

road safety issues

Christchurch City

Land Transport New Zealand has prepared this road safety issues report. It is based on reported crash data for the 2000–2004 period. The intent of the report is to highlight the key road safety issues within Christchurch City.

Over the past year, the number of injury crashes and casualties decreased across all crash types. Significant changes were decreases in:

- urban and rural injury crashes
- serious casualties
- car passenger casualties
- male and female casualties
- intersection crashes.

Over the period from 2000 to 2004 the following trends have shown up:

- crash and casualty numbers have been decreasing since 2002
- casualty numbers are the lowest since 1995
- numbers of pedestrian casualties have remained static.

Major road safety issues

Christchurch City

Intersections

Night-time crashes

Pedestrians

Cyclists

Nationally

Speed

Alcohol

Failure to give way

Restraints



2004 road trauma for Christchurch City



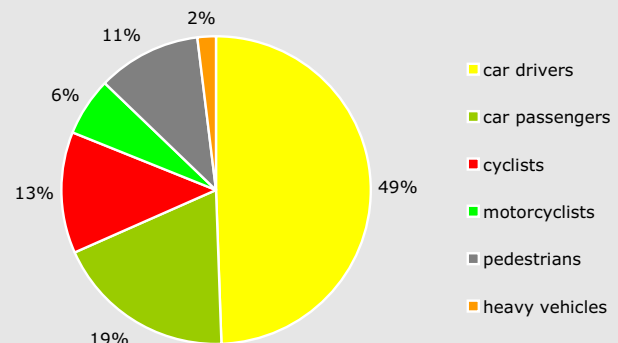
Deaths	9
Serious casualties	131
Minor casualties	723



Fatal crashes	9
Serious injury crashes	117
Minor injury crashes	565
Non-injury crashes	1,440

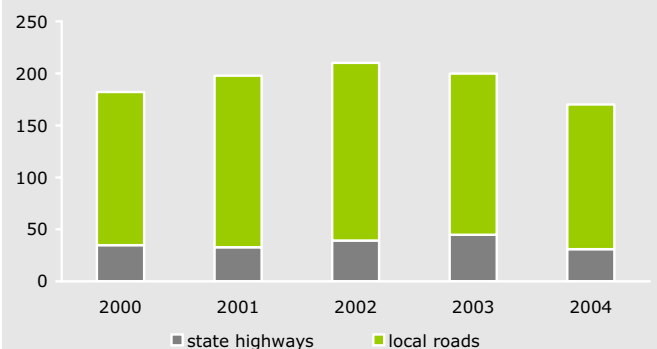
Road casualties 2000–2004

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.

Intersections

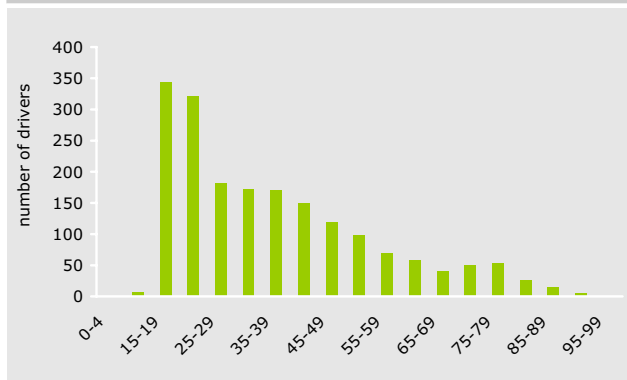
Crashes at urban intersections account for nearly 60 percent of all urban crashes. In the period from 2000 to 2004 these crashes resulted in 21 fatalities, 317 serious injuries and 2,181 minor injuries.

Christchurch City's grid-based road network results in a multitude of intersections, increasing the likelihood of intersection crashes, as highlighted in the map.

Most crashes occurred at traffic signals (883), followed by 457 at Give Way controlled intersections and 374 at uncontrolled intersections. About 50 percent of crashes occurred at crossroads and a further 40 percent at T junctions.

