

Regional Road Safety Report 2000

Draft Report

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Executive Summary

This report has been prepared by Environment Waikato to fulfil the objectives of the National Road Safety Plan in monitoring road safety and co-ordination of safety intervention efforts. The report presents the regions and the country's reported crash statistics for the last five to ten years and provides a comparison and an overview analysis, particularly on 1998 and 1999.

The national road toll has shown a downward trend over the last ten years. Positive national targets have been set for the year 2001 with, for example, the number of road deaths reducing from 509 in 1999 to 420 in 2001, and the seatbelts worn by adults in the front seat from 89% to 98%.

The Waikato Region has had the highest number of fatalities for both the 1999 and 2000 years as opposed to 1998 when the Auckland Region had the highest number of fatalities (105), with the Waikato having considerably less (77). The number of fatalities in the Waikato Region has increased each year for the past three years.

The percentage of crashes in the Region where alcohol was a contributing factor continues to fall with the majority of such crashes occurring in the 15 – 24 age group and the majority of offenders being male.

The four main contributing factors in all rural crashes in the Region were poor observation, excess speed, road factors and alcohol. Crashes as a result of fatigue and poor observation are increasing as a proportion of total crashes within the Region.

Over the five years from 1995 – 1999, 26% of vehicle occupants killed were not restrained (however with a further 27% of the total number of occupants killed restraint use was not recorded so the actual number of victims that were unrestrained may have been considerably higher). Wearing rates in front seat adults is steadily declining in the Region whilst rates for rear seat adults is on the increase. The use of child restraints improved in 1999 reversing a downward trend, however rates in 2000 have dropped.

The number of older driver casualties per 1000 population is much greater within the Region than it is nationally.

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Introduction

Environment Waikato has prepared this Annual Road Safety Report in accordance with the National Road Safety Plan to fulfil its role of co-ordinating, facilitating, monitoring and reporting on road safety in the Waikato Region. The report has been undertaken in consultation with the LTSA, District and Regional Road Safety Coordinators and should be read in conjunction with the Annual Road Safety Reports produced by the LTSA for both the Districts and the Regional Council. These reports are available from the LTSA.

Section One provides a brief overview of the national distribution of crashes and of progress towards national road safety targets.

Section Two illustrates the Waikato regions road safety trends in comparison to other regions and to national targets. Trends are shown for young road users, cyclists, pedestrians, alcohol related crashes, speed, and for urban v rural crashes.

Section Three presents information that Road Safety Coordinators within the Waikato Region have specifically requested. The factors that are illustrated are occupant restraints, fatigue, older drivers and the effectiveness of current education schemes.



National Targets and Trends

This section of the report provides a brief overview of the number of crashes throughout New Zealand and progress towards national road safety targets.

Figure 1 shows the downward trending national road toll over the past 10 years.

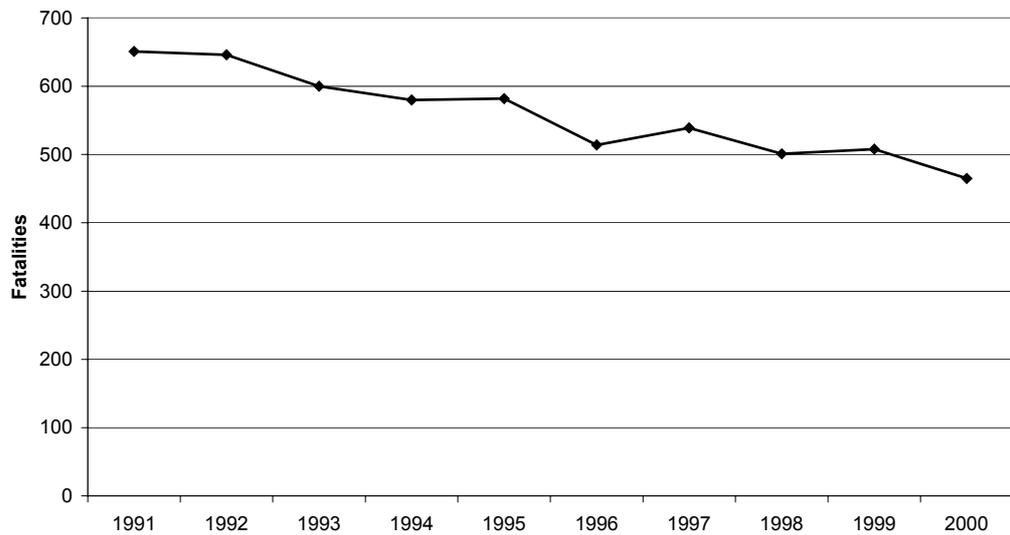


Figure 1 National Road Toll

As can be seen by Table 1, targets have been set to reduce the number of national fatalities from 509 in 1999 to 420 in 2001. Information in the table has been sourced from the LTSA. Some of the information was not available.

Table 1 National Road Safety Targets for 2001

Road Crash Data	1997	1998	1999	2001 Target
Deaths				
Number of road deaths	540	504	509	420
Deaths per 10,000 vehicles	2.3	2.2	2.01	1.6
Deaths per 100,000 people	14.4	13.3	13.4	11
Injuries				
Reported Injuries	13,378	12,962	11,999	11,000
Reported Injuries per 10,000 vehicles	56	56	49	42
Reported injuries per 100,000 people	398	333	315	290
Number hospitalised (discharges)	6,280	6,167	5,819	5,200
Behaviour Measures (Alcohol as a factor)				
Number of driver fatalities with excess alcohol	63	74		60
Proportion of driver fatalities with excess alcohol	21%	27%	23%	25%
Speed				
Percentage exceeding 110 km/h	26%	25%		15%
Rural winter mean (km/h)	104.2	104.3		102
Rural winter 85th percentile (km/h)	116	115		110
Occupant Restraint				
Seatbelts worn by adults, front	88%	88%	89%	98%
Seatbelts worn by adults, rear	56%	62%	67%	90%
Children restrained, 0 -14 years	89%	88%		98%
Children restraints used, 0 - 4 years	74%	76%	76%	98%
Cycle Helmets				
Cycle helmets worn, weekday	94%	95%		98%



Regional Targets and Trends

The Waikato Regional Road Safety Plan contains a number of targets for road safety within the region. Some of these are discussed in this section.

Fatalities

Figure 2 below shows the total number of fatalities for each region for the 1999 and 2000 years. The Waikato Region has the highest number of fatalities for both the 1999 and 2000 years. In 1998 the Auckland Region had the highest number of fatalities (105), with the Waikato having considerably less (77). The number of fatalities has increased each year for the past three years.

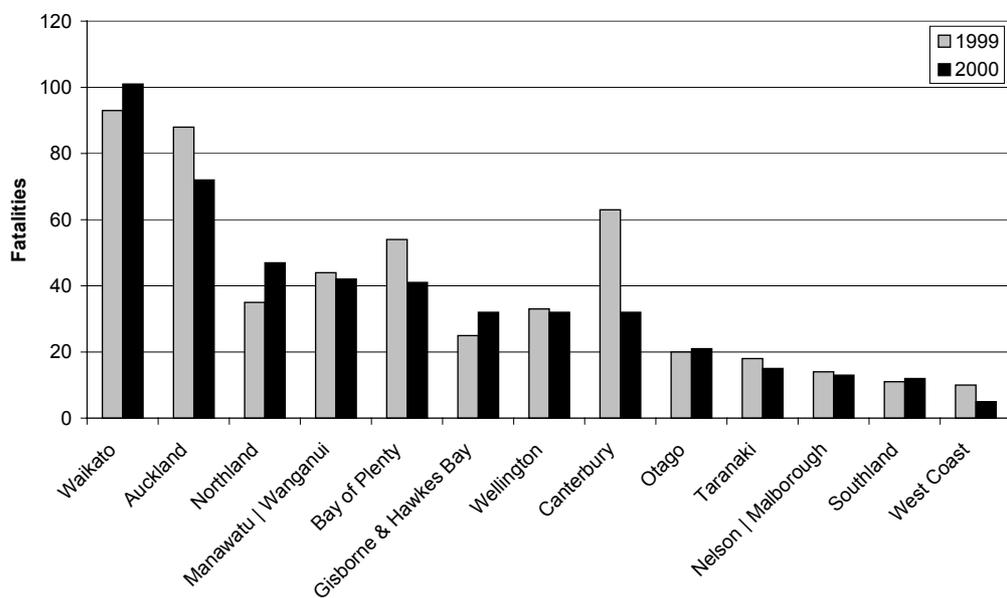


Figure 2 Regional Fatalities 1999 and 2000

Figure 3 below shows the erratic road toll over the past 10 years. The number of rural fatalities has always vastly exceeded the number of urban fatalities. Whilst the total number of fatalities fell from 1997 to 1998, from 1998-1999 the number of fatalities rose. As Figure 3 illustrates, it is aimed to reduce the number of fatalities to 62 by the year 2005 in line with the Waikato Regional Road Safety Plan.

