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INTRODUCTION

Background to the report

This report presents an overview of reported road traffic crashes in Queensland for the year ended 31 December 1999 in the context of the previous five years.

The information in this bulletin is based on data contained in the Queensland Road Crash Information System maintained by Queensland Transport's Land Transport & Safety Division. Additional data supplied by the Queensland Government Chemical Laboratory is used for the analysis of alcohol involvement in road crashes, in particular those involving a fatality. Validation and enhancement of the raw data which originates from the Queensland Police Service Traffic Incident Report System (TIRS) is completed by the Road Crash Database Group. This group provides a statistical service for the Land Transport & Safety Division and is a unit located within the Government Statistician's Office, Queensland Treasury Department.

In 1991, a number of major changes occurred concerning road crash data collection in Queensland, which impact upon the figures in this report. These changes were:

- from 1 April 1991: implementation of the Queensland Road Crash Information System by Queensland Transport. Prior to that date all road traffic crash data on the system had been coded by the Australian Bureau of Statistics (ABS) and distributed to Queensland Transport;

- from 1 July 1991: transfer of the official source for Queensland road traffic crash statistics from the ABS to Queensland Transport;

- from 1 October 1991: introduction of a new Queensland Police Service TIRS and computerised data entry system;

- from 1 December 1991: increase of the minimum damage cost of a reportable road crash (under Section 31 of the Queensland Traffic Act) from greater than $1,000 to greater than $2,500.

During 1992 further modifications were made to the Queensland Road Crash Information System. Also the criterion for the inclusion of a "property damage only" crash in the system was altered in line with the then Queensland Traffic Act to include any crash where the damage to vehicles was greater than $2500 or towed away. On 1 December 1999, with the implementation of the Australian Road Rules in Queensland, this was again altered to include crashes where the damage was greater than $2500 to property other than vehicles or at least one vehicle was towed away.

All crashes and casualties reported in this bulletin are dated in terms of the actual crash dates. Because of this and the fact that some non-fatal crashes may take 12 months or longer for validation, crash data for prior years will contain a percentage of changed data as late reports continue to be entered.

Figures presented in this report are based on the crashes validated in the Queensland Road Crash Information System at 31 March 2000.

Main features of road traffic crashes in Queensland 1999

- Queensland's road toll for 1999 was 314 fatalities. This was 35 fatalities (or 13 per cent) more than for 1998. The 1999 toll was 66 fatalities (or 17 per cent) lower than the previous five-year average of 380.

- In comparison with Queensland's 13 per cent increase, the Australian road toll increased by less than 0.1 per cent compared with the previous year. The Australian toll for 1999 was 1765, an increase of five fatalities on the 1998 toll. Queensland's 8.9 road fatalities per 100,000 population was the second lowest of any Australian state with only Victoria being lower at 8.1. The Queensland rate was also below the national figure of 9.3 fatalities per 100,000 population.

- The over-represented road user groups continue to be young adults. Road users aged between 17 and 20 years experienced fatality rates per 100,000 persons of over twice the average for Queensland. The older drivers, aged 70 and over, and the younger drivers, aged 21 to 24, were noticeably under-represented, with their respective fatality rates for 100,000 persons dropping in 1999.

- Based on police opinion of the cause of traffic crashes, as in previous years, disregard for traffic rules was the largest contributor (35 per cent of fatal crashes and 40 per cent of all reported crashes). At 31 per cent, alcohol/drugs was the largest contributor to fatal crashes.

- Although speed was a contributing factor in four per cent of all reported crashes, it was judged to contribute to 14 per cent of fatal crashes for which it was the fifth most often cited contributing factor.

- Of the 49 fatal pedestrians in 1999, 29 (or 59 per cent) were killed whilst attempting to cross a road with the majority of these occurring where there was no traffic control.

- In regard to the 19335 road crashes on Queensland roads in 1999, by far the majority (11613 or 60 per cent) were multi-vehicle crashes.

- Head-on crashes represented almost half of all multi-vehicle fatal crashes in 1999. This proportion represents a 32 per cent increase over the previous five year.

- The majority (60 per cent) of single vehicle fatal crashes in 1999 involved vehicles hitting objects. The actual number of "hit object" crashes is the lowest in six years.

- During 1999 the highest number of fatal crashes occurred on Friday or Saturday. Almost 40 per cent of fatal crashes occurred on these days. This was also reflected in all crashes where these two days equated to 32 per cent on all crashes.

- Forty percent of all crashes occurred within the greater Brisbane area (Brisbane City and Brisbane Statistical Division) with the rest occurring equally within provincial cities and rural Queensland. For fatal crashes, 50 per cent occurred in rural Queensland.

Road Crash Database

Road crash data plays a major role in the road safety planning and action of major agencies in Queensland and major developments have occurred in its use in recent years.

Queensland transport provides a range of analysis services using the road crash data. As well as the present report, road crash data is used to provide crash profile reports, on request, on specific crash categories. As well, crash data is used to evaluate the effectiveness of all major countermeasures in Queensland (see Chapter 1 of this report) so as to influence program development.

The Department of Main Roads takes core data from the road crash data system operated by Queensland Transport and adds further site information to enable better planning for road safety engineering.

ROAD TOLL IN CONTEXT

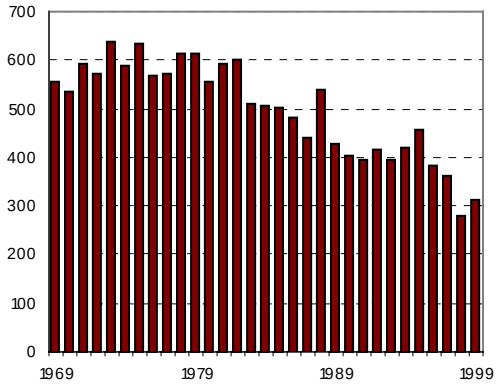
In this section, road traffic crashes for a range of severities in Queensland during 1999 are analysed. The analysis compares 1999 crashes (i) with past trends, (ii) with other states of Australia and (iii) in terms of population growth and economic activity. Finally, the key road safety initiatives of the 1999/2000 Queensland Road Safety Action Plan are evaluated and future actions to reduce the Queensland road toll are summarised.

1.1 Road fatality trends

A total of 314 people died on Queensland roads during 1999. This represents an increase of 35 fatalities (or 13 per cent) on the 1998 road toll. The 1999 road toll was 66 fatalities (or 17 per cent) lower than the average number of fatalities for the previous five years, of 380.

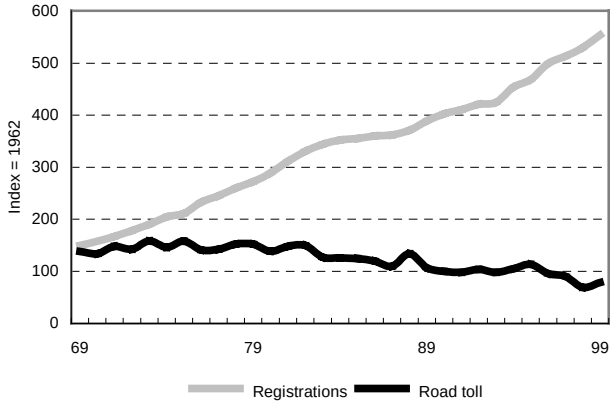
Figure 1.1 shows the longer-term trend in Queensland's road toll. Since the mid-1970s the road toll has been progressively declining. Particularly from 1988, the number of road fatalities has reverted to low levels not experienced since the early 1960s. Between 1989 and 1995 fatalities stabilised within the range of 456 (highest in 1995) and 395 (lowest in 1991). Since 1995, road tolls have declined with the1998 toll being the lowest in Queensland since 1955. Whilst the 1999 toll was a slight increase over the historically low 1998, it was still lower than the toll in 1955.

Fig. 1.1: Annual road toll
Queensland 1969-1999



The general decline in the Queensland road toll has been achieved despite a steadily rising population and an escalation in the number of motor vehicles on register. Figure 1.2, which charts the road toll and motor vehicle registrations since 1969, shows the divergence of trends.

Fig. 1.2: Road toll and motor vehicle registration trends
Queensland 1969-1999



Fatalities in 1999 were 44 per cent below the 1969 toll of 556 fatalities, but vehicle registrations in 1999 were almost four times the 1969 level (see Table 1.1). From the early 1960s, annual road toll figures increased until the mid-1970s, after which a substantial decrease occurred. This decline was achieved despite a continuing strong increase in the number of motor vehicles registered.

A number of road safety initiatives introduced since 1970 have contributed to the reduction in road fatalities, particularly:

- compulsory seat belt wearing for occupants of cars (1972);
- reduction of illegal blood alcohol levels to 0.05 per cent (1982);
- introduction of Random Breath Testing (1988)
- introduction of Random Road Watch (1991)
- compulsory helmet wearing for bicyclists (1992)
- introduction of Speed Cameras (1997)
- introduction of 50 km/h on local streets (1999)

As shown in Table 1.1, the fatality rates relative to both population and vehicle registration have declined significantly since 1969. Since that year the fatality rate based on population has declined by more than two-thirds and the rate based on number of vehicles on register has fallen over 80 per cent. Approximately 8.9 persons per 100,000 population died on Queensland roads in 1999 in contrast to 31.2 in 1969. Further, there were 1.3 road fatalities per 10,000 Queensland vehicles on register in 1999 in contrast to 8.6 in 1969.

Table 1.1: Fatality rates per head of population and vehicles registered Queensland 1969 to 1999

Year	Road Toll	Population * ('000)	Fatality rate per 100,000 population	Vehicles on register ('000)	Fatality rate per 10,000 vehicles
1969	556	1779.7	31.2	649.9	8.6
1974	589	2033.0	29.0	889.7	6.6
1979	616	2239.7	27.5	1183.4	5.2
1984	505	2547.1	19.8	1533.5	3.3
1989	428	2864.4	14.9	1693.4	2.5
1994	422	3116.0	13.5	1975.5	2.1
1999	314	3525.6	8.9	2385.6	1.3

* ABS Cat. No. 3201.0

1.2 Road casualty trends

Casualties from road traffic crashes on Queensland roads totalled 14,671 in 1999. This represents a decrease of 328 (or two per cent) on 1998. The decrease was in all severity categories except for hospitalisation. The 1999 casualty figure was 584 (or four per cent) lower than the average number for the previous five years.

Table 1.2: Severity of road crash casualties Queensland 1994-1999

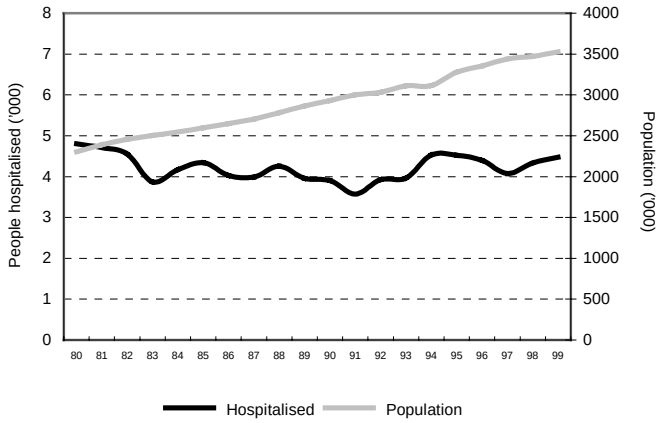
Severity	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fatal	422	3%	456	3%	385	2%	360	2%	279	2%	314	2%
Hospitalisation	4600	31%	4636	29%	4481	28%	4146	28%	4393	29%	4437	30%
Medical treatment required	6205	42%	6692	43%	6836	43%	6481	43%	6319	42%	6137	42%
Other injury	3587	24%	3932	25%	4131	26%	3928	26%	4008	27%	3783	26%
Total	**14814**	**100%**	**15716**	**100%**	**15833**	**100%**	**14915**	**100%**	**14999**	**100%**	**14671**	**100%**

As indicated in Table 1.2:

- the total number of road crash casualties in 1999 was slightly below that for 1998;
- road crash casualties in 1999 were less than one per cent lower than in 1994;
- 32 per cent of all road crash casualties in 1999 were either killed or admitted to hospital; and
- medical treatment injuries accounted for the greatest percentage of all casualties in 1999 (42 per cent).

Figure 1.3 charts the recent trend of the more severe road injuries (defined as persons requiring admission to hospital) compared with state population data.