The worst months for crashes were March and June and the lowest number of crashes occurred in January and October. The most common day for crashes was Thursday while Sunday recorded the lowest number of crashes. Over 70 percent of crashes occurred between 7 am and 7 pm with crashes peaking at morning and evening rush hour periods.

Age of at-fault drivers in intersection crashes 2000–2004



The graph above shows the largest numbers of drivers causing intersection crashes were in the 15–24 year age group.

Common factors contributing to these crashes were drivers failing to stop or give way and drivers failing to see other vehicles.

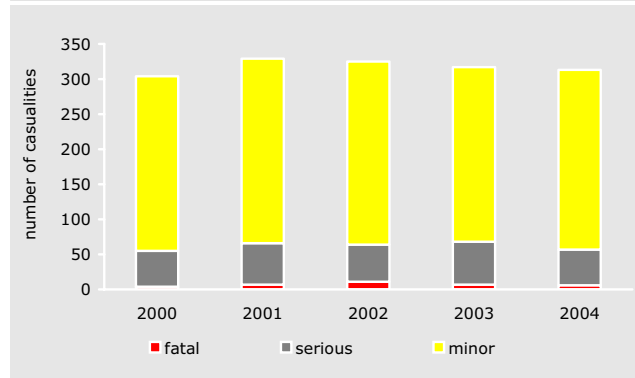
The two most common vehicle movements leading to a crash were:

- a collision between two vehicles travelling on different legs of the intersection, at 90 degrees to each other – usually caused by failure to give way to the right
- a vehicle making a right turn in the face of oncoming traffic.

Night-time crashes

Over 30 percent of injury crashes occur at night or during twilight. During the 2000–2004 period crashes at night resulted in 35 fatalities, 275 serious injuries and 1,278 minor injuries. Casualty numbers have remained fairly constant.

Night-time crash casualties by injury severity 2000–2004

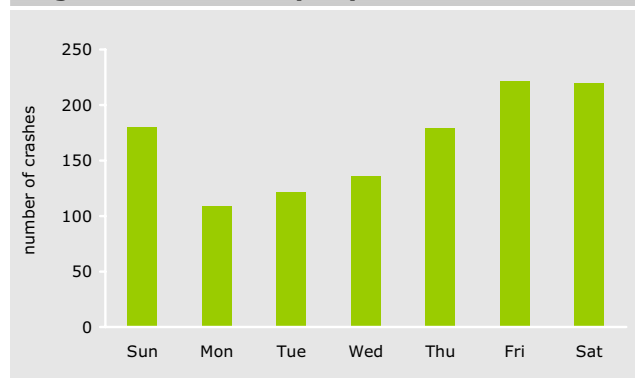


Drivers most likely to be involved in these crashes were aged from 15 to 24 years, making up 40 percent of the total. Female drivers accounted for around one third of the drivers in these crashes.