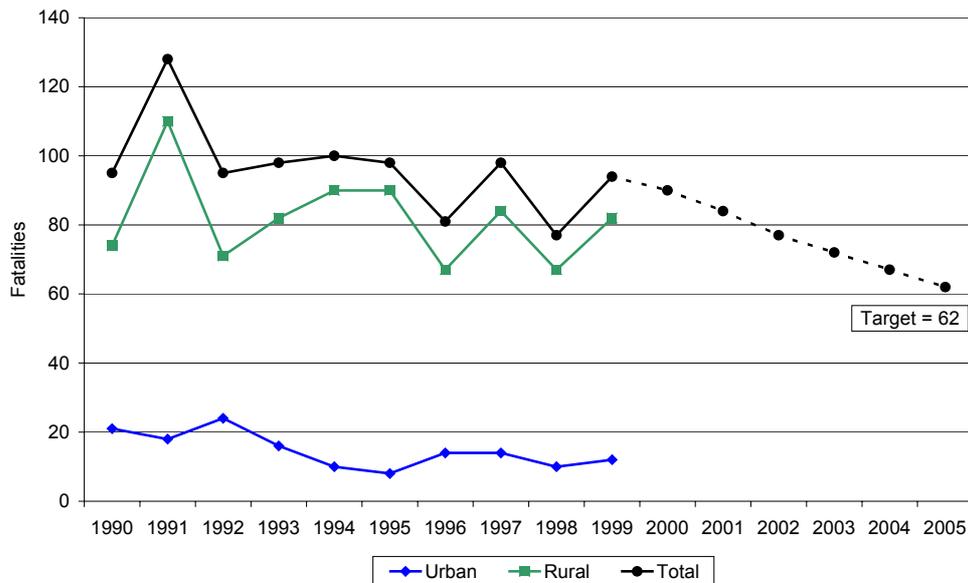


Figure 3 Regional Fatalities

Young Road User Casualties

Young Road Users are defined as those people aged up to 14 years of age. This age group is very vulnerable as it takes children several years to gradually develop their road skills.

Figure 4 below shows the number and type of casualties for 0 – 14 year olds in 1999. Of the 15 cyclists casualties, 4 were head-on conflicts with vehicles and 11 were conflicts between cyclists and vehicles that were overtaking or changing lane. There were 30 pedestrian casualties with most due to either head-on conflicts with vehicles or vehicles changing lanes. Of these pedestrian casualties 80% were due to pedestrians ‘running heedless of traffic’. Only 1 pedestrian casualty was due to a vehicle losing control and swerving into the pedestrian’s path.

The data suggests that the main issue with pedestrian casualties is crossing the road at uncontrolled crossing places and not being aware of approaching traffic or not being able to judge the distance between the pedestrian and approaching traffic. This may suggest that New Zealand children require further education on how to safely cross the road.

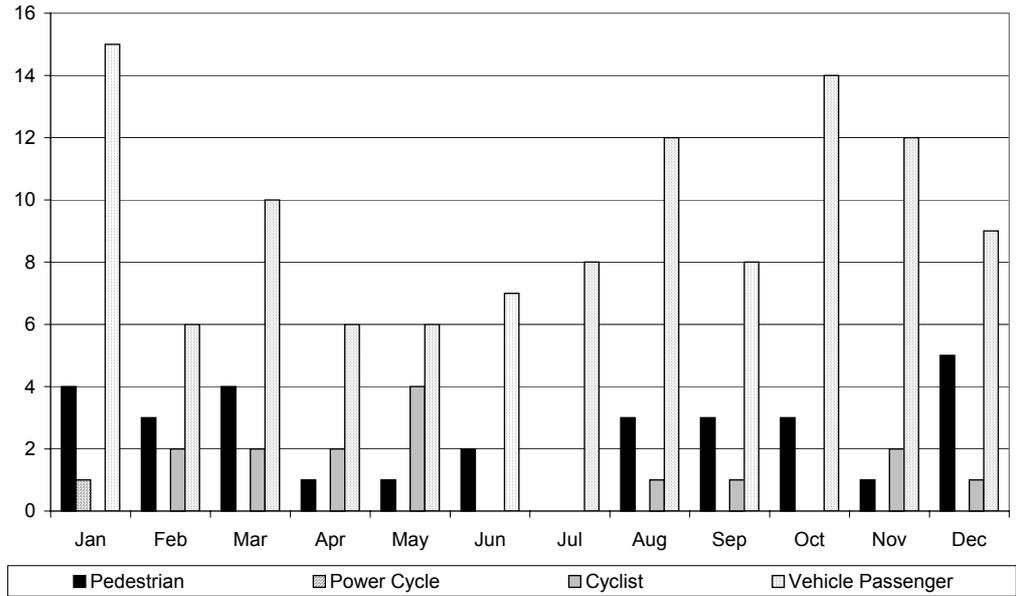


Figure 4 Young Road User Casualty Types 1999

Figure 5 below shows the age of the pedestrian and cyclists casualties. Cyclists casualties do not appear until age 8, and steadily increase until age 13. This is likely to be as a result of more children riding bikes to and from school as they get older. The decrease in cyclists casualties at age 14 could be due to increased cyclist skills and/or less cyclists on the road as children move to secondary schools which may be more distant, making cycling a less viable transport option.

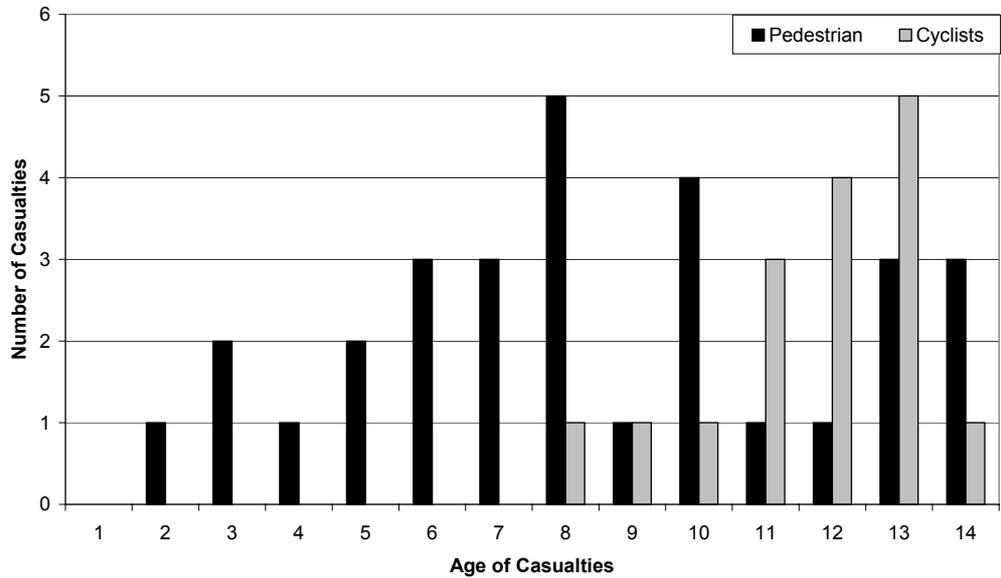


Figure 5 Age of Cyclist and Pedestrian Casualties

Alcohol Crashes

Figure 6 below illustrates that the number of crashes in the Waikato Region where alcohol was a contributing factor is slowly declining as is the percentage of all crashes where alcohol was a contributing factor. The national trend for such is also one of decline, although drink driving is still the second most prevalent crash factor in fatal and injury crashes, after speed.