Fig. 1.3: Road toll and motor vehicle registration trends Queensland 1980-1999



As Figure 1.3 shows, the number of persons hospitalised due to road crashes declined between 1980 and 1991, while the Queensland population increased each year. However hospitalisations increased from 1991 to 1996 and at a higher rate than that for population growth. This trend reversed from 1994 to 1997 but has reverted to an increase since 1998.

1.3 Trends in total reported crashes

There were 19,335 reported crashes on Queensland roads in 1999. This represents a slight drop on the 1998 figure and a five per cent decrease on the average for the previous five years.

Table 1.3 shows that the proportion of crashes in each severity category has remained relatively constant over 1994 to 1998. Over this period the fatality rate per 100 crashes has dropped from 1.8 in 1994 to 1.4 in 1999.

Table 1.3: Severity of road crashes Queensland 1994-1999

Severity	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fatal	368	2%	408	2%	338	2%	321	2%	257	1%	273	1%
Hospitalisation	3612	17%	3654	17%	3559	17%	3328	17%	3514	18%	3513	18%
Medical treatment required	4469	21%	4800	23%	4936	24%	4761	25%	4608	24%	4482	23%
Other injury	2469	12%	2800	13%	2872	14%	2697	14%	2757	14%	2587	13%
Property damage only	9912	48%	9602	45%	9208	44%	8235	43%	8419	43%	8480	44%
Total	**20830**	**100%**	**21264**	**100%**	**20913**	**100%**	**19342**	**100%**	**19555**	**100%**	**19335**	**100%**

Table 1.3 also shows that there were 273 fatal crashes in 1999, an increase of 16 (or six per cent) on 1998 and a decrease of 65 (or 19 per cent) on the average for the previous five years.

Table 1.4 presents data on road crashes for 1994 to 1999 by the level of vehicle damage.

**Table 1.4: Extent of vehicle damage in road crashes*
Queensland 1994-1999**

Overall damage	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Vehicle towed away	17308	83%	17657	83%	17201	82%	15864	82%	15950	82%	15875	82%
Minor damage	2610	13%	2687	13%	2730	13%	2544	13%	2604	13%	2481	13%
No damage	577	3%	605	3%	633	3%	628	3%	669	3%	608	3%
Unit not a vehicle	288	1%	252	1%	286	1%	251	1%	255	1%	229	1%
Not stated	47	0%	63	0%	62	0%	54	0%	72	0%	53	0%
Total	**20830**	**100%**	**21264**	**100%**	**20912**	**100%**	**19341**	**100%**	**19550**	**100%**	**19246**	**100%**

* Based on the most severe vehicle damage in each crash

The table indicates that:

- tow-away crashes rose in 1994 and 1995, but have been declining since then;
- in over 80 per cent of reported road crashes, the damage is extensive enough for a vehicle to be towed away; and
- the proportion of damage to vehicles in road crashes has remained constant since 1993.

A further breakdown of the vehicle damage arising from reported crashes in 1999 is shown in Table 1.5.

**Table 1.5: Extent of vehicle property damage in road crashes*
Queensland 1999**

Damage	No.	%
Extensive, unrepairable	2561	13%
Major - towed away	5226	27%
Moderate - towed away	8153	42%
Moderate - vehicle driveable	1100	6%
Minor damage	1399	7%
No damage	613	3%
Unit not a vehicle	229	1%
Not stated	54	0%
Total	**19335**	**100%**

* Based on the most severe vehicle damage in each crash.

1.4 Queensland in relation to Australia

The Australian road toll in 1999 was 1765, an increase of six fatalities on the 1998 toll. Table 1.6 shows that changes to road tolls varied in Australian from those of 1998. The largest increases were in Queensland (up 13 per cent) and Tasmania (up 10 per cent) whilst the largest decrease occurred in the Northern Territory (down 29 per cent). Queensland had the second lowest per capita toll of all states only bettered by Victoria. Australian Capital Territory had a lower per capita toll at 5.8 fatalities per 100,000 population.

As indicated previously, Queensland's 8.9 road fatalities per 100,000 population and 1.4 road fatalities per 10,000 motor vehicles on register were both below the Australian average rates of 9.3 and 1.5 respectively.

Table 1.6: Road toll in 1999 compared with 1998
States and territories of Australia

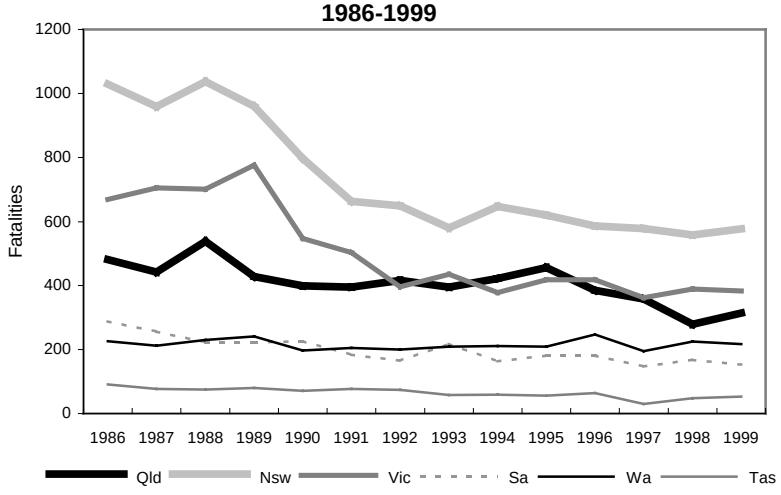
	Fatalities				Fatality rate	
	1999 No.	1998 No.	Variation No.	Variation per cent	per 100,000 population *	per 10,000 vehicles on register **
New South Wales	578	559	19	3%	9.0	1.6
Queensland	314	279	35	13%	8.9	1.4
Victoria	383	389	-6	-2%	8.1	1.2
Western Australia	217	225	-8	-4%	11.6	1.6
South Australia	153	168	-15	-9%	10.2	1.5
Tasmania	53	48	5	10%	11.3	1.6
Northern Territory	49	69	-20	-29%	25.3	4.8
Australian Capital Territory	18	22	-4	-18%	5.8	0.9
Australia	**1765**	**1759**	**6**	**0%**	**9.3**	**1.5**

* Based on ABS Cat. No. 3201.0

** Vehicle data supplied by relevant road authorities

To place this situation into a longer-term perspective, Figure 1.4 plots annual road fatalities by state for the period 1986 to 1999.

Fig. 1.4: Annual road fatalities by state
1986-1999



The figure shows that:

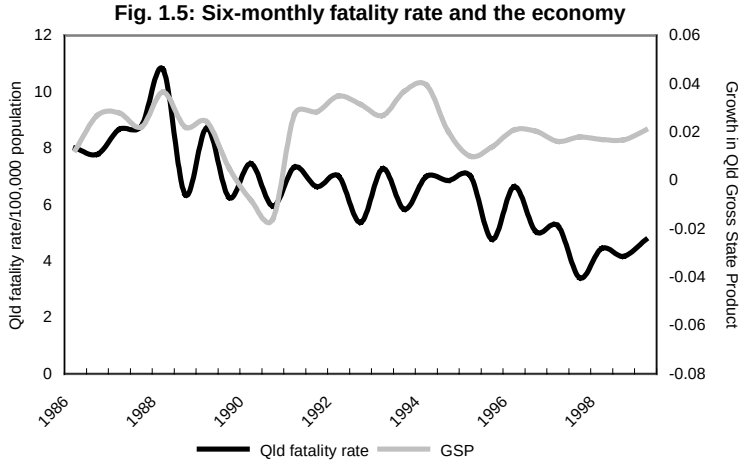
- after a period of relative stability, road fatalities in NSW and Victoria fell significantly from 1988 to 1992;
- the road toll in other jurisdictions remained relatively constant over the period; and
- the Queensland road toll has been declining markedly in comparison with the other states since 1995.

1.5 Factors behind the road toll

There is strong evidence that much of Queensland's road toll performance in both the longer 1986 to 1997 and shorter (since 1998) term can be explained by the interaction between the level of traffic activity (crash risk) and traffic safety management (safety measures carried out either by government, as in the Queensland Road Safety Strategy, or others – vehicle manufacturers, individual road users, and so on).

Figure 1.5 illustrates both the longer and shorter term points by comparing Queensland road fatalities with a measure of community (and hence traffic) activity, the Queensland Gross State Product.

Fig. 1.5: Six-monthly fatality rate and the economy



Road toll and the economy

Concerning the longer term, Figure 1.5 shows that the road toll since 1991 has been lower than for the same level of activity from 1986 to 1990. This suggests (and separate, more rigorous studies support) the concept that the 1990s toll decrease is due to the effect of the measures of the Queensland Road Safety Strategy introduced from 1991 onwards. To name but a few, these measures include compulsory bicycle helmets, Red Light Cameras, Random Road Watch and, in 1997, the implementation of Speed Cameras.

1999, then, can be seen as a period in which the latest generation of road safety improvements (the Queensland Road Safety Action Plan) combined with a lower risk environment than experienced for some years. Previous results would suggest that these factors combined should lead to a very low road toll and, as reported at the start of this chapter, this is the result which has occurred.

1.6 The major contributors to the 1999 fatal road toll

In this section, over 30 road crash descriptors, which are analysed in more detail in the following chapters, are ranked together in order of the contribution of each to the entire fatal road toll. By this means, major contributors to the road toll can be isolated for consideration independent of their usual categories.

Table 1.7 shows that of the seven highest-ranked factors involved in fatal road crashes in 1999, none involved the traditional risk factors of speed, alcohol and failure to wear seat belts. The highest ranking factors included such 'good conditions' as seat belt used, alcohol not involved, straight level road and daylight.

Table 1.7: Fatal crash descriptors by size of contribution to fatal crashes: per cent of crashes, units or persons involved Queensland 1999

Crash descriptor	% Total	Crash descriptor	% Total
Seatbelt used	80%	60 years & over	19%
Non-intersection	76%	Age/inexperience	19%
Alcohol not involved	75%	30-39 years	18%
Weekday	65%	Brisbane City	15%
Cars and variants	63%	Speed	14%
Mulit-vehicle	62%	Uncontrolled intersections	12%
Open road	59%	25-29 years	11%
Daylight	55%	Pedestrians	11%
After dark	45%	Heavy freight vehicles	10%
Single vehicle	38%	40-49 years	10%
Disobeyed traffic rules	35%	Fatigue	9%
Weekend	35%	Motorcycle	9%
Built-up area	33%	50-59 years	6%
Alcohol involvement	25%	Vehicle defects	5%
17-24 years	24%	Rain/wet road	4%
Seatbelt not used	20%	Bicycles	2%

The high levels of these categories of crashes point to the influence of the road and travel environment on fatal crashes. Hence widespread as well as targeted safety programs may be more likely to achieve benefits through greater deterrence.

1.7 Proposed next steps

As discussed above, during the 1990s Queensland has been subject to a wide range of road safety risk factors including Australia's:

- most rapid population growth; and
- strongest economic performance.

However, as outlined above, the road toll has not increased to the extent expected (see Section 1.5). As also outlined this reflects the success of the road safety initiatives discussed above, including those implemented since the release of the 1993 Queensland Road Safety Strategy.

Despite the benefits of these programs, the road toll remains high. Following the success of the 1998/1999 Action Plan, the Queensland Government developed the 1999/2000 Queensland Road Safety Action Plan and revised the 10 year Queensland Road Safety Strategy to enhance those measures which were proven to work and to introduce further new effective programs.

The 1999/2000 Queensland Road Safety Action Plan Top 10 actions in priority order are presented in Table 1.8.

Table 1.8: 1999/2000 Queensland Road Safety Action Plan - Top 10 actions in priority order

Action	Type of crash addressed	Coverage of road toll	Proven crash reductions	Value for money score	Target group
Enhanced speed management strategy	Speed-related crashes	Medium	Y	High	Drivers
Random Road Watch enforcement program	All crashes	High	Y	High	All road users
More effective sanctions and penalties	All crashes	Medium	Y	High	All road users
Improved Random Breath Testing	All crashes	High	Y	Medium	All road users
Conduct public education campaigns	All crashes	Low	Y	Medium	All road users
Road safety traffic engineering works	All crashes	Low	Y	Medium	All road users
Improved vehicle safety standards	All crashes	High	Y	Medium	Vehicle occupants
Maintenance of State Traffic Task Force	All crashes	Medium	Y	Medium	All road users
Extend Red Light Cameras	Drivers/intersections	Low	Y	High	Drivers
Safer cycling and walking	Urban crashes	Medium	Y	Medium	Bicyclists & pedestrians

These initiatives have been prioritised on the basis of:

- the extent to which they target the total road toll;
- their ability to reduce crashes; and
- their value for money.