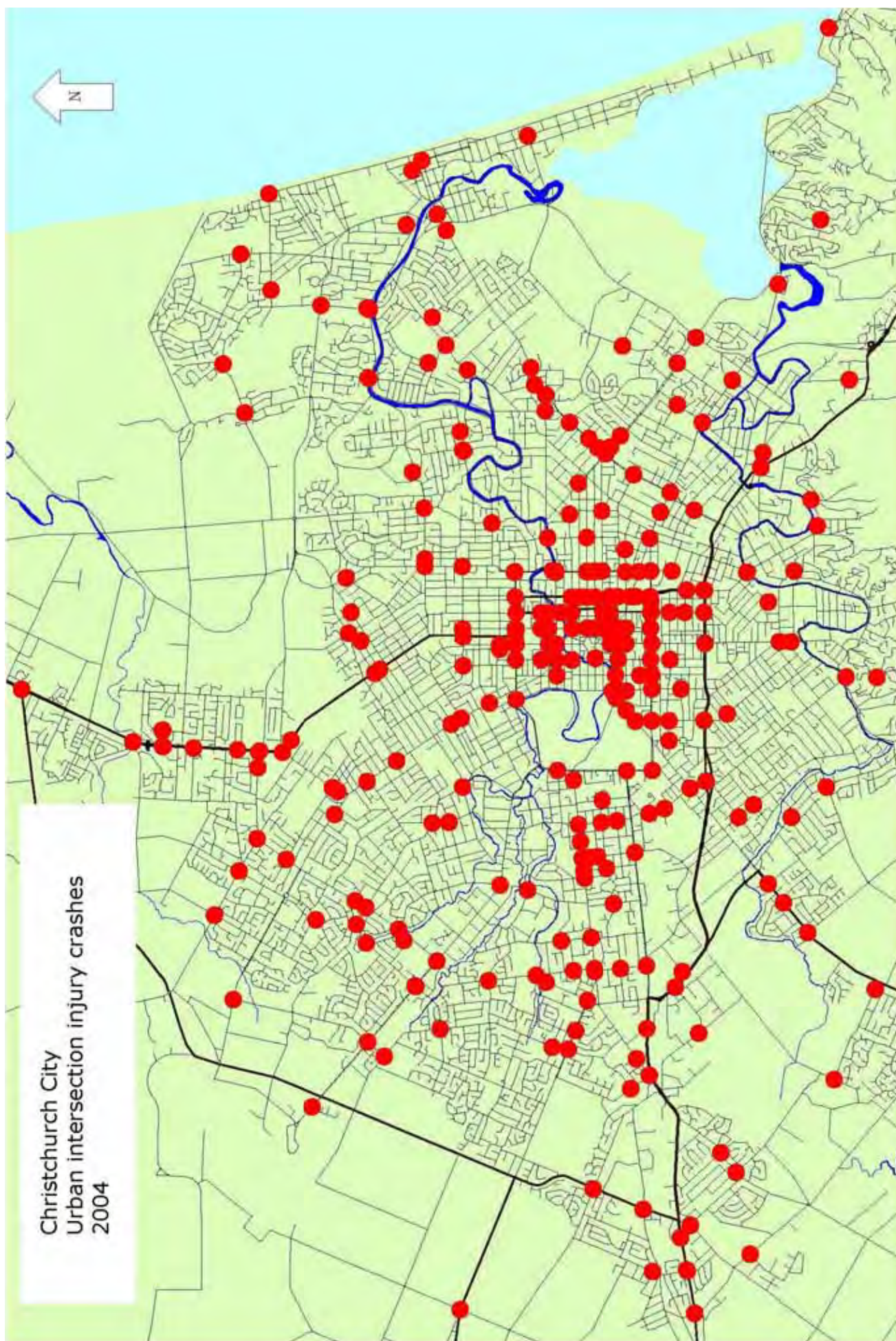
There is a distinct seasonal pattern to the night-time crashes, with more crashes occurring between April and September. This is due to the longer hours of darkness during this period and the more hazardous wet winter conditions.