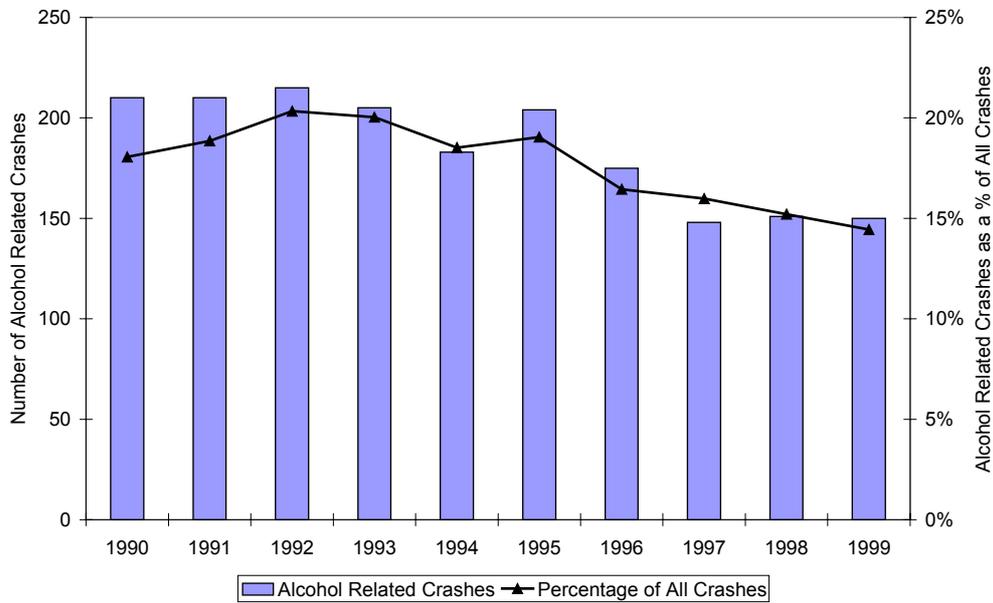


Figure 6 Crashes with Alcohol as a Contributing Factor

Figure 7 below illustrates that most alcohol related crashes result in minor injuries and that most offenders are aged between 15 and 24. For fatal alcohol related crashes Figure 8 shows that most offenders are aged between 20 and 30 and the large majority of offenders are male.

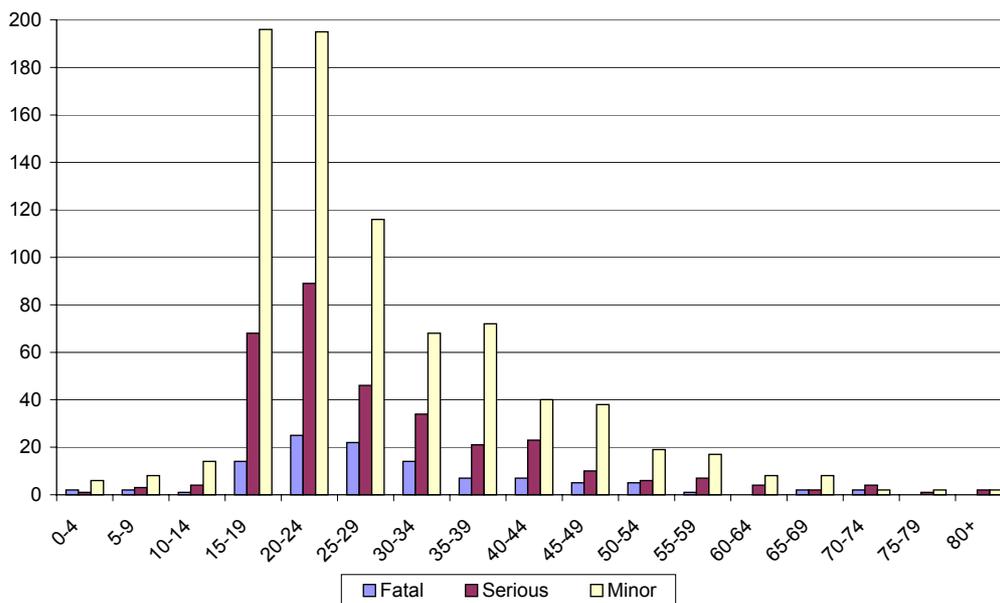


Figure 7 Casualties from Crashes with Alcohol as a Contributing Factor 1995-1999

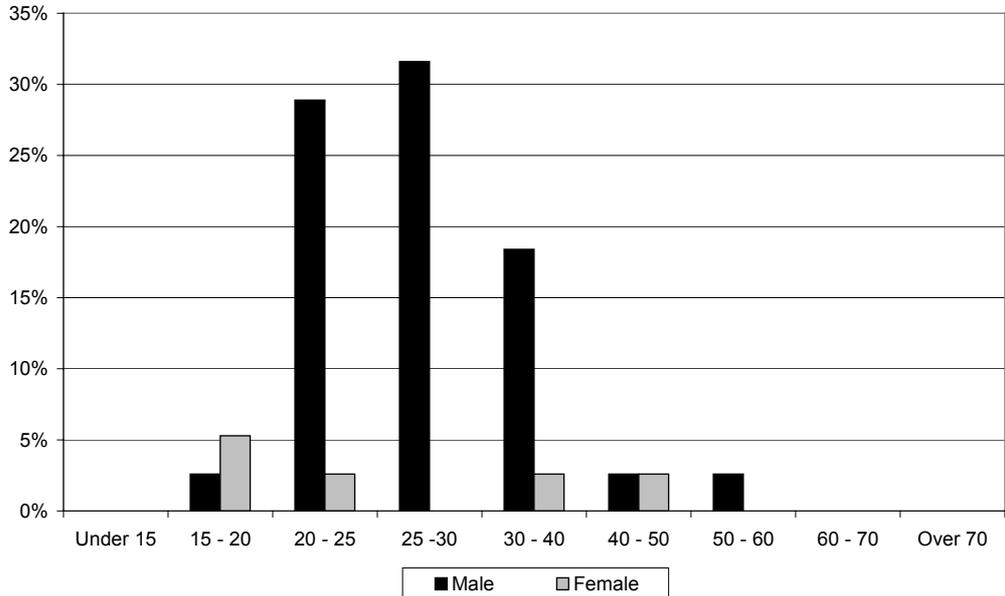


Figure 8 Age of Offender in Fatal Alcohol Crashes (Waikato Police District)

Figure 9 shows the number of Last Drink Surveys undertaken within each local authority area for the 2000 year. Private homes are the most common places to have had the last drink, however within some areas, some public establishments are highly represented. For privacy reasons, these are not mentioned. In some instances, the place of last drink is a considerable distance from the location of the survey suggesting that a number of drivers had travelled a considerable distance under the influence of alcohol.

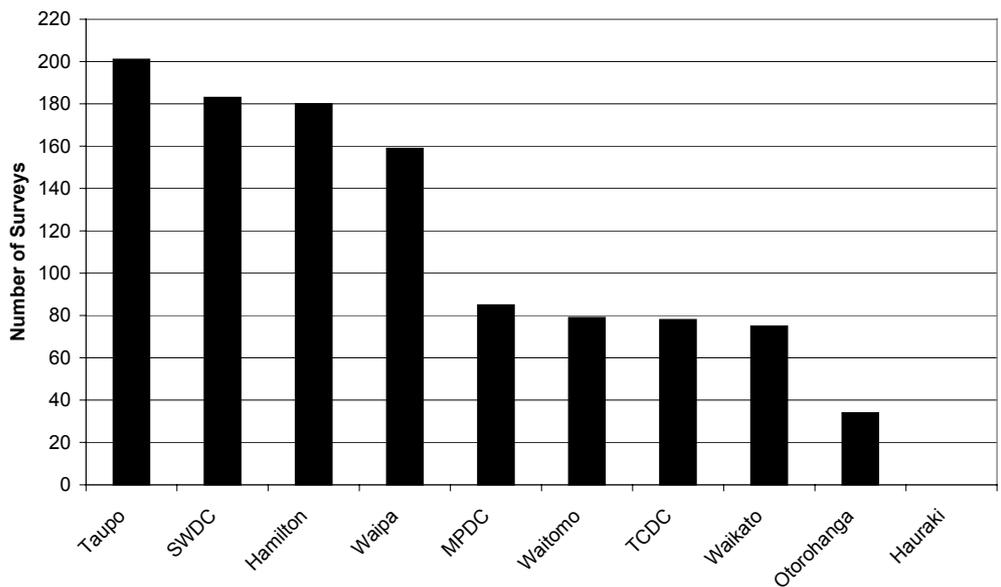


Figure 9 Number of Last Drink Surveys Undertaken

Speed

Nationally, speed is now the single most prevalent crash factor. The number of speed related crashes in the Waikato Region has been a little erratic over the last 10 years although the overall trend has been downward. From 1998 – 1999 the number of speed related crashes fell from 177 to 131 and the number of speed related crashes as a percentage of all crashes fell from 17.8% to 12.6%.