Once implemented, it is expected that the Top 10 initiatives alone will make significant further inroads into the state road toll.

2. CHARACTERISTICS OF ROAD USERS INVOLVED IN CRASHES

2.1 Introduction

Of the 314 road users killed on Queensland roads in 1999, 224 (or 71 per cent) were male and 88 (or 28 per cent) were female. This represents an increase of 27 males and 7 females over the figures for 1998.

2.2 Trend

The long term trends in fatalities by age group and gender are shown in Table 2.1. This table shows that while there have been slight increase in fatalities, the five year average has fallen since 1990 in all age groups except 25 to 59 years.

Table 2.1: Annual trends in fatalities by age group and gender: Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All fatalities										
0-11 years*	34	25	26	19	22	25	20	21	17	18
12-16 years	11	17	22	18	18	21	20	17	14	20
17-24 years	125	96	119	122	103	121	107	113	79	76
25-59 years	143	180	172	174	194	208	172	155	121	143
60 years+	86	77	77	63	85	81	66	54	48	57
Total	399	395	416	396	422	456	385	360	279	314
Female fatalities										
0-11 years*	10	7	10	9	8	12	8	5	4	8
12-16 years	2	5	5	9	6	8	5	3	6	7
17-24 years	39	24	32	25	29	29	19	39	18	17
25-59 years	44	49	47	40	46	63	55	41	36	36
60 years+	40	34	33	23	38	32	30	21	17	20
Total	135	119	127	106	127	144	117	109	81	88
Male fatalities										
0-11 years*	24	18	16	10	14	13	12	16	12	8
12-16 years	9	12	17	9	12	13	15	14	8	13
17-24 years	86	72	87	97	74	92	88	74	61	59
25-59 years	99	131	125	134	148	145	117	114	85	107
60 years+	46	43	44	40	47	49	36	33	31	37
Total	264	276	289	290	295	312	268	251	197	224

* includes fatalities of unknown gender

Table 2.2 provides more detailed data concerning persons killed during 1999 by gender and age group.

Table 2.2: Age and sex of fatalities
Queensland 1999

Age group	Male	Female	Total	Proportion of road toll**	Proportion of population**	Fatalities per 10,000 persons*
0 - 4 years***	5	7	14	4%	7%	3.76
5 - 11 years	3	1	4	1%	10%	1.19
12 - 16 years	13	7	20	6%	7%	8.16
17 - 20 years	36	12	48	15%	6%	23.91
21 - 24 years	23	5	28	9%	7%	12.58
25 - 29 years	24	12	36	11%	8%	13.74
30 - 39 years	45	12	57	18%	16%	10.91
40 - 49 years	25	5	30	10%	14%	6.22
50 - 59 years	13	7	20	6%	10%	5.93
60 - 69 years	18	7	25	8%	7%	10.21
70 - 79 years	12	10	22	7%	5%	12.31
80 years & over	7	3	10	3%	2%	12.11
Total	**224**	**88**	**314**	**100%**	**100%**	**9.36**

* ABS Cat. No. 3201.0 ** Figures in this column have been rounded

*** Includes fatalities of unknown gender

The data above indicates that:

- male fatalities were more than twice the number of females killed in road crashes;
- the over-represented road user age groups continue to be young adults. Road users aged 17 to 20 recorded a fatality rate of more than twice the state average;
- young adult road users aged 17 to 24 years accounted for 24 per cent of the total fatalities but only 13 per cent of the population. Fatalities in this group decreased from 79 in 1998 to 76 in 1999. The 21 to 24 years age group decreased significantly from 14 per cent in 1999 to nine percent in 1999; and
- in the 17 to 24 years age group, males made up 78 percent of the total fatalities (up from 77 per cent in 1998), while females made up 25 percent of total fatalities (down from 39 per cent in 1998) in the 17 to 20 years age group.

Table 2.3 provides comparative information on fatality numbers by gender and age groups between 1999 and 1998.

Table 2.3: Age and sex of fatalities
Queensland 1999 compared to 1998

	Male			Female		
Age group	**1999**	**1998**	**Variation**	**1999**	**1998**	**Variation**
0 - 4 years	5	6	-17%	7	2	250%
5 - 11 years	3	6	-50%	1	2	-50%
12 - 16 years	13	8	63%	7	6	17%
17 - 20 years	36	28	29%	12	11	9%
21 - 24 years	23	33	-30%	5	7	-29%
25 - 29 years	24	18	33%	12	8	50%
30 - 39 years	45	29	55%	12	11	9%
40 - 49 years	25	20	25%	5	7	-29%
50 - 59 years	13	18	-28%	7	10	-30%
60 - 69 years	18	7	157%	7	5	40%
70 - 79 years	12	17	-29%	10	6	67%
80 years and over	7	7	0%	3	6	-50%
Total	**224**	**197**	**14%**	**88**	**81**	**9%**

Table 2.3 indicates that, compared with 1998:

- in line with the overall road toll, the number of male road user fatalities increased by 14 per cent from 197 to 224 in 1999. Fatalities for females increased nine per cent from 81 to 88;

- the largest percentage decrease of male age groups occurred in fatalities aged 21 to 24 years, (a decrease of 30 per cent from 33 to 23);

- the largest percentage decrease for any female age group occurred in the 80 years and over group, where fatalities decreased by 50 per cent (from six to three) compared with 1998 and in the 5 to 11 years age group (also down by 50 per cent,) from two in 1998 to one in 1999; and

- in contrast to 1998, the largest percentage increases in male fatalities occurred in the 60 to 69 years age group (from seven to 18). The largest percentage increase in female fatalities occurred in the zero to four years and 70 to 79 years age groups, by 250 and 67 per cent respectively.

Table 2.4 presents data concerning fatalities by road user type over the period 1994 to 1999.

Table 2.4: Fatalities by road user type
Queensland 1994-1999

Road user type	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Drivers	177	42%	180	39%	174	45%	158	44%	121	43%	127	40%
Passengers	108	26%	119	26%	105	27%	88	24%	75	27%	87	28%
Motorcyclists	45	11%	54	12%	41	11%	43	12%	25	9%	41	13%
Bicyclists	13	3%	10	2%	10	3%	12	3%	9	3%	9	3%
Pedestrians	79	19%	92	20%	55	14%	59	16%	48	17%	49	16%
Other	0	0%	1	0%	0	0%	0	0%	1	0%	1	0%
Total	**422**	**100%**	**456**	**100%**	**385**	**100%**	**360**	**100%**	**279**	**100%**	**314**	**100%**

It can be seen from the table that:

- the 314 fatalities in 1999 represent a 17 per cent decrease on the average of the previous five years of 380 fatalities;

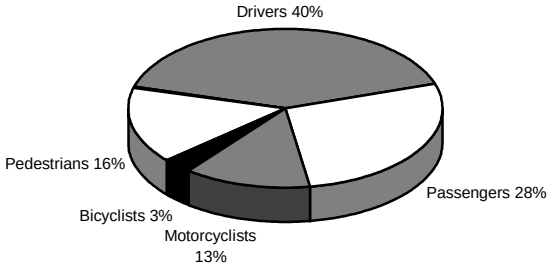
- on average over the past six years, vehicle drivers made up 42 per cent of those killed in each year;

- passengers were the next largest group with an average of 26 per cent of all fatalities; and

- the proportion of fatalities made up by each user group has been similar in most years from 1994 to 1999.

Figure 2.1 shows the proportion of the 1999 road toll represented by each road user type.

Fig 2.1: Road toll by road user type Queensland 1999



The injury severity category "admitted to hospital" indicates a severe injury from a traffic crash and is second to "fatal" as the highest severity level recorded by police. Data on persons involved in a road crash and admitted to hospital over the period 1994 to 1999 is presented in Table 2.5, classified by type of road user.

Table 2.5: Hospitalised casualties by road user type Queensland 1994-1999

Road user type	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Drivers	2001	44%	2088	45%	1928	43%	1841	44%	1996	45%	2097	47%
Passengers	1304	28%	1294	28%	1273	28%	1131	27%	1172	27%	1176	27%
Motorcyclists	649	14%	598	13%	606	14%	546	13%	589	13%	525	12%
Bicyclists	227	5%	211	5%	259	6%	253	6%	240	5%	238	5%
Pedestrians	418	9%	445	10%	411	9%	373	9%	393	9%	380	9%
Other	1	0%	0	0%	4	0%	2	0%	3	0%	21	0%
Total	**4600**	**100%**	**4636**	**100%**	**4481**	**100%**	**4146**	**100%**	**4393**	**100%**	**4437**	**100%**

Table 2.5 shows that:

- when compared to the previous five-year average, the number of road users admitted to hospital as a result of a road crash has decreased by less than one per cent;
- the number of hospitalised drivers increased by five per cent in 1999 from 1,996 in 1998 to 2,097 in 1999;
- in 1999, passengers hospitalised made up 27 per cent of the total, which is consistent with the previous five-year average proportion of the total;
- over the past six years, motorcyclists consistently averaged around 13 per cent of the hospitalised casualties;

2.3 Children

The majority of fatalities among children aged up to 16 years in 1999 involved crashes between intersections (90 per cent), over 60 percent during the working week and more than half during daylight hours. Compared with all fatalities in 1999, fatalities among children aged up to 16 years involved proportionally twice as many bicycles and were more likely to involve driver fatigue as a cause (44 per cent more).

Thirty-four children aged up to 16 years were fatally injured in 1999, accounting for 11 per cent of the state's road fatalities. The number killed in 1999 was higher than in 1998 (31). As children made up of one-quarter of the state's population, they were under represented in road fatalities.

Figure 2.2 and Table 2.6 provide details of fatalities of children grouped by road user type.

Fig. 2.2: Fatally injured children
Queensland 1999

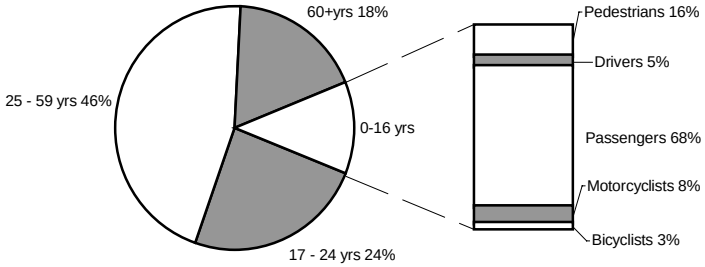


Table 2.6: Child fatalities by road user type and age group
Queensland 1999

Age group	Drivers	Passengers	Motorcyclists	Bicyclists	Pedestrians	Total
0 - 4 years	0	12	1	0	1	14
5 - 11 years	0	4	0	0	0	4
12 - 16 years	2	10	2	1	5	20
Total	**2**	**26**	**3**	**1**	**6**	**38**

The data shows that:

- 68 per cent of the children killed on Queensland road in 1999 were passengers;
- there were six pedestrian fatalities for young children in 1999, representing 16 per cent of all children killed. This was a decrease from 1998 when eight children pedestrians were killed, representing 26 per cent of the 1998 child fatalities; and
- 53 per cent of the child fatalities were of secondary school age (12 to 16 years). Thirty-eight per cent of these were passengers.

Table 2.7 compares the level of seat belt wearing of child fatalities during 1999 by age group to that of all vehicle occupant fatalities.

Table 2.7: Non-seat belt wearing of child vehicle occupant fatalities Queensland 1999

Age group	Seat belt not worn	Total vehicle occupants killed *	Proportion of occupants unrestrained
0 - 4 years	2	6	33%
5 - 11 years	0	3	0%
12 - 16 years	5	9	56%
Total children	**7**	**18**	**39%**
All vehicle occupants	47	145	32%

* Where restraint use could be determined

The above data indicates that, in 1999, the proportion of child fatalities unrestrained (39 per cent) was above that for all road fatalities unrestrained (32 per cent).

The percentage of unrestrained vehicle occupants (regardless of age) has increased when compared with 1998 (from 26 per cent to 32 per cent). In 1999, of the 18 child vehicle occupant fatalities, seven were unrestrained compared with one in 1998.

Table 2.8 shows the time of day when children were killed on Queensland roads in 1999.