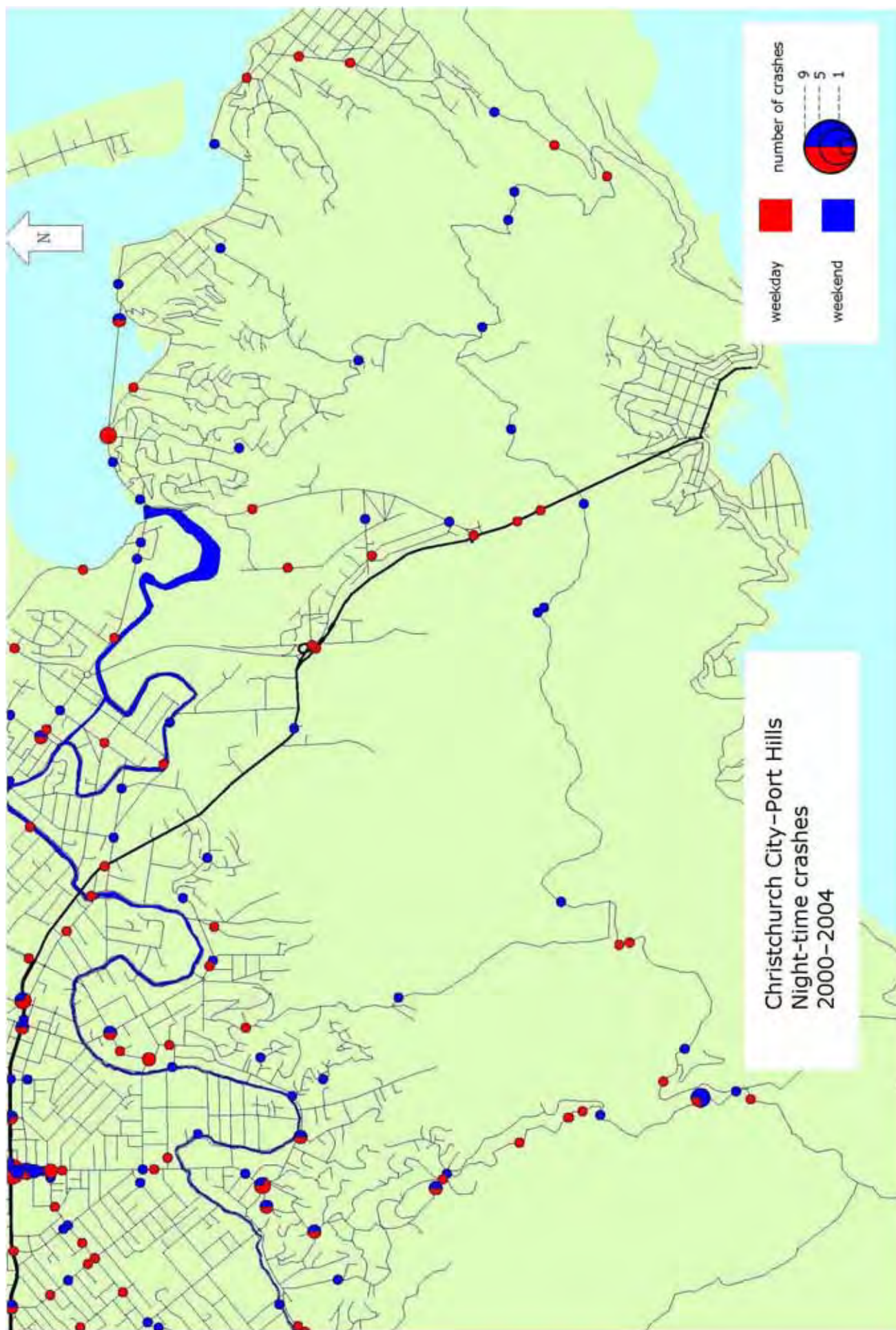
As expected, there were more crashes during weekend nights, with Friday and Saturday nights having the highest numbers while Thursday and Sunday nights still had significantly higher crash rates than the rest of the week.

Night-time crashes by day of week 2000–2004



The most common factors contributing to these crashes were poor driver observation and failure to give way or stop. A third of the crashes involved alcohol while a fifth of them had speed as a factor.

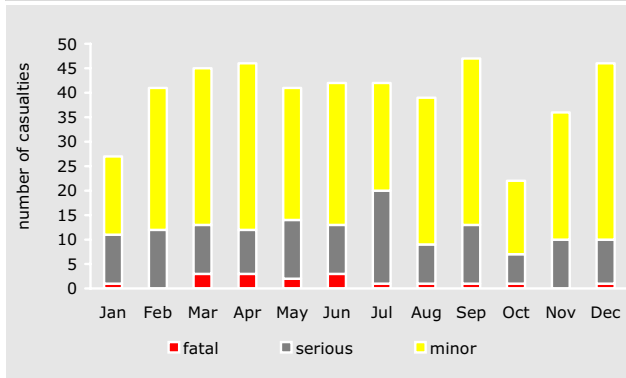




Pedestrians

In the five-year period from 2000 to 2004, there were 17 pedestrian fatalities, 127 seriously injured and 330 sustaining minor injuries. The number of pedestrian crashes has remained relatively constant with the last three years ranging from 93 to 95.