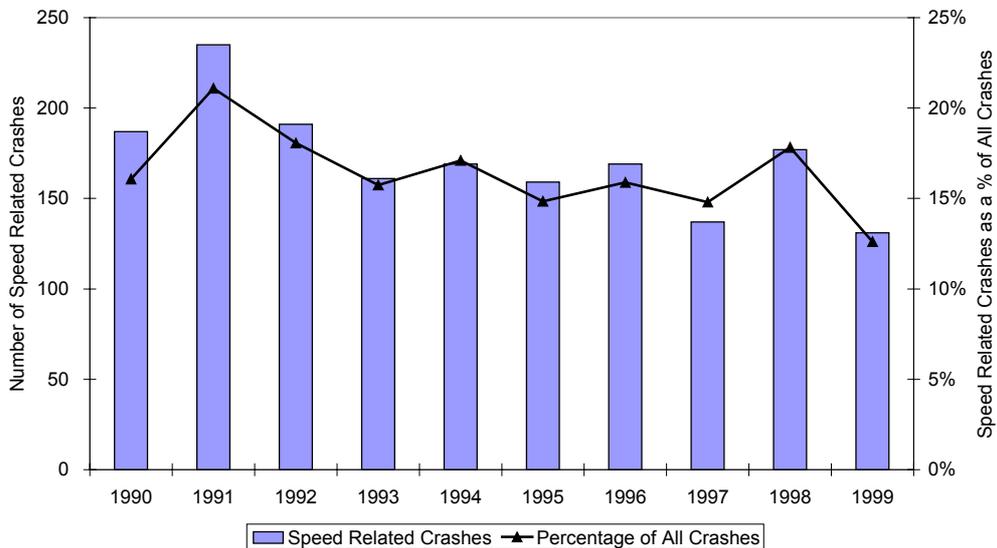


Figure 10 Crashes with Speed as a Contributing Factor

Open Road Crashes

The “Open Road” is defined as any length of road with a posted maximum speed limit of 80kph or over.

Figure 9 below shows that for the past 10 years the majority of open road crashes have been on local as opposed to State Highway roads, and in fact the ratio is almost 2:1. The number of local road crashes has also been steadily increasing since 1997. The Waikato Region has a large network of rural open roads which are used as alternatives to the State Highway network in many instances (for example between Auckland and Otorohanga). In recognition of this, some local road routes have recently become State Highways (Hamilton to Taupiri).

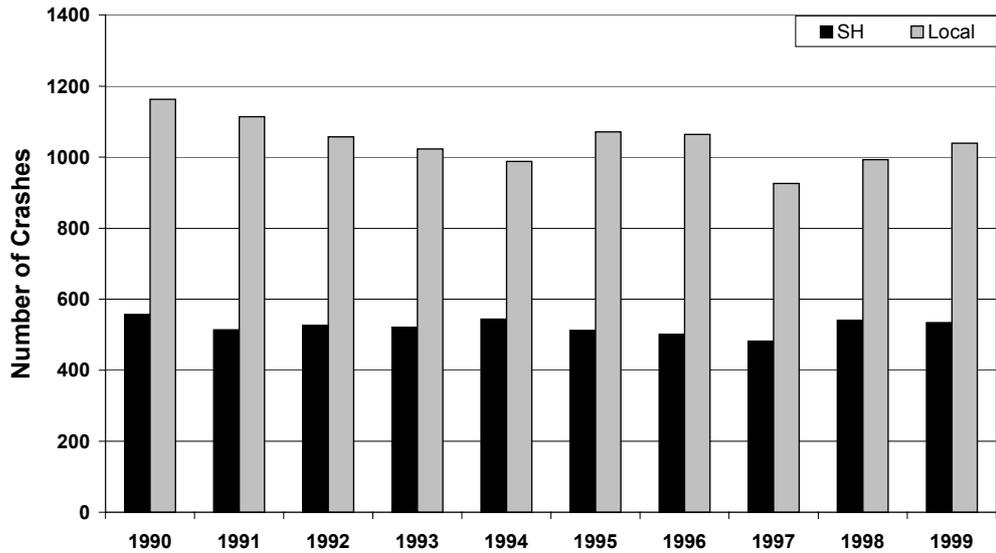


Figure 11 State Highway and Local Road Crashes

Figure 12 below shows the percentage of crashes that occur on the state highway network. The thick line on the graph shows 50%. The percentage of crashes that occur on state highways has not varied much over the past 10 years remaining between 46% and 55%.

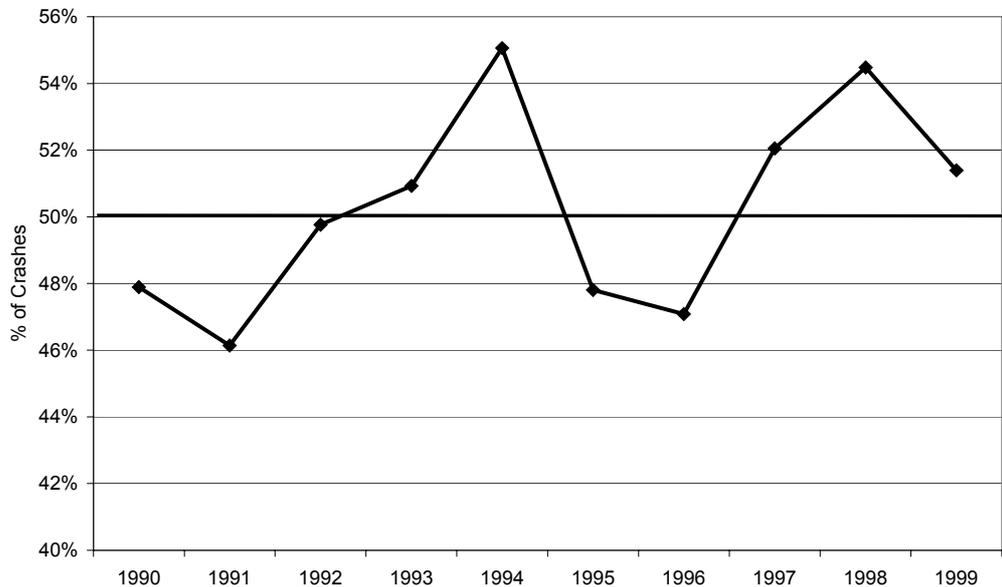


Figure 12 State Highway Crashes

It is interesting to note that in Figure 13, there are more urban crashes on State Highways and more rural crashes on local roads.