Table 2.8: Child road user fatalities by time of day Queensland 1999

Age group	Midnight to 6 am	6 am to 8 am	8 am to 2 pm	2 pm to 4 pm	4 pm to 6 pm	6 pm to midnight	Total
0 - 4 years	1	2	1	3	1	2	10
5 - 11 years	1	0	3	0	0	0	4
12 - 16 years	3	3	3	4	1	6	20
Total Children	**5**	**5**	**7**	**7**	**2**	**8**	**34**

The table shows that:

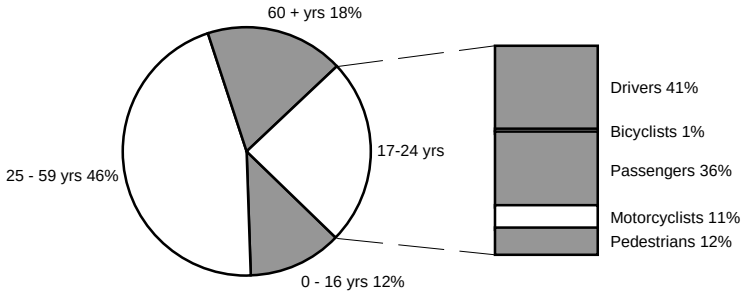
- 41 per cent of child fatalities in 1999 occurred between 8 am and 4pm;
- eight (18 per cent) of the fatally injured children where involved in crashes occurring between 6pm and midnight; and
- 13 (38 per cent) of the child fatalities died as a result of crashes occurring after dark.

2.4 Young adults

The majority of fatalities among young adults (that is, those aged between 17 and 24 years) in 1999 involved vehicles moving straight ahead (68 per cent) with 74 per cent occurring between intersections and 64 per cent after dark. Sixty-eight per cent of units involved were cars whilst 42 percent of crashes were single vehicle accidents. Compared with all fatalities in 1999, fatalities among young adults occurred proportionally more often involving speed (29 per cent more), unrestrained occupants (20 per cent more) and involving a heavy vehicle (30 per cent more).

In Queensland, road crashes are a major cause of death for young adults (Australian Bureau of Statistics Cat. No. 3303.0). Young adults made up 76 of those killed on Queensland roads in 1999, this number representing 24 per cent of the year's total fatalities. This group was over-represented in road traffic fatalities as it makes up only 13 per cent of the total population of Queensland.

Fig. 2.3: Fatally injured young adults
Queensland 1999



The road user type of young adult fatalities is presented in Table 2.9. The table is divided into the two principal age groups; 17 to 20 years and 21 to 24 years.

Table 2.9: Young adult fatalities by road user type and age group
Queensland 1999

Age group	Drivers	Passengers	Motorcyclists	Bicyclists	Pedestrians	Total
17 - 20 years	19	18	5	0	6	48
21 - 24 years	12	9	3	1	3	28
Total	**31**	**27**	**8**	**1**	**9**	**76**

Table 2.9 indicates that:

- in 1999, 28 young adult fatalities (63 per cent) were aged 17 to 20 years. This is an increase on the 1998 proportion of 49 per cent;
- 58 of the young adults killed in road crashes (76 per cent) were vehicle occupants, with the majority of those being drivers; and
- pedestrian fatalities, at nine, among young adults have dropped 18 per cent since 1998.

Table 2.10 shows that, where restraint use was known, 38 per cent of young adult vehicle occupant fatalities were unrestrained in 1999. This is an increase on 1998 when this proportion was 28 per cent, and is slightly above all vehicle occupants fatality rate (32 per cent).

Table 2.10: Non - seat belt wearing of young adult vehicle occupant fatalities
Queensland 1999

Age group	Seat belt not worn	Total vehicle occupants killed *	Proportion of vehicle occupants unrestrained
17 - 20 years	10	25	40%
21 - 24 years	4	12	33%
Total children	**14**	**37**	**38%**
All vehicle occupants	47	145	32%

* Where restraint use could be determined

Table 2.11 shows that the alcohol involvement of young adults in fatal crashes was just below that for all drivers and riders. In 1999, 22 per cent of young adult fatalities tested for alcohol returned blood alcohol levels of 0.05 per cent or greater, just below the figure for all road users (23 per cent).

Table 2.11: Alcohol involvement of young adult driver and rider fatalities Queensland 1999

Age group	Tested	BAC 0.05% or greater	Proportion
17 - 20 years	19	2	11%
21 - 24 years	13	5	38%
Total young adults	**32**	**7**	**22%**
All drivers and riders	124	29	23%

Compared with 1998, proportional alcohol involvement amongst young adults decreased by 15 per cent in 1999. The total number of young adults with alcohol involvement fell by 36 per cent compared to 1998.

Table 2.12: Young adult road user fatalities by day of week Queensland 1999

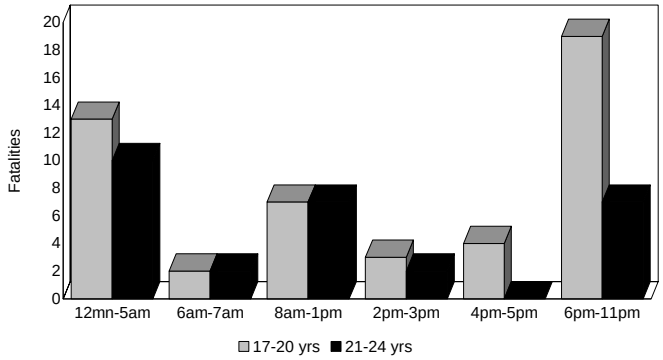
Age group	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
17 - 20 years	12	7	0	2	9	11	7	48
21 - 24 years	6	2	3	1	4	8	4	28
Total young adults	**18**	**9**	**3**	**3**	**13**	**19**	**11**	**76**

Analysis by the day of the week on which crashes occurred reveals Thursday, Friday, Saturday and Sunday to be high-risk periods for young adult road users, as shown in Table 2.12.

The table indicates that of the 76 young adult road users killed in 1999, 48 (or 63 per cent) died on a Friday, Saturday or Sunday, up slightly from 62 percent in 1998.

Figure 2.4 illustrates that 26 (or 34 per cent) of the 76 young adult fatalities were killed between 6pm and midnight, and a further 23 (30 per cent) were killed between midnight and 6 am, making those the highest risk times for young adults.

Fig. 2.4: Young adult road user fatalities by time of day Queensland 1999

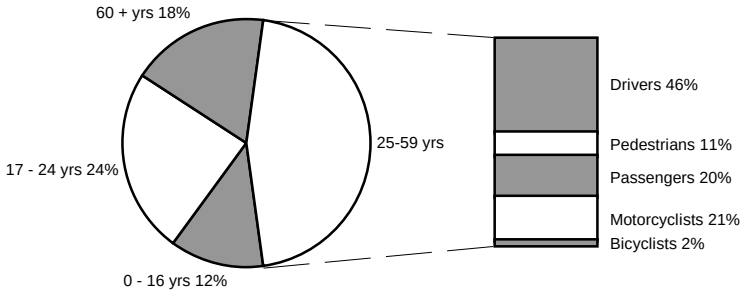


2.5 Mature age road users

The majority of fatalities among mature age road users (that is, those aged 25 to 59 years) in 1999 involved crashes between intersections (83 per cent) with 62 per cent occurring during the working week and 52 percent in daylight. Fifty-seven per cent of units involved were cars whilst 47 per cent of crashes occurred in 100 km/h zones. Compared with all fatalities in 1999, fatalities among mature age road users were more likely to involve alcohol (24 per cent) or involve a motorcycle (56 per cent more likely). In 1999 there were 143 mature age road fatalities, which accounted for 46 per cent of Queensland's road toll, similar to 1998. Within the mature age group, road users aged 30 to 39 years and 40 to 49 years were under represented in fatal road crashes. These groups comprised 16 and 14 per cent respectively

of the population in 1999, but made 18 and 10 per cent of those killed on the roads (see Table 2.2 page 10).

Fig. 2.5: Mature age road user fatalities
Queensland 1999



Mature age road user fatalities in the four main age groups are shown in Table 2.13.

Table 2.13: Mature age road user fatalities by type and age group
Queensland 1999

Age group	Drivers	Passengers	Motorcyclists	Bicyclists	Pedestrians	Total
25 - 29 years	12	15	8	0	1	36
30 - 39 years	26	6	15	1	8	57
40 - 49 years	16	4	5	1	4	30
50 - 59 years	11	3	2	1	3	20
Total	**65**	**28**	**30**	**3**	**16**	**143**

Data presented in Table 2.13 and Figure 2.5 indicate that:

- 65 per cent of the mature age road users killed in 1999 were vehicle occupants;
- 65 (45 per cent) of the mature age road users were drivers; and
- motorcycle fatalities increased by 100 per cent from 15 in 1998 to 30 in 1999.

Table 2.14 shows that, where restraint use was known, mature age vehicle occupant fatalities have a failure to wear a seat belt rate of 33 per cent, which is one per cent higher than that for all road users.

Table 2.14: Non-seat belt wearing of mature age vehicle occupant fatalities
Queensland 1999

Age group	Seat belt not worn	Total vehicle occupants killed *	Proportion of occupants unrestrained
25 - 29 years	8	20	40%
30 - 39 years	9	21	43%
40 - 49 years	2	13	15%
50 - 59 years	2	9	22%
Total mature age	**21**	**63**	**33%**
All vehicle occupants	47	145	32%

The data in Table 2.14 indicate that vehicle occupant fatalities aged 30 to 39 years had the lowest seat belt wearing rates of mature age groups, with 43 per cent unrestrained.

Table 2.15 presents data on alcohol involvement of mature age driver and rider fatalities in 1999.

Table 2.15: Alcohol involvement of mature age driver and rider fatalities Queensland 1999

Age group	Tested	BAC 0.05% or greater	Proportion
25 - 29 years	15	5	33%
30 - 39 years	29	8	28%
40 - 49 years	15	5	33%
50 - 59 years	11	1	9%
Total mature age	**70**	**19**	**27%**
All drivers and motorcycle riders	124	29	23%

The table shows that:

- compared with 1998, proportional alcohol involvement amongst mature adults showed a slight decrease;
- 27 per cent of mature age driver and rider fatalities in 1999 (19 of 70 tested) returned a BAC reading of 0.05 per cent or greater (the general adult legal drink driving limit). This was four percentage points below the proportion for all drivers and riders killed; and
- fatalities aged from 25 to 29 and 40 to 49 years had the highest incidence of illegal drink driving (33 per cent).

Table 2.16 shows the occurrence of mature age road user fatalities by day of the week.

Table 2.16: Mature age road user fatalities by day of week Queensland 1999

Age group	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
25 - 29 years	5	6	3	5	2	6	9	36
30 - 39 years	10	2	9	6	7	7	16	57
40 - 49 years	5	5	4	5	2	5	4	30
50 - 59 years	2	3	4	2	3	3	3	20
Total Mature Age	**22**	**16**	**20**	**18**	**14**	**21**	**32**	**143**

It can be seen from the data above that fatalities were spread throughout the week, with peaks on Saturday (22 per cent) and Sunday (15 per cent), and the lowest rate on Thursday (10 per cent).

2.6 Older road users

The majority of fatalities among older road users (that is, those aged 60 years and over) in 1999 involved vehicles moving straight ahead (75 per cent), with almost 70 per cent involving cars and more than 80 per cent during daylight hours. Compared with all fatalities in 1999, fatalities among older road users were 67 per cent more likely to occur at intersections, particularly at unsigned (83 per cent more likely) or at Give Way/Stop signs (100 per cent more likely).

Fifty-seven road users aged 60 years and over were killed on Queensland roads in 1999, comprising 18 per cent of the road toll. This is nine (or 19 per cent) more fatalities for this age group than in 1998.

Figure 2.6 presents the distribution of older road user fatalities by road user type.

Fig. 2.6: Older road user fatalities
Queensland 1999

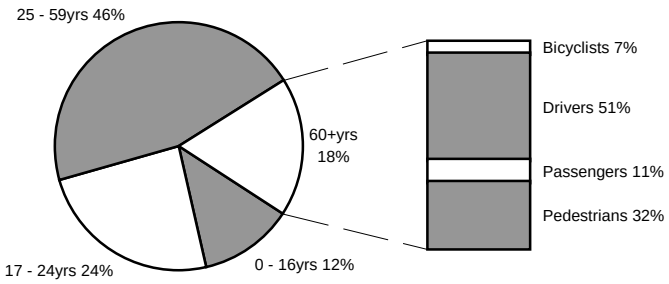


Table 2.17 groups the data by road user type and age.

