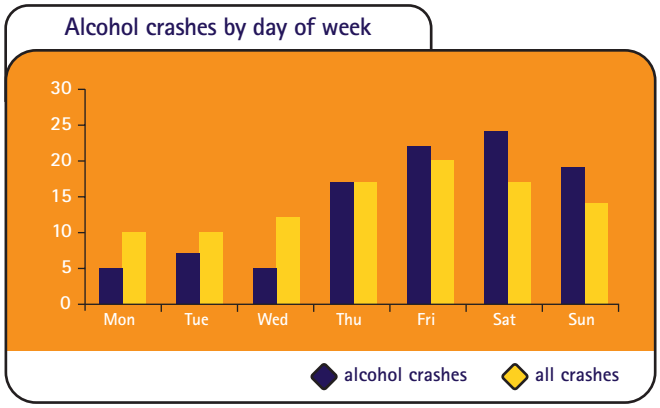
Alcohol

The trend for alcohol to be a factor in crashes was higher in the Kaipara district than in other parts of the country. Alcohol made up nearly 24 percent of the contributing factors in open road crashes in Kaipara compared with a national figure of less than 17 percent.

In the five years from 1997 to 2001, alcohol was a factor in 58 crashes in the Kaipara district with 78 percent of these on the open road. Alcohol was a common factor in crashes on urban roads and even more in open road crashes. The number of alcohol-related crashes, however, has dropped markedly since 1995, especially on urban roads.

Crashes involving alcohol occurred mostly on the weekends and at night. They were spread throughout the year but there were more in the latter half of the year. Many alcohol-related crashes involved hitting a roadside object, which can increase the severity of the injuries to drivers and passengers.





Drivers were from a wide age range, usually between 15 and 34 years, and most (86 percent) of the drivers involved in alcohol-related crashes werse male.

The three main movement types associated with these alcohol-related crashes were:


31%


26%


12%

Many of the serious and fatal crashes involving alcohol occurred on Pouto Road, Maropiu-Dargaville (SH12), Maungaturoto (SH12) and Topuni-Brynderwyn (SH1).

Recommended actions

- Continue alcohol enforcement campaigns with particular emphasis at night.
- Use targeted enforcement aimed at high-risk areas and times.
- Continue education and publicity campaigns targeting male drivers.
- Conduct studies of sections of road with high alcohol crash histories to identify improvements in delineation, markings, shoulder widths and clear zones.

Road factors

Road factors made up 23 percent of the contributing factors in open road crashes in the Kaipara district. This compares with 17 percent nationally and 22 percent for similar rural authorities.

The road factors usually mentioned in the crashes were such things as loose gravel on unsealed roads or roadworks sites, or a slippery surface when wet. Lack of adequate fencing could result in collisions with stray farm animals.

Forty-four percent of the crashes where road factors featured were at night and 57 percent were on a wet road. Twenty-eight percent were on both a wet road and at night.

Percentage of crashes with road factors

	Dry	Wet	Total
Dark	17%	28%	44%
Light	26%	30%	56%
Total	43%	57%	100%

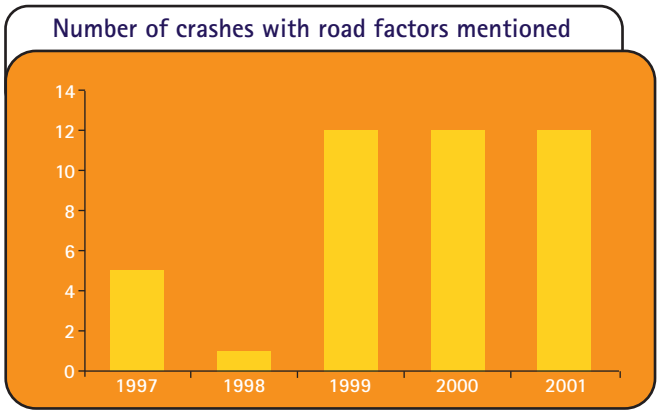
Road factors can often be related to excessive speed for the conditions. Speed-related crashes were common on wet roads with 46 percent occurring on a wet road surface compared to a general wet road percentage of 32 percent. Nearly half (46 percent) of speed-related crashes occurred at night, compared with 31 percent at night for all types of crashes in Kaipara, which confirms the need for good delineation.