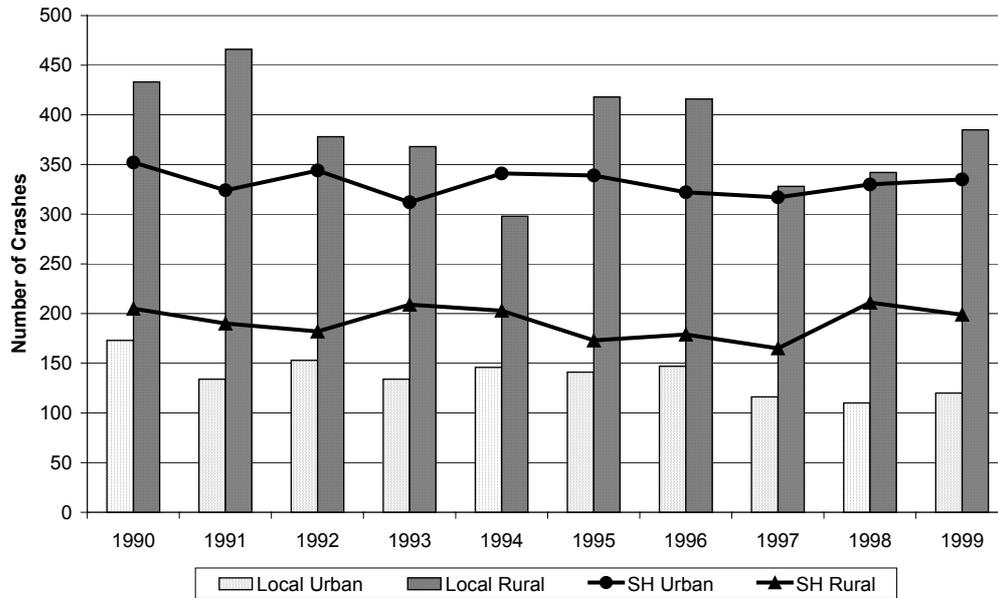


Figure 13 State Highway v Local Road Crashes Urban and Rural Split

Figure 14 below shows that the four greatest contributors to rural crashes are poor observation, too fast, road factors and alcohol involved. Poor observation, which is the greatest of these, relates to how a driver performs the task of driving and includes factors such as inattention, attention being diverted, and not seeing or looking for another party until it is too late. The number of rural crashes with poor observation as a factor has increased from a low of 71 in 1997 to 99 in 1999.

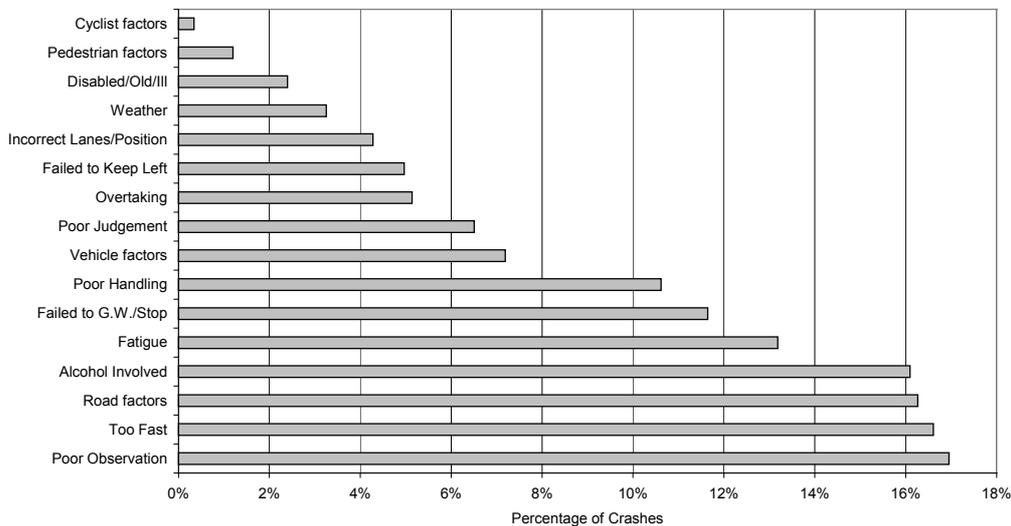


Figure 14 Rural Crash Contributing Factors

Figure 15 below breaks down the social cost of crashes into the 10 whole districts of the Waikato Region and shows that the social cost of crashes on rural roads is a lot higher in the Waikato District than in any other. This is similar to previous years.

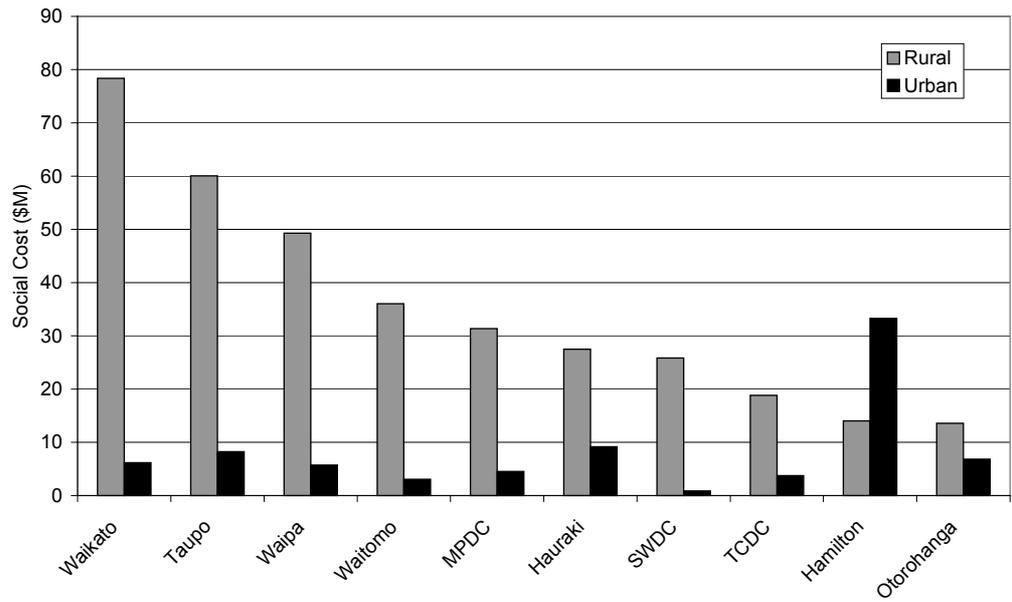


Figure 15 Social Cost of Crashes 1999 (fatal, serious and minor)

Road Safety Coordinators

This section of the Report includes information that Road Safety Coordinators within the Waikato Region have specifically requested. The issues that coordinators requested additional information on are:

- Occupant Restraints
- Fatigue
- Older Drivers
- Education – the effectiveness of current schemes

Each of these issues is addressed in this section of the report.

Occupant Restraints

LTSA research¹ has indicated that in the Waikato Region over the five years 1995 - 1999, of the 367 vehicle occupants killed, 97 were not restrained (for a further 99 restraint use was not recorded so the actual number not restrained may be much higher). Of the 367 fatalities, only 357 had restraints available to be used and of those 89 were not restrained (and restraint use was not recorded for a further 97). Of the 89 who were not restrained, the officers who attended the crashes estimated that 44 lives would have been saved if all those occupants had been restrained at the time of the crash.

The data below looks at restraint wearing rates for adults in front and rear seats, as well as children under 5 years old.

Adults

Figure 16 shows the percentage of front seat adults who wore occupant restraints during LTSA surveys in 1998 and 1999. LTSA survey in 1999 found that Wellington and Taranaki where the only places where restraint use was over 95%. Manawatu-Wanganui, Hawkes Bay and the West Coast Regions had wearing rates of less than 85%. The rates in the Waikato were 88% in 1998 and 87% in 1999. However in the 2000 survey, rates improved by 15% in the West Coast but fell in again the Waikato from 87% to only 82%. The national target for 2001 is 98%.

The latest annual national survey of safety belt use in New Zealand by adults in the rear seats of cars was carried out by the LTSA in November/December 1999. The highest wearing rates for adults in rear seats (in 2000) were found in Lower Hutt (94%), Kapiti (91%), Wellington (89%) and Hamilton (83%). Overall the Waikato Region had a 75% wearing rate, which ranks third after Wellington and Northland. The wearing rate in the Waikato has steadily improved, from 64% in 1997 to the current 75%. This is well above the national average in 1999 of 67%.

Wearing rates in front seat adults is steadily declining, while rates for rear seat adults is continuing to increase.