Christchurch City pedestrian casualties by month and severity 2000–2004



The chart above shows that October was the month with fewest casualties, while September had the most. The month of July was significant as it had almost twice as many serious injuries as any other month.

A third of pedestrian crashes occurred on weekdays between 9.30 am and 3.30 pm. Further examination of the crash times shows that a high proportion of crashes between 3 pm and 4 pm involved children aged 5 to 14 years. The number of crashes affecting children suggests that there is a continuing need to educate school pupils about road safety.

The highest number of crashes was recorded on Thursday and Friday while the fewest crashes were recorded on Sunday. Crashes carried on later into the evening on Thursday and Friday, with many involving alcohol.

The two most common causes of these crashes were pedestrians crossing the road without proper care and drivers failing to give way to pedestrians on crossings.

Pedestrian crashes are spread throughout the city area with concentrations on major roads, particularly where there are shopping centres or malls. The other significant location is the central city where there are a number of crashes involving alcohol-impaired male adults during the weekend.

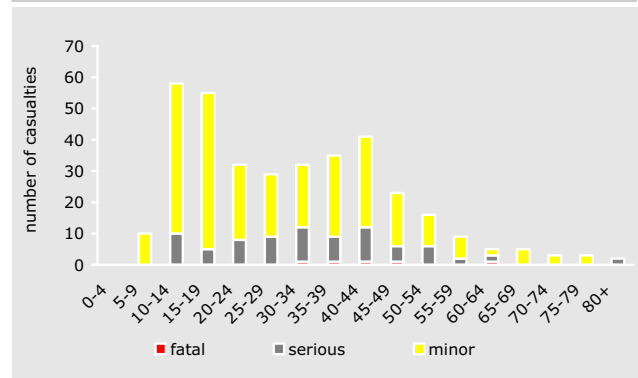
Cyclists

In the last five years, there have been five cyclist fatalities, 85 seriously injured and 287 sustaining minor injuries. In recent years the number of cycle crashes has declined, from a high of 143 in 2001 down to 86 in the year 2004.

The months with the largest numbers of crashes are February and March. This peak is the result of children coming back to school and then struggling to adjust to the heavy traffic, particularly at the start of the day. The other peak time of the day for crashes is between 5 pm and 6 pm when cyclists are heading home in rush hour traffic.

Most of the crashes in 2000 to 2004 occurred during weekdays; only 16 percent of cyclist crashes occurred during the weekends.

Cyclist casualties by age and severity 2000–2004



The graph above shows that the younger cyclists from 10 to 19 years old had the most casualties, however, older cyclists had more severe crashes and were more likely to be seriously injured or become a fatality.

The location of the crashes was spread throughout the city but with some concentrations in the central city and along major roads.

Over 60 percent of the crashes happen at intersections; usually the driver of the vehicle has failed to notice the cyclist. Both cyclists and motorists need to be vigilant and be aware of each other. Cyclists can assist this by wearing bright or reflective clothing and by using lights during twilight and night hours.

Performance measures

The table below lists some of the local authority performance measures noted in the *Road Safety Progress* publication prepared by Research and Statistics, Ministry of Transport. It compares the measures for Christchurch City 2004 injury crashes with the range for the five poorest performances recorded in the March 2005 issue of *Road Safety Progress*.

	Range for five poorest performances	Christchurch City 2004 injury crashes
Speed % crashes with excessive speed	28% to 35%	14%
Alcohol % driver alcohol crashes	21% to 40%	12%
Intersections % crashes with failed to stop or give way factors	35% to 43%	35%
Pedestrian % crashes with pedestrians	14% to 22%	14%
Cyclists % crashes with cyclists	12% to 17%	12%
Safety belts % unrestrained – front seat	11% to 19%	3%

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