Table 2.17: Older road user fatalities by type and age group
Queensland 1999

Age group	Drivers	Passengers	Motorcyclists	Bicyclists	Pedestrians	Total
60 - 69 years	12	3	0	2	8	25
70 - 79 years	13	2	0	2	5	22
80 years and over	4	1	0	0	5	10
Total	**29**	**6**	**0**	**4**	**18**	**57**

From Table 2.17, it can be seen that:

- the majority of older road users killed were vehicle occupants (61 per cent);
- 58 per cent of older drivers killed were aged 70 years and over;
- there were six passenger fatalities in 1999, nine (or 60 per cent) less than 1998; and
- there were 18 pedestrian fatalities in 1999, a 100 per cent increase on the 1998 level. Almost 60 per cent of these fatalities were aged 70 years and over.

Table 2.18 (and previous annual crash reports) indicate that older vehicle occupants fatally injured are more likely to be wearing seat belts when compared with other age groups. For vehicle occupant fatalities, 19 per cent of older road users were unrestrained, compared with 32 per cent of all vehicle occupants.

Table 2.18: Non - seat belt wearing of older vehicle occupant fatalities
Queensland 1999

Age group	Seat belt not worn	Total vehicle occupants killed *	Proportion of occupants unrestrained
60 - 69 years	3	10	30%
70 - 79 years	2	12	17%
80 years +	0	5	0%
Total children	**5**	**27**	**19%**
All vehicle occupants	47	145	32%

* Where restraint use could be determined

Table 2.19 provides details of responsibility for fatal crashes involving older road users, as indicated by the reporting police officer.

Table 2.19: Responsibility for fatal crashes involving older drivers or pedestrians Queensland 1999

	Drivers			Pedestrians		
Age group	**Responsible**	**Total**	**%**	**Responsible**	**Total**	**%**
60 - 69 years	12	21	57%	6	8	75%
70 - 79 years	14	20	70%	4	5	80%
80 years and over	5	5	100%	5	5	100%
Total older age group	**31**	**46**	**67%**	**34**	**52**	**65%**
All age groups	201	367	55%	36	48	75%

Table 2.19 shows that:

- older drivers were believed to be responsible for 67 per cent of fatal crashes in which they were involved in 1999 in contrast to drivers generally, who were believed to be responsible for 55 per cent of fatal crashes in which they were involved. This was a decrease for the older drivers from 72 per cent in 1998;

- this allocated responsibility for drivers increases with age from 57 per cent in the 60 to 69 years group, to 100 per cent for the 80 years and over group; and

- older pedestrians were believed to be responsible for 65 per cent of fatal crashes in which they were involved in 1999. This is lower than the proportion of pedestrians responsible for fatal crashes across all age groups (75 per cent).

Table 2.20 shows the daily time periods during which fatal crashes involved older road users occurred in 1999.

Table 2.20: Older road user fatalities by time of day Queensland 1999

Age group	**6am - 8am**	**8am - 10am**	**10am - 12 noon**	**12 noon - 2pm**	**2pm - 4pm**	**4pm - 6pm**	**6pm - 6am**	**Total**
60 - 69 years	3	2	6	4	2	3	5	25
70 - 79 years	1	1	3	6	5	2	4	22
80 years and over	0	0	4	1	1	3	1	10
Total older age group	**4**	**3**	**13**	**11**	**8**	**8**	**10**	**57**

The data show that:

- 5 per cent of older road user fatalities (43 out of 57) occurred between 8.00am and 6.00pm;

- 33 per cent of the older road user fatalities (19) occurred between 12.00pm and 4.00pm; and

- 18 per cent of the older road user fatalities (10) occurred between 6.00pm and 6.00am.

3. UNITS IN CRASHES

3.1 Introduction

There were 35,603 vehicles and other crash unit types involved in the 19,335 reported road traffic crashes on Queensland roads during 1999. This indicates a crash rate of 1.84 units per crash during 1999, while for the more severe crashes the number of units per crash was lower (fatal 1.77; hospitalisation 1.74). Table 3.1 illustrates the involvement of the different unit types by the severity level of crashes in 1999.

Table 3.1: Units involved in crashes by severity of crash
Queensland 1999

	Fatal		Hospitalisation		All crashes	
Unit type	**No.**	**%**	**No.**	**%**	**No.**	**%**
Car	229	47%	3736	61%	25557	72%
Utility/van	73	15%	741	12%	4574	13%
Rigid truck	17	4%	147	2%	903	3%
Articulated truck	31	6%	151	2%	706	2%
Bus	12	2%	45	1%	274	1%
Motorcycle	44	9%	515	8%	1160	3%
Tractor	5	1%	30	0%	147	0%
Towed device	1	0%	2	0%	27	0%
Bicycle	10	2%	247	4%	795	2%
Pedestrian	52	11%	388	6%	911	3%
Animal - ridden	0	0%	1	0%	1	0%
Animal - stock *	1	0%	30	0%	192	1%
Animal - other *	0	0%	18	0%	76	0%
Railway stock	0	0%	11	0%	27	0%
Other	8	2%	40	1%	253	1%
Total units	**483**	**100%**	**6102**	**100%**	**35603**	**100%**

The data above indicates that:

- 72 per cent of units involved in all reported crashes were cars, whereas cars comprised 47 per cent of the units involved in fatal crashes;
- in fatal crashes, unprotected road users (motorcyclists, bicyclists and pedestrians) comprised 22 per cent of the units involved, whereas they comprised only eight per cent of units in all reported crashes; and
- the involvement of heavy freight vehicles (rigid and articulated) in fatal crashes was twice the involvement of these vehicles in all heavy vehicle crashes. These vehicles comprised 10 per cent of the units involved in fatal crashes in 1999, whereas they comprised five per cent of the units involved in all crashes.

Figure 3.1 illustrates the involvement of units in fatal crashes in 1999.

Fig. 3.1: Unit involvement in fatal crashes
Queensland 1999

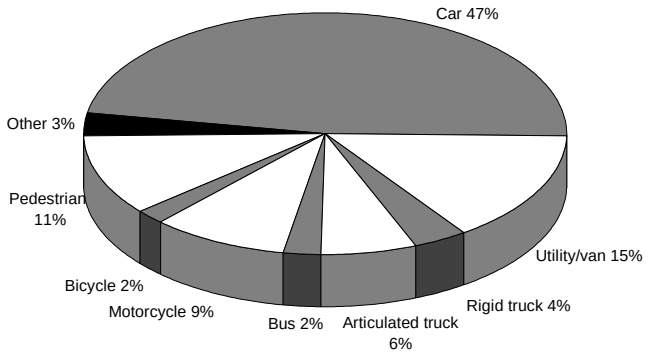


Table 3.2 lists the number of units involved in fatal crashes by unit type since 1994.

Table 3.2: Units involved in fatal crashes by year
Queensland 1994-1999

Type of vehicle	1994	1995	1996	1997	1998	1999
Car	335	347	292	286	209	229
Utility/van	85	107	84	78	75	73
Rigid truck	31	28	24	24	17	17
Articulated truck	38	49	34	31	29	31
Bus	7	6	6	2	7	12
Motorcycle	46	57	44	44	25	44
Tractor	5	7	7	6	3	5
Towed device	0	0	1	0	1	1
Bicycle	12	10	11	12	10	10
Pedestrian	86	96	59	61	48	52
Animal - ridden	0	0	0	0	2	0
Animal - stock	4	2	2	5	3	1
Animal - other	0	1	1	0	2	0
Railway stock	4	4	4	3	4	0
Other	0	2	0	3	2	8
Total	**653**	**716**	**569**	**555**	**437**	**483**

The main trends indicated in Table 3.2 are:

- overall, the number of units involved in fatal crashes during 1999 was 18 per cent lower than the average of the previous five years;
- motorcycle and pedestrian involvement both showed increases in 1999 over 1998. However, pedestrian involvement in particular was noticeably down when compared to the five-year average; and
- the involvement of motorcycles in fatal crashes increased in 1999 when compared to the historically low involvement 1998, but is similar to the previous five-year average.
- bus involvement had a 42 per cent increase over 1998 and an increase (53 per cent) when compared to the previous five-year average.

The trend of the involvement of the major vehicle types in fatal crashes since 1986 is illustrated in Figure 3.2.

Fig. 3.2: Unit involvement trend for fatal crashes
Queensland 1986 - 1999

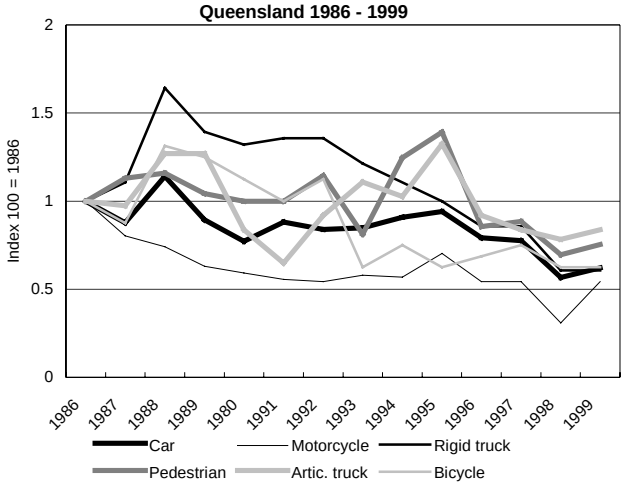


Figure 3.2 highlights the general downward trend of all units involved in fatal crashes from 1988 until 1998. In 1999, bicycle and rigid truck involvement maintained 1998 levels but all other units show an increase over 1998 levels.

3.2 Fatal crash involvement by unit type

Cars and variants

Fatal crash involvement of cars, utilities and panel vans have shown decreases in 1999 over the previous nine year averages, of 24 per cent and 12 per cent respectively (see Table 3.3). The majority of these crashes in 1999 involved vehicles between intersections (75 per cent), with 66 per cent occurred during the working week, 60 per cent on straight roads and 57 per cent in daylight. Compared with all fatal crashes in 1999, fatal crashes involving cars occurred in similar proportions for all descriptors.

Table 3.3: Annual trends in fatal crash involvement of cars and variants
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Car	285	325	310	313	335	347	292	286	209	229
Utility/van	89	75	89	72	85	107	84	78	75	73

During 1999, 302 cars (including utilities and panel vans) were involved in fatal crashes. Of the 302 cars, 179 (or 59 per cent) were considered “most at fault” by investigating police. Of the fatal crashes in which a car was considered most at fault, less than half (80 crashes) were single vehicle crashes. Overall, cars were considered the unit most at fault in 66 per cent of all fatal crashes.

An analysis of the relative involvement in fatal crashes of all types of cars in 1999 is provided in Table 3.4.

Table 3.4: Comparison of fatal crash involvement for cars and variants
Queensland 1999

Vehicle type	% of units in fatal crashes	% of total vehicle registrations	Fatal crash rate/10,000 vehicles
Car/Station wagon	47%	73%	1.3
Utility/van	15%	18%	1.7
Total cars	**63%**	**91%**	**1.4**

Heavy freight vehicles

Fatal crash involvement of heavy vehicles in 1999 was close to that 1998, the lowest figure for the previous nine years. Overall, the involvement of rigid and articulated trucks showed a decrease in 1999 over the previous nine-year average (down by 44 per cent and 10 per cent respectively) (see Table 3.5). The majority of these crashes (78 per cent) occurred between intersections and during the working week, with 53 per cent not on straight roads and 51 per cent after dark. Twenty-five per cent of these crashes occurred within the Southern region. Compared with all fatal crashes in 1999, fatal crashes involving heavy vehicles were more likely to involve the 17 - 24 year age group (50 per cent more) and occur less often on weekends (37 per cent less often).

Table 3.5: Annual trends in fatal crash involvement of heavy vehicles
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Rigid Truck	37	38	38	34	31	28	24	24	17	17
Articulated Truck	31	24	34	41	38	49	34	31	29	31

During 1999, 48 heavy freight vehicles (rigid and articulated trucks) were involved in fatal crashes. Of the 48 heavy freight vehicles, 17 (or 35 per cent) were considered most at fault by investigating police. Of those fatal crashes in which a heavy freight vehicle was considered most at fault, 59 per cent were single vehicle crashes. Overall, heavy freight vehicles were considered the unit most at fault in 18 per cent of all fatal crashes. An analysis of the relative involvement in fatal crashes in 1999 of heavy freight vehicles compared with cars is provided in Table 3.6.