¹ The information regarding occupant restraints has been sourced from both the LTSA website

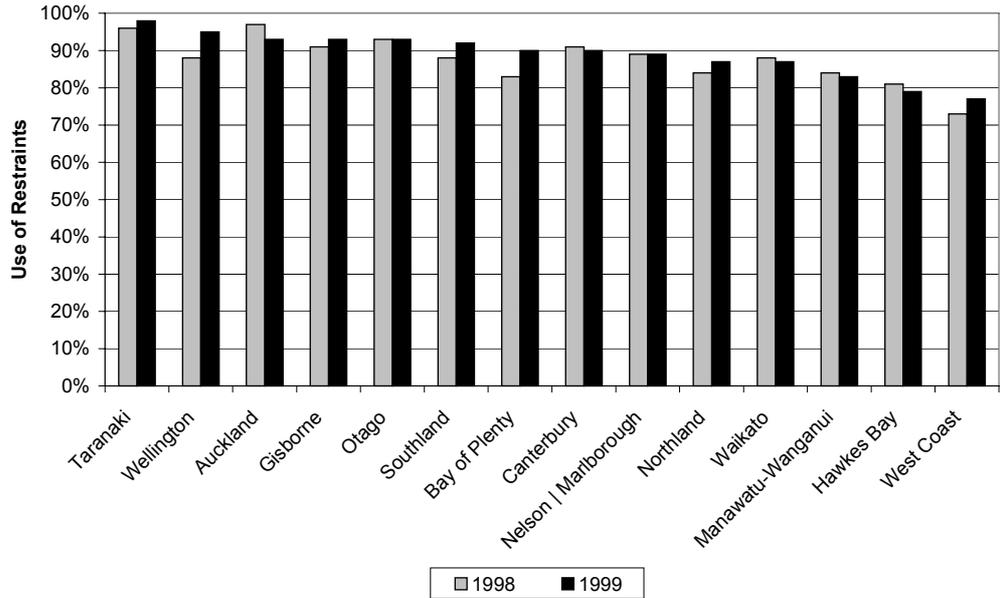


Figure 16 Front Seat Adult Occupant Restraint Use

Children

LTSA undertook the latest annual national survey of child restraint use in New Zealand in August -October 2000. Over 4100 children aged under 5 years were surveyed at 60 sites around the country. The results show a similar level of child restraint use as in the previous 1999 survey.

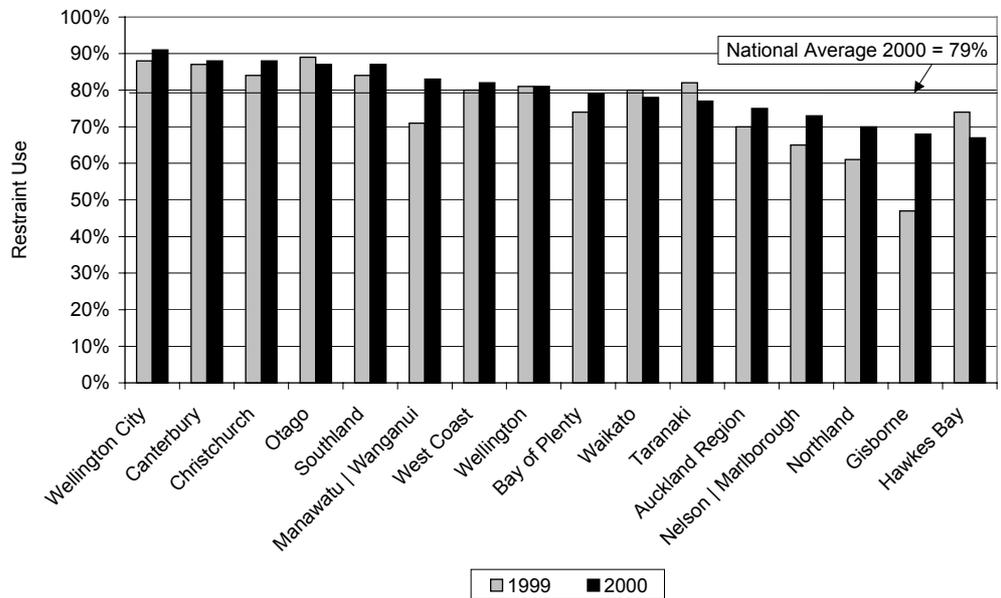


Figure 17 Regional Child Restraint Use 1999 and 2000

Figure 18 below shows how child restraint use in the Waikato has fluctuated over the past five years. In 1999 the national average was 75% with Waikato well above that (80%), however in the 2000 survey, wearing rates in the Waikato fell to 78%, just below the national average of 79% shown in Figure 17 above.



Figure 18 Child Restraint Use in the Waikato Region

Fatigue

There has always been debate about the use of 'fatigue' as a crash contributing factor, and now the LTSA appear to have split the traditional crash contributing factor of "fatigue" into "fatigue" and "poor observation". A greater number of crashes that in the past had been recorded with fatigue as a contributing factor, are now being recorded with poor observation as a contributing factor. Regardless of how the statistics are recorded, as Figure 19 and Figure 20 below show, both fatigue and poor observation crashes are increasing as a proportion of total crashes within the Waikato Region.

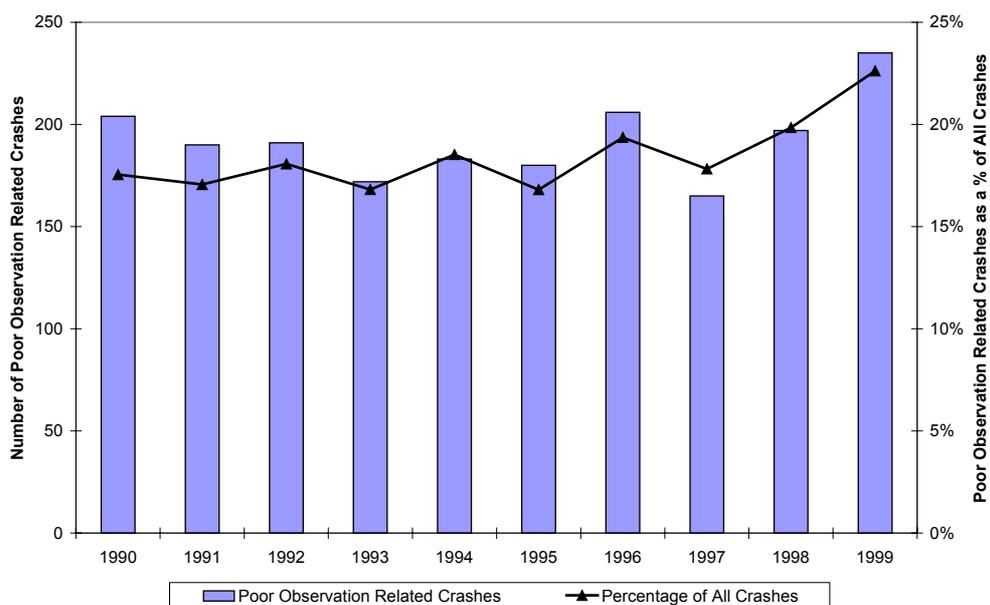


Figure 19 Poor Observation Crashes

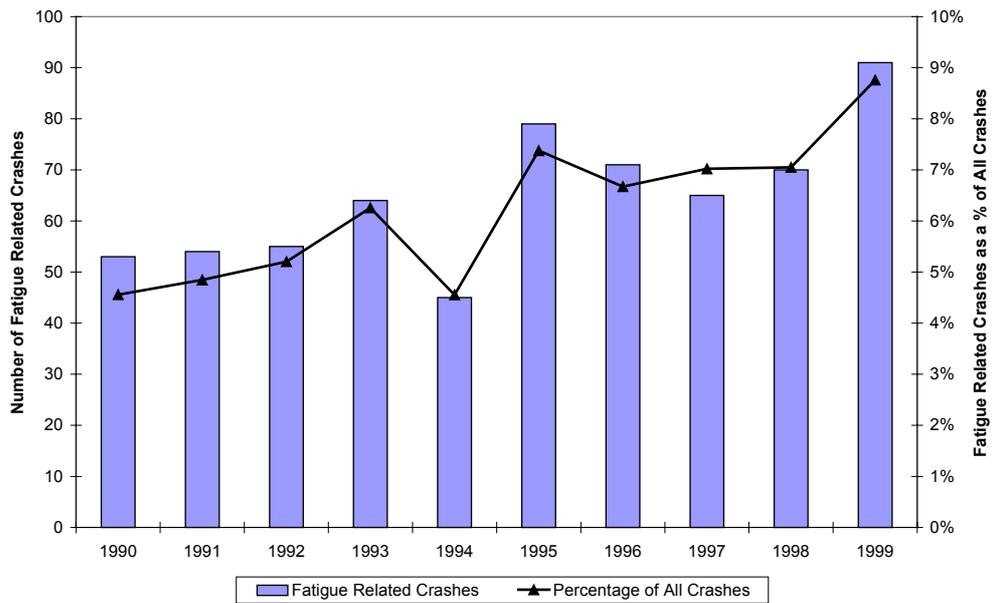


Figure 20 Fatigue Crashes

Older Road Users

Environment Waikato has undertaken a some more comprehensive research into the area of older road users and a separate report addressing this issue is available from Council.