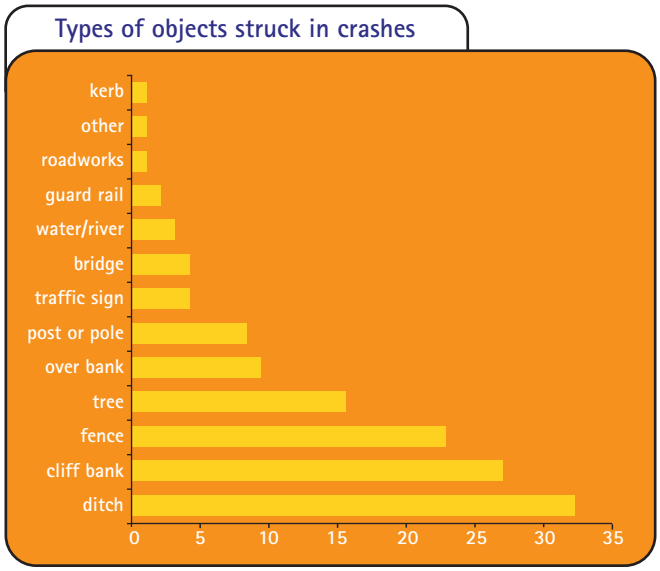
The main movement types where road factors contributed were:


28%


28%


13%



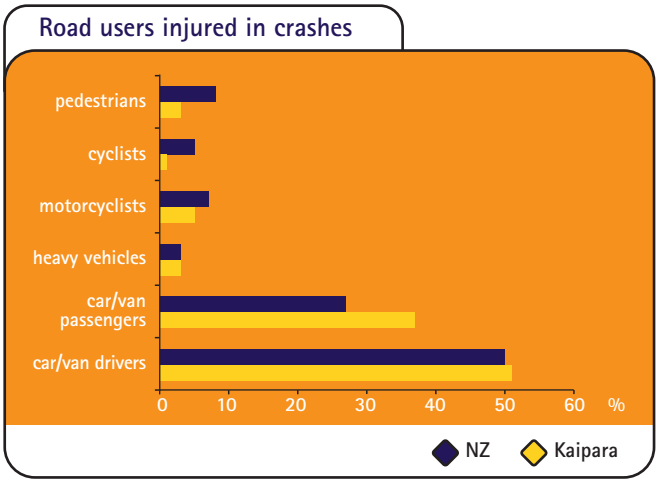


Recommended actions

- Conduct a safety audit/safety survey of roads, particularly the road surface and slipperiness.
- Conduct crash reduction studies of known black spots.
- Investigate wet road and slippery surface sites to establish if safe levels of surface friction are being maintained.
- Ensure road signs and markings are regularly checked, especially at night and on the open road.
- Improve road drainage at identified sites.
- Maintain unsealed roads to an appropriate standard.
- Raise awareness that drivers need to adjust their speed based on weather and road conditions.
- Target drivers travelling at speeds inappropriate for the conditions.

Passengers

Although passengers are rarely responsible for causing crashes, they often suffer injuries as a result of a crash. Passengers made up nearly 30 percent of the casualties in urban areas, and nearly 40 percent of the open road casualties in the Kaipara district.



In the five years 1997 to 2001, 155 vehicle passengers were injured in crashes, with 14 passengers killed, 38 seriously injured and 103 who suffered minor injuries.

Eighty-three percent of the passengers were injured in crashes on the open road and mostly on the state highways.