Table 3.6: Comparison of fatal crash involvement for cars and heavy freight vehicles
Queensland 1999

Vehicle type	% of units in fatal crashes	% of total vehicle registrations	Fatal crash rate/10,000 vehicles
Total cars	63%	91%	1.4
Rigid trucks	4%	3%	2.4
Articulated trucks	6%	1%	24.0

The data indicates that in 1999 articulated trucks had a fatal crash rate per 10,000 registered vehicles of 17 times that for cars. Articulated trucks were involved 24 fatal crashes per 10,000 trucks on register in 1999. The figure for cars was 1.4 fatal crashes per 10,000 cars registered. Rigid trucks had a total crash rate of 1.7 times that for cars.

Buses

Fatal crash involvement of buses has shown a relatively flat trend over the past ten years apart from peaks in 1991 and 1999 (see Table 3.7). Bus crashes in 1999 resulted in one bus occupant killed. The majority of fatal crashes involving buses in 1999 occurred during the working week (75 per cent), in daylight (67 per cent), between intersections and on straight roads (58 per cent).

Table 3.7: Annual trends in fatal crash involvement of buses
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bus	4	12	4	7	7	6	6	2	7	12

During 1999, 12 buses were involved in fatal crashes on Queensland roads. In two of these crashes, the bus was considered most at fault by investigating police, and one bus occupant was killed in those crashes. A comparison of the relative fatal crash involvement per 10,000

vehicles on register of buses compared with cars indicates a fatal crash rate for buses of over five times that of cars for 1999. Table 3.8 presents this comparison.

Table 3.8: Comparison of fatal crash involvement for cars and buses
Queensland 1999

Vehicle type	% of units in fatal crashes	% of total vehicle registrations	Fatal crash rate/10,000 vehicles
Total cars	63%	91%	1.4
Buses	2%	1%	7.6

Motorcycles

The trend in the involvement of motorcycles in fatal crashes was relatively flat from 1990 to 1999, except for an increase in 1995 and a decrease in 1998 (see table 3.9). The majority of fatal motorcycle crashes in 1999 occurred between intersections (68 per cent), during daylight hours (66 per cent) and not on a straight road (61 per cent). Compared with all crashes in 1999, fatal crashes involving motorcycles occurred proportionally more often with speed (129 per cent more often) but less often on straight roads (34 per cent less often).

Table 3.9: Annual trends in fatal crash involvement of motorcycles
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Motorcycle	48	45	44	47	46	57	44	44	25	44

During 1999, 44 motorcycles were involved in fatal crashes, in which 39 motorcycle riders and two pillion passengers died. Thirty of these motorcycles (or 68 per cent of motorcycles involved) were considered most at fault by investigating police. Sixteen (or 37 per cent) of motorcycles considered most at fault were involved in single vehicle crashes. Overall, motorcycles were considered the unit most at fault in 11 per cent of all fatal crashes.

Table 3.10 indicates that in 1999, motorcycles had a fatal crash involvement rate, based on vehicles registered, that was more than four times that for cars.

Table 3.10: Comparison of fatal crash involvement for cars and motorcycles
Queensland 1999

Vehicle type	% of units in fatal crashes	% of total vehicle registrations	Fatal crash rate/10,000 vehicles
Total cars	63%	91%	1.4
Motorcycles	9%	3%	5.9

Cars comprised 63 per cent of units involved in fatal crashes, while motorcycles comprised nine per cent. However, based on vehicle registrations, motorcycles were involved in 5.9 fatal crashes per 10,000 registered motorcycle compared to the car fatal crash rate of 1.4 fatal crashes per 10,000 registered cars.

Bicycles

The trend in fatal bicycle crashes was relatively flat between 1990 and 1992, followed by a decline in 1993, with a flat trend since then. The majority of crashes in 1999 (78 per cent) occurred between intersections, on straight roads (78 per cent), during the working week (67 per cent) with 67 per cent occurring in daylight. Compared to all fatalities, the over 60 years age group (132 per cent) and bicycle fatalities in 70-90km/h zones (91 per cent) were over represented.

Table 3.11: Annual trends in fatal crash involvement of bicycles
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bicycle	18	16	18	10	12	10	11	12	10	10

In 1999, 10 bicycles were involved in fatal crashes on Queensland roads. In three of these fatal crashes (or 30 per cent), the cyclist was considered most at fault. Overall, bicycles were considered the unit most at fault in one per cent of all fatal crashes. In six (or 60 per cent) of the fatal crashes involving bicycles, the other unit involved was a car, utility or panel van.

Pedestrians

The trend in pedestrian crashes was relatively flat between 1990 and 1994, followed by an increase in 1995 (see Table 3.12). Pedestrian fatal crash involvement showed an eight per cent increase from 1998 but a 25 per cent decrease compared with the previous nine year average. The majority of crashes in 1999 occurred between intersections (73 per cent), on straight roads (69 per cent), during the working week (67 per cent) and after dark (63 per cent).

Table 3.12: Annual trends in fatal crash involvement of pedestrians
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Pedestrian	69	69	79	56	86	96	59	61	48	52

During 1999, 49 pedestrians who were involved in fatal crashes died. As indicated in Table 3.13, 28 (or 57 per cent) of the pedestrian fatalities in 1999 occurred while the pedestrian was attempting to cross a road. Of these, 25 (or 89 per cent) were killed on roads with no traffic controls, while only one was killed at traffic lights.

Table 3.13: Attempted action of pedestrians killed in fatal crashes
Queensland 1999

Attempted action	No. of fatalities	% involvement in fatal pedestrian crashes
Crossing carriageway - Traffic lights	1	2%
Crossing carriageway - Pedestrian Crossin	2	4%
Crossing carriageway - No traffic control	25	51%
Crossing carriageway - Other	1	2%
Remain stationary	8	16%
Walk against traffic	2	4%
Walk with traffic	7	14%
Work on vehicle	2	4%
Other working	1	2%

Of the pedestrians involved in fatal crashes, 34 (or 65 per cent) were considered by police to be most at fault. Eighty-eight per cent of these most at fault pedestrians were crossing where no traffic control was present.

4. CHARACTERISTICS OF CRASHES

Introduction

Of the 19,335 road crashes reported in Queensland in 1999, by far the majority (11,613 or 60 per cent) were multi-vehicle crashes. Single vehicle crashes made up 6528 crashes, or 34 per cent of all crashes in 1999.

Comparative trends

The long-term trends in the nature of fatal crashes are shown in Table 4.1. This table shows that, while there have been no dramatic changes in these trends over the past ten years, hit object and angle crashes showed decreases in 1999. Sideswipe has recorded a 10-year high of 19 fatal crashes and Head-on fatal crashes have returned to their pre-1998 trend with a 104 per cent increase on 1998 figures.

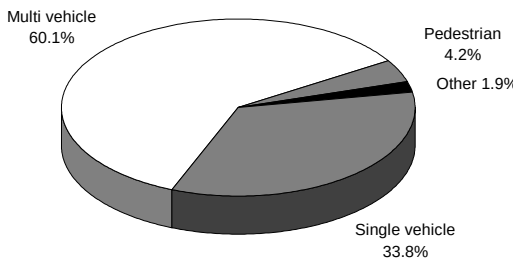
Table 4.1: Annual trends in the nature of fatal crashes: Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Hit object	84	85	82	101	93	105	93	95	80	65
Hit pedestrian	63	63	73	44	73	88	55	55	46	47
Head-on	45	53	67	55	62	70	46	48	23	47
Angle	65	69	53	71	60	50	60	54	44	36
Overturned	44	46	39	53	35	47	45	25	24	27
Rear-end	14	15	17	7	11	16	10	8	8	12
Fall from vehicle *	9	8	20	9	10	11	13	11	8	12
Sideswipe	12	15	9	7	10	10	9	16	11	19
Hit parked vehicle	7	1	1	2	6	7	4	3	6	5
Hit animal	4	3	2	7	4	3	3	5	6	1
Other	0	1	0	1	4	1	0	1	1	2

* Vehicle includes motor or pedal cycle

Figure 4.1 illustrates the proportion of each of the major road crash types for 1999.

Fig. 4.1: Type of road crashes Queensland 1999



For the first time since 1992, the relative occurrence of multi-vehicle crashes was higher than the relative occurrence of single vehicle crashes. Of the 273 fatal crashes in 1999, 109 crashes (or 40 per cent) were single vehicle crashes, while multi-vehicle crashes accounted for 114 crashes (or 42 per cent).

Figure 4.2 shows how the nature of crashes changed in relation to the severity of the crash.

Fig. 4.2: Type of road crash by severity
Queensland 1999

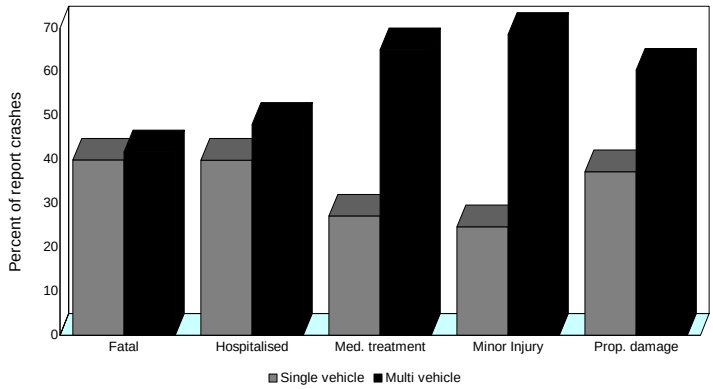


Table 4.2 provides a more detailed analysis of the nature of crashes in Queensland in 1999 grouped by the severity of crash.

Table 4.2: Crashes by nature of crash and severity
Queensland 1999

	Fatal		Hospitalisation		All crashes**	
Nature of crash	**No.**	**%**	**No.**	**%**	**No.**	**%**
Hit object	65	24%	894	25%	4245	22%
Head-on	47	17%	163	5%	466	2%
Hit pedestrian	47	17%	359	10%	820	4%
Angle	36	13%	1020	29%	6286	33%
Overturned	27	10%	290	8%	1205	6%
Sideswipe	19	7%	144	4%	1001	5%
Fall from vehicle *	12	4%	131	4%	286	1%
Rear-end	12	4%	361	10%	3860	20%
Hit parked vehicle	5	2%	86	2%	792	4%
Other	2	1%	17	0%	108	1%
Hit annimal	1	0%	48	1%	266	1%
Total	**273**	**100%**	**3513**	**100%**	**19335**	**100%**

* Vehicle includes motor or pedal cycle ** Including casualty and property damage only

Table 4.2 indicates that in 1999:

- 65 fatal crashes (or 24 per cent of all fatal crashes) occurred as the result of a vehicle hitting an object, whilst 22 per cent of all crashes were of this nature;
- vehicles involved in head-on crashes (47 fatal crashes or seventeen per cent of fatal crashes), and vehicles hitting a pedestrian (47 fatal crashes or 17 per cent of fatal crashes) were also markedly over-represented in fatal crashes compared with all reported crashes;
- the majority of hospitalisation crashes resulted from vehicles colliding at intersections, i.e. angle crashes (29 per cent), or with an object, e.g. trees or power poles (25 per cent); and
- intersection collisions and rear end crashes, both multi-vehicle type crashes, made up over half (52 per cent) of all reported crashes.

4.3 Multi-vehicle crashes

The trend in fatal multi-vehicle crashes has been relatively stable over the period 1994 to 1999 and, in line with fatal crashes overall, numbers of fatal multi-vehicle crashes have trended downwards from 1994 to 1999. The majority of these crashes in 1999 occurred in daylight (73 per cent) and between Monday and Friday (67 per cent) and at non-intersections (68 per cent). Compared with all fatal crashes in 1999, fatal multi-vehicle crashes occurred proportionally more often at Give Way/Stop signs (twice as often) particularly during daylight hours (33 per cent more often) and were twice as likely to result from disobeying traffic rules. Similarly, multi-vehicle fatal crashes were 40 per cent less likely to involve alcohol, speed or unrestrained occupants and 67 per cent less likely to involve fatigue.

In 1999, 114 fatal multi-vehicle crashes were reported. This figure is 9 per cent below the average for the last five years. Table 4.3 presents multi-vehicle fatal crash data for 1994 to 1999 by the nature of the crash.