Figure 21 shows the number of older driver casualties both in the Waikato Region and New Zealand per 1000 population. Population figures are provided by Statistics NZ and are from the 1996 census. The graph shows that the risk of older drivers becoming a casualty within the Waikato Region is far greater than the nationwide risk.

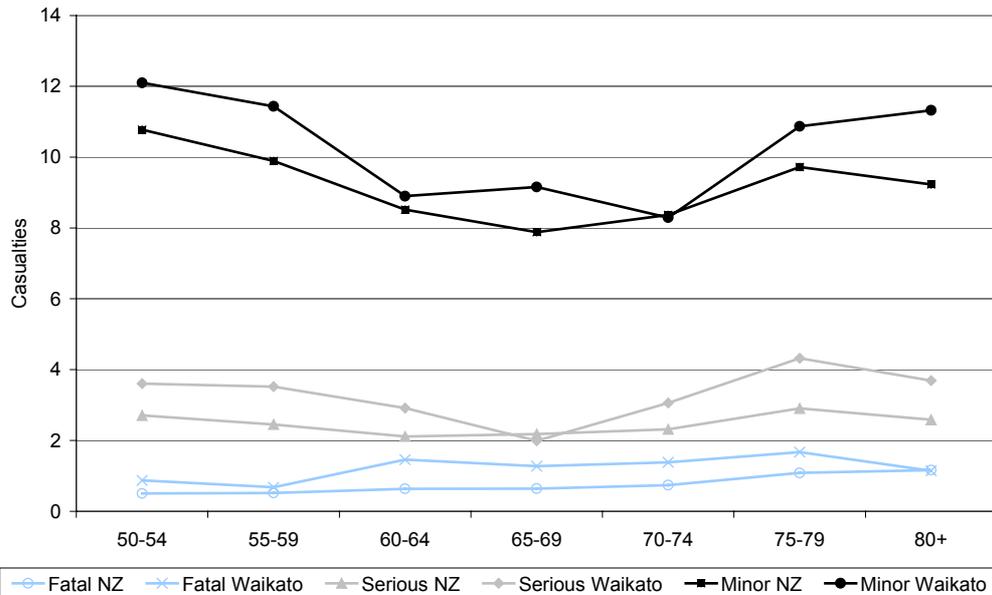


Figure 21 Older Driver Casualties 1995 – 1999 per 1000 Population

Note: It is acknowledged that using the Waikato Region resident population is not accurate as not all casualties within the Waikato Region reside in the Waikato Region. It does however provide some basis for comparison. It should also be noted that the figures are for driver casualties, not total casualties.

Each graph in the following series relates to the geographic area of responsibility for the District Road Safety Coordinators within the Waikato Region. Waitomo and Otorohanga Districts, which do not have a Road Safety Coordinator, have been grouped together.

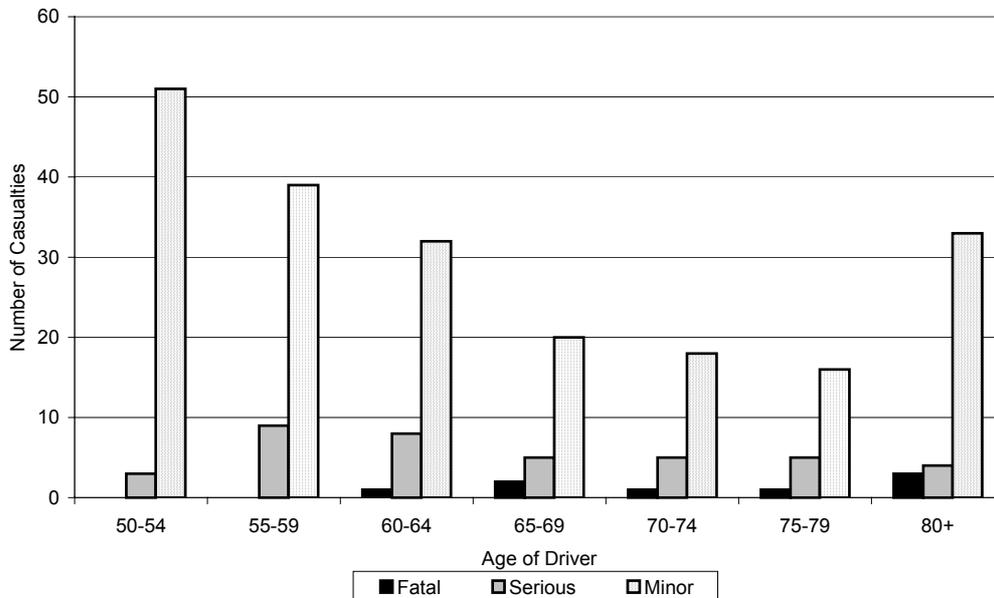


Figure 22 Older Driver Casualties in Hamilton 1995-1999

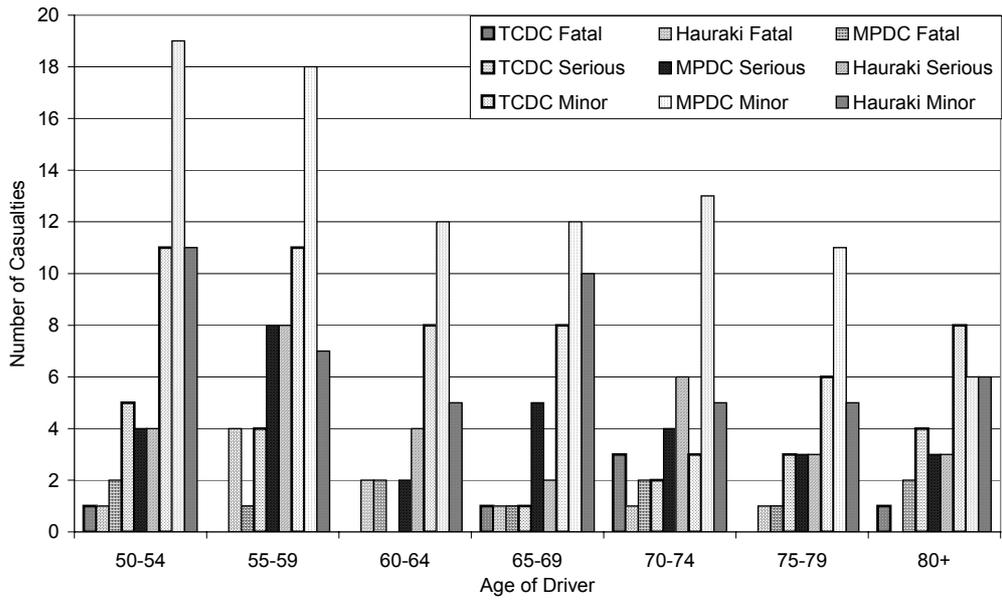


Figure 23 Older Driver Casualties: Hauraki, Matamata-Piako, Thames-Coromandel 1995-1999