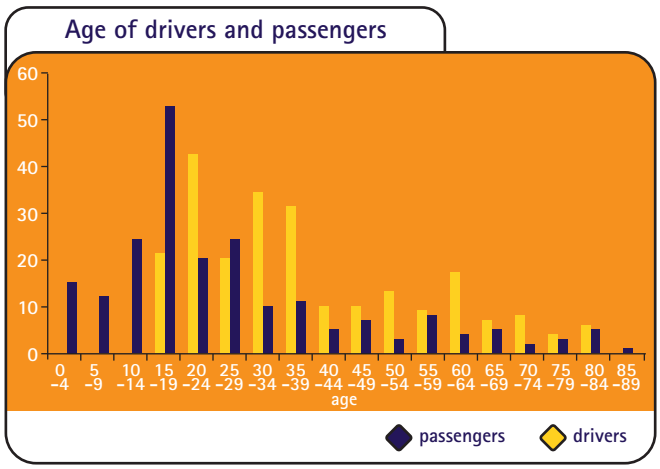
Most of the crashes involved a driver losing control on a curve. Alcohol, speed and fatigue were common factors. The main movement types in crashes where passengers were injured were:


22%


20%


10%

Twenty-two percent of the passenger casualties were in the 15 to 19 year age range but there was also a high proportion of children injured in crashes with another 22 percent under 15 years old.



Whereas the majority of driver casualties were male, the majority of injured passengers were female. Again, they were mostly in the 15 to 19 year age range. In the under 15 year age group, male passenger casualties still outnumbered females.

Crashes where passengers were injured occurred mainly during March, November and December and were more likely to happen on a Thursday, Saturday or Sunday and during the afternoon.

Recommended actions

- Conduct regular education and publicity campaigns to improve restraint wearing, especially for children and young adults.
- Develop community programmes targeting females as passengers.
- Regular ongoing enforcement of restraint wearing, targeting high-risk times and locations.
- Ensure that enforcement of other issues also covers restraint wearing.
- Enforcement of restricted and unlicensed drivers.

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 the 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 the district.

Funding for community projects across Northland from the NZRSP for the 2002/2003 year includes:

Project name	Funding	Police hours
Driver licensing	$24,000	
Local road safety support	$5,000	
Community road safety forum	$5,000	
Youth road safety initiatives	$10,000	
Community road safety initiatives	$19,500	
Child restraint campaign/safety belts compliance	$12,000	
He Oranga Poutama – Te Kohanga Reo training programme	$5,000	
Driver education programme	$5,000	
Pacific community safety campaign	$5,900	
Road safety co-ordination	$65,000	
Speed control for the conditions	$22,000	200
Rural alcohol watch (RAW)	$26,000	1,000
Restraint use programme	$36,000	300
Intersection safety	$10,000	
Driver licence training assistance	$40,000	400
Safety culture	$5,000	
Students against driving drunk (SADD)	$9,500	
Small projects community involvement	$12,300	
Sign project maintenance	$4,500	

Police enforcement

In addition to the 1,900 police hours spent regionally on community projects, a further 8,150 hours will be delivered by police in the Kaipara district as follows:

Project	Police hours
Strategic – drinking or drugged driver, restraint device, speed, visible road safety enforcement	6,010
Traffic management – crash attendance events, incidents, emergencies and disasters, traffic flow supervision	1,660
School road safety education	400
Police community services	80

In addition to these hours there is the delivery by the highway patrol, commercial vehicle investigation, enhanced alcohol CBT project and traffic camera operations.

Road environment

The LTSA's Crash Reduction Monitoring database shows that works implemented as a result of crash reduction studies have reduced crashes at the study sites by 61 percent in the Kaipara district (77 percent at state highway sites and 37 percent at local road sites).

Recommendations from recent studies should be implemented and further studies undertaken to consider mass action or local area traffic management to reduce crash problems.

References

Kaipara District Road Safety Report 1997–2001

LTSA Crash Analysis System

Where to get more information

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

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