Table 4.3: Multi-vehicle fatal crashes by nature of crash
Queensland 1994-1999

Nature of crash	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	60	42%	50	34%	60	48%	54	43%	44	51%	36	32%
Head-on	62	43%	70	48%	46	37%	48	38%	23	27%	47	41%
Rear-end	11	8%	16	11%	10	8%	8	6%	8	9%	12	11%
Sideswipe	10	7%	10	7%	9	7%	16	13%	11	13%	19	17%
Total	**143**	**100%**	**146**	**100%**	**125**	**100%**	**126**	**100%**	**86**	**100%**	**114**	**100%**

Table 4.3 indicates that:

- angle crashes represented 32 per cent of fatal multi-vehicle crashes in 1999, which is less than the 1994 to 1998 average of 44 per cent;
- head-on crashes represented 41 per cent of fatal multi-vehicle crashes in 1999 which is below the 1994 to 1998 average of 39 per cent; and
- rear-end crashes contributed a similar proportion of fatal multi-vehicle crashes (eleven per cent), compared with the previous five-year average (eight per cent), whereas sideswipe crashes are 52 per cent above the previous five-year average.

Multi-vehicle crashes in which at least one road user was hospitalised but no road user was killed totalled 1688 in 1999. This figure is an increase on the 1998 total (1644) and 24 above the average of the 1994 to 1998 period. Table 4.4 presents multi-vehicle crash data involving hospitalisation for 1994 to 1999 by the nature of the crash.

Table 4.4: Multi-vehicle crashes involving hospitalisation by nature of crash
Queensland 1994-1999

Nature of crash	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Angle	1000	59%	1043	60%	1035	61%	976	63%	997	61%	1020	60%
Head-on	218	13%	229	13%	224	13%	165	11%	177	11%	163	10%
Rear-end	310	18%	293	17%	297	17%	279	18%	325	20%	361	21%
Sideswipe	160	9%	161	9%	146	9%	141	9%	145	9%	144	9%
Total	**1688**	**100%**	**1726**	**100%**	**1702**	**100%**	**1561**	**100%**	**1644**	**100%**	**1688**	**100%**

Table 4.4 indicates that:

- the majority (60 per cent) of multi-vehicle crashes involving hospitalisation in 1999 were angle crashes (i.e. intersection collisions). This proportion is twice that for fatal angle crashes which accounted for 32 per cent of multi-vehicle fatal crashes; and

- the proportion of rear-end, head-on, angle and sideswipe crashes involving hospitalisation has remained constant over the last six-year period.

4.4 Single vehicle crashes

The trend in fatal single vehicle crashes over the period 1994 to 1999 has been uneven, but continuing a downward trend since 1996 (see Table 4.5). The majority of these crashes in 1999 occurred between intersections (84 per cent) with 66 per cent involving cars and two-thirds of the crashes occurring during the working week and on straight roads and after dark. Compared with all fatal crashes in 1999, fatal single vehicle crashes were proportionally more likely to involve fatigue (53 per cent more likely), non-wearing of seatbelts (47 per cent more likely), speed (46 per cent more likely) or alcohol (19 per cent more likely) and occur after dark (21 per cent more likely). Similarly, fatal single vehicle crashes were less likely to occur at Give Way/Stop signs (88 per cent less likely) and in daylight (21 per cent less likely) and 80 per cent less likely to involve disobeying traffic rules. Casualties were 53 per cent less likely to involve the over 60 years.

In 1999, 109 fatal single vehicle crashes were reported. This figure is 9 crashes (or 8 per cent) less than the 1998 total and 24 per cent below the average of the 1994 to 1998 period. In Table 4.5 single vehicle fatal crash data are presented for 1994 to 1999 by the nature of the crash.

Table 4.5: Single vehicle fatal crashes by nature of crash
Queensland 1994-1999

Nature of crash	1994		1995		1996		1997		1998		1999	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Hit object	93	65%	105	62%	93	60%	95	71%	80	68%	65	60%
Overturned	35	24%	47	28%	45	29%	25	19%	24	20%	27	25%
Hit parked vehicle	**6**	4%	**7**	4%	4	3%	3	2%	6	5%	5	5%
Fall from vehicle *	10	7%	11	6%	13	8%	11	8%	8	7%	12	11%
Total	**144**	**100%**	**170**	**100%**	**155**	**100%**	**134**	**100%**	**118**	**100%**	**109**	**100%**

* Vehicle include motor or pedal cycle

Table 4.5 indicates that:

- 65 single vehicle fatal crashes in 1999 (60 per cent) involved vehicles hitting objects (such as trees or power poles). This is below the 1994 to 1998 average (65 per cent); and

- the other major category in 1999, vehicle overturning, represents 25 per cent of the total number of fatal single vehicle crashes for that year. The number of overturning fatal crashes was 8 (or 23 per cent) lower than the average for the previous five years of 35 fatal crashes.

In 1999, there were 1405 single vehicle crashes in which a road user was hospitalised. This figure is 51 below the figure for 1998 and 25 (or two per cent) below the average for the 1994 to 1998 period. In Table 4.6 data are presented for single vehicle crashes involving hospitalisation for the period 1994 to 1999 by the nature of crash.

Table 4.6: Single vehicle crashes involving hospitalisation by nature of crash Queensland 1994-1999

Nature of crash	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hit object	863	58%	841	58%	840	60%	861	64%	903	62%	894	64%
Overturned	386	26%	412	28%	346	25%	313	23%	326	22%	290	21%
Hit parked vehicle	100	7%	88	6%	80	6%	61	5%	87	6%	86	6%
Fall from vehicle *	130	9%	115	8%	139	10%	120	9%	140	10%	131	9%
Total	**1479**	**100%**	**1456**	**100%**	**1405**	**100%**	**1355**	**100%**	**1456**	**100%**	**1401**	**100%**

* Vehicle includes motor or pedal cycle

Table 4.6 indicates that:

- 64 per cent of the single vehicle crashes involving hospitalisation in 1999 (894 of a total 1401) resulted from a vehicle hitting an object. This proportion is above the 1998 level of 62 per cent, and four percentage points above the 1994 to 1998 average of 60 per cent;

- vehicles overturning represented 21 per cent of single vehicle crashes involving hospitalisation in 1999. This proportion is four percentage points lower than the 1994 to 1998 average of 25 per cent; and

- in 1999, motorcyclists, bicyclists or other vehicle occupants falling from their vehicles represented nine per cent of single vehicle crashes involving hospitalisation. The number of this crash type in 1999 (131 hospitalisation crashes) is two per cent higher than the 1994 to 1998 average of 129.

4.5 Crashes by time of day

The long term trend in the proportion of fatal crashes occurring after dark increased from 1990 to 1995 but has generally declined since then as shown in Table 4.7.

Table 4.7: Annual trends in the nature of fatal crashes occuring after dark Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fatal crashes after dark	139	149	161	150	154	171	142	152	102	124
All fatal crashes	347	359	363	357	368	408	338	321	257	273
% after dark	40%	42%	44%	42%	42%	42%	42%	47%	40%	45%

Different patterns appear when looking at high-risk periods of the day for multi-vehicle and single vehicle fatal crashes. Generally speaking, the majority of multi-vehicle fatal crashes occurred most frequently during daytime periods, while single vehicle crashes occurred more often after dark. Figure 4.3 demonstrates this occurrence for crashes in 1999.

Fig. 4.3: Fatal crashes by time of day
Queensland 1999

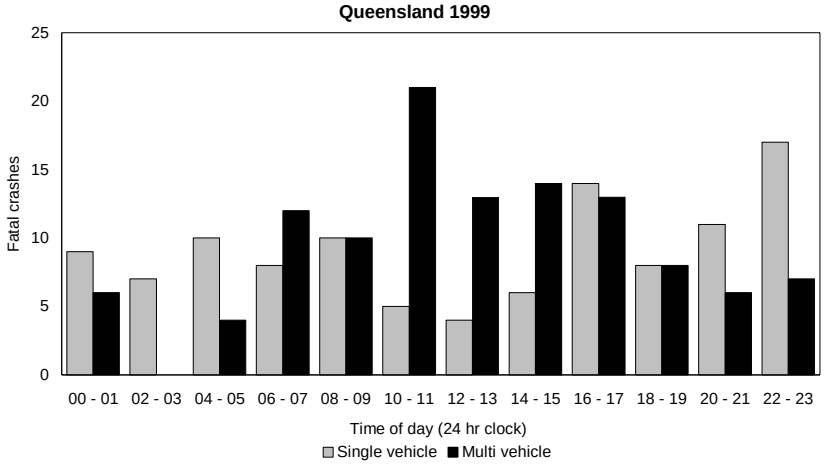


Figure 4.3 indicates that:

- during morning and afternoon commuting periods (6 to 10 a.m. and 4 to 6 p.m.), 31 per cent of multi-vehicle fatal crashes occurred with a similar percentage for single vehicle fatal crashes;

- during the balance of daylight hours (10 a.m. to 4 p.m.), 42 per cent of multi-vehicle fatal crashes occurred, in contrast to 14 per cent of single vehicle fatal crashes; and

- during the after dark periods (6 p.m. to 6 a.m.), the trend was reversed; 27 per cent of fatal multi-vehicle crashes occurred, in contrast to 57 per cent of fatal single vehicle crashes.

An analysis of the data in Table 4.8 reveals that crashes, which occurred after dark, are more likely to result in a fatality than daytime crashes.

Table 4.8: Crashes by time of day by severity
Queensland 1999

	Fatal		Hospitalisation		All crashes*	
Time period	**No.**	**%**	**No.**	**%**	**No.**	**%**
Midnight - 6 am	46	17%	361	10%	1670	9%
6 am - 10 am	43	16%	593	17%	3650	19%
10 am - 4 pm	76	28%	1245	35%	7027	36%
4 pm - 6 pm	30	11%	551	16%	2999	16%
6 pm - midnight	78	29%	763	22%	3989	21%
Total	**273**	**100%**	**3513**	**460%**	**19335**	**100%**

* Including casualty and property damage only

Table 4.8 indicates that:

- 45 per cent of fatal crashes occurred after dark (i.e. 6 p.m. to 6 a.m.) compared with 29 per cent for all crashes. Between midnight and 6 a.m. the proportion of fatal crashes at 17 per cent was almost double that of all crashes (nine per cent); and

- the reverse trend applied during the middle of the day (between 10 a.m. and 4 p.m.) when 36 per cent of all reported crashes occurred while 28 per cent of fatal crashes occurred during this period.

4.6 Crashes by day of week

The long-term trend in the fatal crashes by day of week has remained stable over the period 1990 to 1999 (see Table 4.9). In 1999, fatal crashes on Tuesday and Wednesday showed the biggest decreases of 40 and 35 per cent respectively when compared to the previous 9 year average.

Table 4.9: Annual trends in fatal crashes by day of week
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Monday	41	47	53	41	42	45	36	30	31	33
Tuesday	40	35	36	41	43	43	48	44	25	24
Wednesday	42	41	46	45	54	58	34	45	32	29
Thursday	47	44	44	45	50	52	46	42	36	35
Friday	63	66	69	59	65	74	53	56	39	57
Saturday	67	74	67	65	59	67	60	64	55	50
Sunday	47	52	48	61	55	69	61	40	39	45

During 1999 the number of crashes generally increased as the week progressed, with most categories of crashes peaking on Friday or Saturday.

Table 4.10 presents the number of crashes by the day of week grouped by the severity of the crash.

Table 4.8: Crashes by time of day by severity
Queensland 1999

	Fatal		Hospitalisation		All crashes*	
Time period	**No.**	**%**	**No.**	**%**	**No.**	**%**
Midnight - 6 am	46	17%	361	10%	1670	9%
6 am - 10 am	43	16%	593	17%	3650	19%
10 am - 4 pm	76	28%	1245	35%	7027	36%
4 pm - 6 pm	30	11%	551	16%	2999	16%
6 pm - midnight	78	29%	763	22%	3989	21%
Total	**273**	**100%**	**3513**	**460%**	**19335**	**100%**

* Including casualty and property damage only

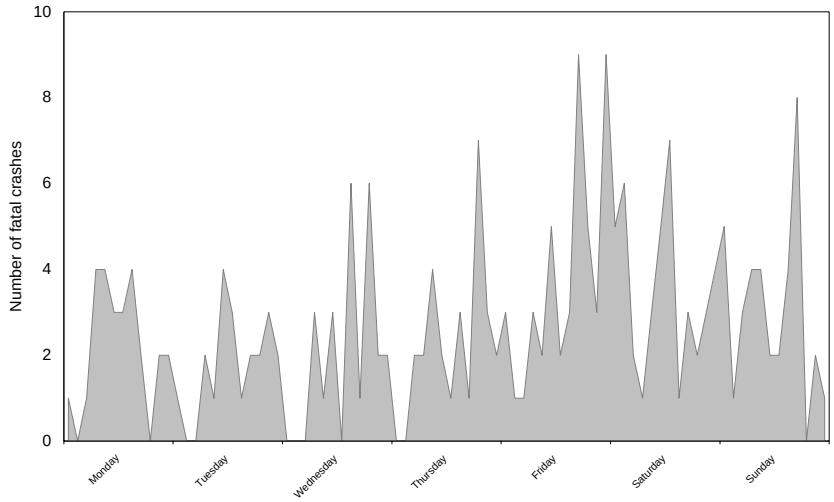
As indicated in Table 4.10, in 1999:

- Friday and Saturday were the days on which crashes of most severities were more likely to occur. Approximately 40 per cent of fatal and one third of hospitalisation and all crashes occurred on these days; and

- the days less likely to have fatal crashes were Tuesday and Wednesday (combined 20 per cent), whereas Tuesday and Sunday recorded the lowest number of hospitalisation crashes (combined 25 per cent).