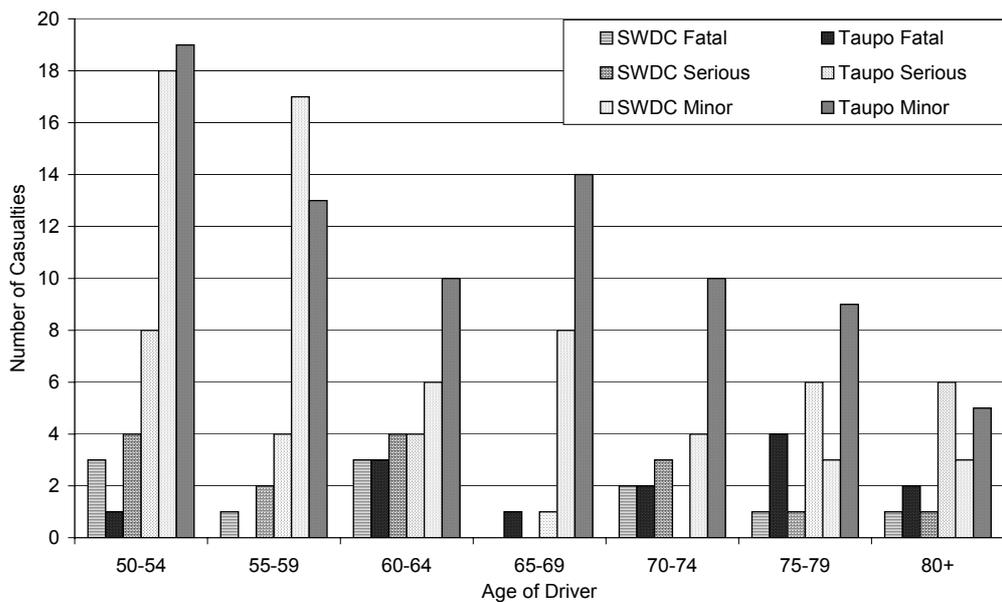


Figure 24 Older Driver Casualties: Taupo and South Waikato 1995-1999

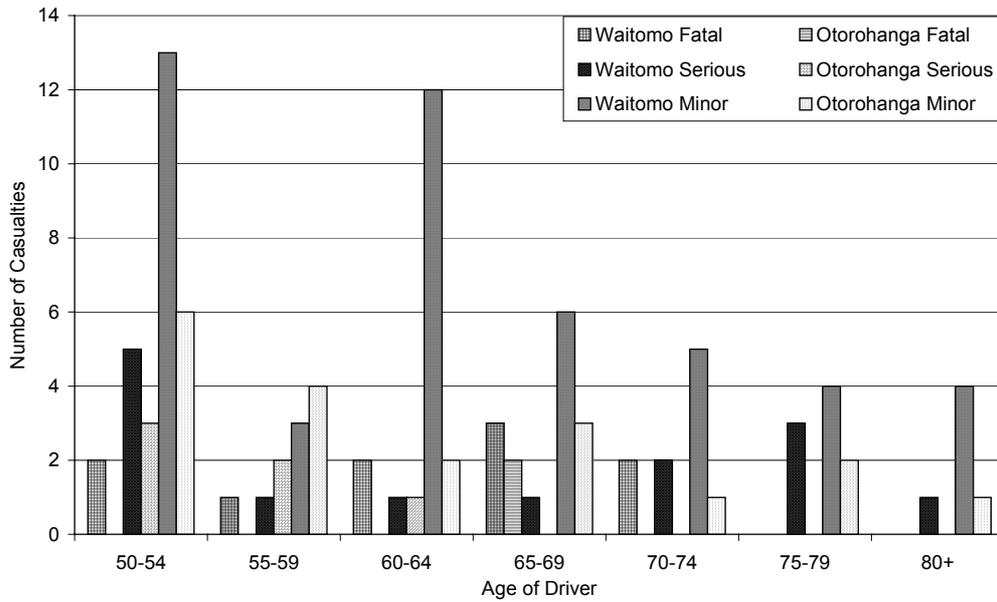


Figure 25 Older Driver Casualties: Waitomo and Otorohanga 1995-1999

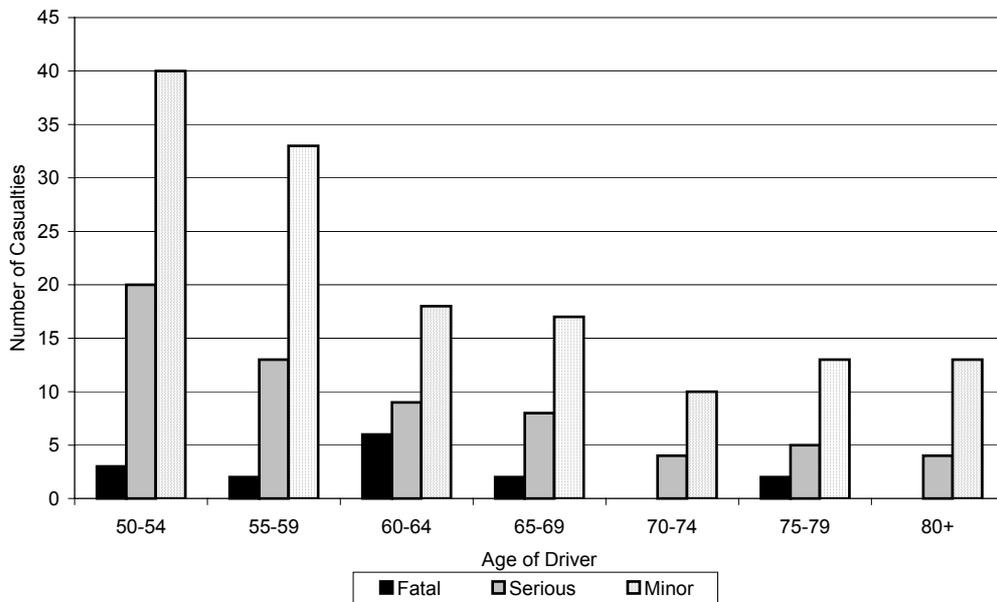


Figure 26 Older Driver Casualties: Waikato 1995-1999

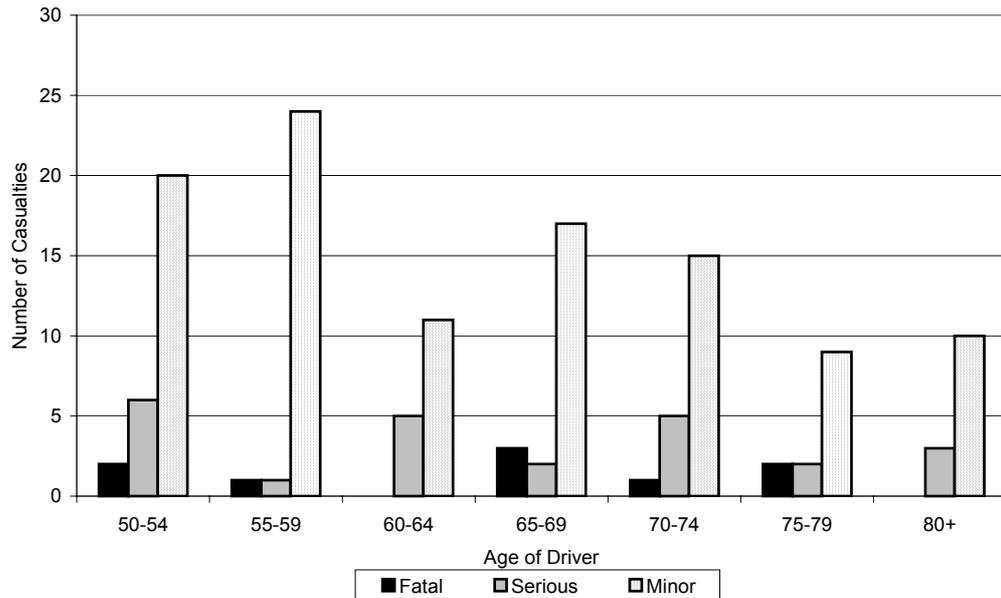


Figure 27 Older Driver Casualties: Waipa 1995-1999

Education

Education is a long term approach to road safety as it is designed to change peoples attitudes which in tern influence their behaviour. Each road safety project has different social objectives which are measured by an evaluation process generally through the LTSA project application process. The efficacy of education programmes and projects is going take some time to measure accurately.