Combining the fatal crash trends for day of week with time of day, it is seen that the numbers of crashes generally peak in the late afternoon hours each day. Figure 4.4 shows these trends for 1999.

Fig. 4.4: Fatal crashes by time of day* & day of week
Queensland 1999



* For each day, time begins at midnight

4.7 Spatial location of crashes

Forty per cent of Queensland's reported road crashes in 1999 occurred in the greater Brisbane urban area (Brisbane City and Rest of Brisbane Statistical Division). Some 7740 crashes occurred in this area during 1999. A further 6044 crashes (or 31 per cent) occurred in Queensland provincial cities in 1999. Fatal crashes are more likely to occur outside of urban areas (shown in Table 4.11 as "rest of state") than crashes of lower severity.

Table 4.11: Location of crashes by severity
Queensland 1999

	Fatal		Hospitalisation		All crashes**	
Location	**No.**	**%**	**No.**	**%**	**No.**	**%**
Brisbane City	39	14%	792	23%	5232	27%
Rest of BSD*	33	12%	452	13%	2539	13%
Provincial cities	64	23%	1037	30%	5847	30%
Rest of state	137	50%	1232	35%	5717	30%
Total	**273**	**100%**	**3513**	**100%**	**19335**	**100%**

* Brisbane Statistical Division ** Including casualty and property damage only

As indicated in Table 4.11:

- during 1999, 27 per cent of all reported crashes in Queensland occurred in Brisbane City, but only 13 per cent of fatal crashes occurred in the metropolitan area; and

- while 30 per cent of Queensland's reported crashes occurred outside urban areas, 50 per cent of fatal crashes occurred in these non-urban areas.

Table 4.12 shows the location of fatal crashes.

Table 4.12: Location of fatal crashes
Queensland 1994-1999

Location	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Brisbane City	53	14%	58	14%	50	15%	39	12%	34	13%	39	14%
Rest of BSD*	60	16%	44	11%	39	12%	37	12%	26	10%	33	12%
Provincial cities	99	27%	110	27%	113	33%	80	25%	77	30%	64	23%
Rest of state	156	42%	196	48%	136	40%	165	51%	120	47%	137	50%
Total	**368**	**100%**	**408**	**100%**	**338**	**100%**	**321**	**100%**	**257**	**100%**	**273**	**100%**

* Brisbane Statistical Division

As indicated in Table 4.12:

- Brisbane City had 39 fatal crashes (or 14 per cent of the state total) in 1999 which, while consistent in percentage terms is lower than the average of 47 fatal crashes over the 1994 to 1998 period; and

- rest of BSD had 33 fatal crashes (or 12 per cent of the state total) in 1999, which is significantly lower than the 1994 to 1998 average of 41 fatal crashes.

Table 4.13 shows the location of crashes of different severities listed by Queensland Transport districts.

Table 4.13: Location of crashes by severity
Queensland 1999

Department of Main Roads	Fatal		Hospitalisation		All crashes*	
District Location	No.	%	No.	%	No.	%
Barcaldine	2	1%	24	1%	94	0%
Bundaberg	24	9%	186	5%	932	5%
Cairns	16	6%	252	7%	1317	7%
Cloncurry	6	2%	59	2%	201	1%
Emerald	3	1%	62	2%	218	1%
Gympie	33	12%	368	10%	2093	11%
Mackay	9	3%	161	5%	755	4%
Metropolitan Brisbane	69	25%	1192	34%	7763	40%
Nerang	31	11%	470	13%	2149	11%
Rockhampton	17	6%	177	5%	996	5%
Roma	2	1%	31	1%	132	1%
Toowoomba	27	10%	243	7%	1255	6%
Townsville	24	9%	214	6%	1101	6%
Warwick	10	4%	74	2%	329	2%
Total	**273**	**100%**	**3513**	**100%**	**19335**	**100%**

* Including casualty and property damage only

The table shows that:

- Metropolitan Brisbane, Nerang and Gympie accounted for 63 per cent of reported crashes, and 49 per cent of fatal crashes;

- the highest proportion of crashes for all severity levels occurred in Brisbane, with over 40 per cent of Queensland's crashes; and

- Brisbane also recorded the highest number of fatal crashes with 69 (or 25 per cent), followed by Nerang and Gympie, with 31 fatal crashes (or 11 per cent) and 33 fatal crashes (or 12 per cent) respectively.

5. FACTORS CONTRIBUTING TO CRASHES

5.1 Introduction

It is relatively uncommon for a single factor to be identified as the sole cause of a crash. Several factors are often represented in the "causal chain" of events resulting in crashes. However, issues such as alcohol use, excessive speed, fatigue (which are consistently reported as the causal factor by investigating police) and the failure to wear seat belts are discussed in more detail in this chapter.

Table 5.1 presents information collected by the police at the scene of traffic crashes concerning the causes of crashes. The data is usually collected within 24 hours of a crash, and the assessment of contributing factors may differ from those arrived at after a more complete investigation. However the table provides an indicative ranking of the major causal factors.

Table 5.1: Assessed contributing factors to crashes * - Queensland 1999

	Fatal crashes		All reported crashes	
	No.	**Proportion of fatal crashes**	**No.**	**Proportion of all reported crashes**
Disobeyed traffic rules**	96	35%	7801	40%
Alcohol/drugs	85	31%	1671	9%
Inexperience	52	19%	4337	22%
Inattention	47	17%	6388	33%
Speed	39	14%	843	4%
Other	32	12%	2483	13%
Age	28	10%	961	5%
Other driver conditions **	25	9%	1155	6%
Negligence	19	7%	432	2%
Road conditions	14	5%	1069	6%
Vehicle defects	14	5%	713	4%
Rain/wet road	10	4%	1862	10%
Fatigue	5	2%	397	2%
No street lighting	1	0%	106	1%
Total crashes	**273**	**100%**	**19335**	**100%**

* More than one contributing factor could be attributed to a crash and therefore this table may not reflect crash totals

** Driver conditions do not include Inattention, Negligence, Inexperience, Fatigue, Age

*** Disobeyed traffic rules does not include Alcohol/Drugs, Inexperience, Speed and Inattention

The data presented in Table 5.1 concerning police opinion of cause-of-crash indicates that:

- disobey traffic rules was the largest contributor, being regarded as responsible for thirty-five per cent of fatal crashes and forty per cent of all reported crashes during 1999;
- alcohol or drug use was the second largest contributor with thirty-one per cent of fatal crashes, but only nine per cent of all reported crashes;
- inexperience was cited as the third-ranking contributor for fatal crashes and ranked third for all reported crashes;
- whilst inattention was a contributing factor in thirty-three per cent of all reported crashes, it contributed to seventeen per cent of fatal crashes;
- speed contributed to four per cent of all crashes and fourteen per cent of fatal crashes; and

- other factors such as (medical condition, some atmospheric and lighting conditions etc) were considered to have contributed to 14 per cent of fatal crashes and 11 per cent of all reported crashes.

Fatigue and negligence are difficult to assess and thus may be understated in the data.

5.2 Trends

Long term trends in contributing circumstances in fatal crashes are shown in Table 5.2. Note that "NA" in 1990 indicates data was not collected in that year. The top contributing circumstance (disobeyed traffic rules) showed an increase in 1999 compared with 1998 but remained well below the high numbers of the mid-1990's.

Table 5.2: Annual trends in contributing circumstances in fatal crashes
Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Disobeyed traffic rules	82	110	107	125	125	128	115	110	73	96
Alcohol/drugs	97	138	107	98	103	132	101	101	86	85
Inexperience	N/A	26	69	57	82	102	91	95	62	52
Speed	32	52	66	80	51	46	48	51	30	39
Other driver conditions	N/A	23	45	51	42	50	32	26	31	25
Age	N/A	30	54	35	36	41	30	28	25	28
Rain/wet road	N/A	19	47	25	35	41	22	16	29	10
Negligence	N/A	12	19	15	31	25	14	17	19	19
Inattention	17	31	25	15	24	41	26	26	28	47
Road conditions	N/A	21	32	35	23	29	26	9	14	14
Other	4	29	48	21	23	41	31	36	22	32
Vehicle defects	8	17	23	21	11	17	13	7	13	14
Fatigue	13	17	14	11	11	12	20	15	10	5
No street lighting	N/A	27	15	3	6	7	5	9	9	1

5.3 Alcohol and road fatalities

Alcohol use is considered to contribute to a substantial proportion of the more severe crashes, especially those involving a fatality (see Table 5.1). Drivers, motorcycle and bicycle riders, and pedestrians affected by alcohol play a major role in road crashes, and the extent of alcohol involvement in fatal crashes is analysed in more detail in the following section.

Table 5.3 presents information on the level of post-mortem testing of driver and motorcycle rider fatalities over the period 1994 to 1999, and the blood alcohol content (BAC) of those tested.

Table 5.3: Blood alcohol content of driver and motorcycle rider fatalities*
Queensland 1994-1999

	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Untested	53	24%	37	16%	42	20%	26	13%	15	10%	42	26%
Tested	167	76%	195	84%	171	80%	172	87%	129	90%	121	74%
Total Fatalities	220	100%	232	100%	213	100%	198	100%	144	100%	163	100%
BAC results for those tested:												
Nil	106	63%	113	58%	106	62%	113	66%	87	67%	86	71%
.01-.04 %	10	6%	18	9%	5	3%	13	8%	8	6%	6	5%
.05 - .14 %	20	12%	20	10%	19	11%	21	12%	15	12%	13	11%
.15 - .24 %	23	14%	31	16%	31	18%	15	9%	14	11%	8	7%
.25% and above	8	5%	13	7%	10	6%	10	6%	5	4%	8	7%
BAC .05% or more	51	31%	64	33%	60	35%	46	27%	34	26%	29	24%
BAC .15% or more	31	19%	44	23%	41	24%	25	15%	19	15%	16	13%

* Based on post-mortem tests

The table indicates that alcohol involvement in crashes has declined since 1996. Total driver and rider fatalities involving a BAC of 0.05 per cent or greater for 1999 was 29, a decrease of 22 fatalities over the 1994 to 1998 average of 51.
Of 163 driver and motorcycle rider fatalities during 1999:

- 74 per cent were given a post-mortem blood alcohol test;
- of those tested, 24 per cent had a BAC at or in excess of the general legal limit of 0.05 per cent for open license holders and provisional license holders over 25 years. This figure is seven percentage points lower than the 1994 to 1998 average; and
- 13 per cent of those tested had a BAC of 0.15 per cent or greater (three times the legal limit for most open license holders). In 1999, 16 fatalities recorded these levels compared with the average of the previous five years of 32, a decrease of 50 per cent.

Figure 5.1 provides a graphical representation of blood alcohol levels for all driver and motorcycle rider fatalities in 1999.

Fig. 5.1: Blood alcohol level for driver & motorcycle rider fatalities Queensland 1999

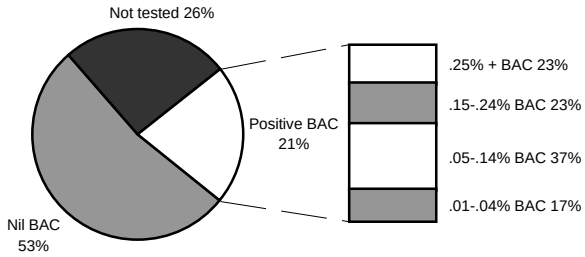


Table 5.4 presents data by year from 1994 to 1999 on the age groups of fatally injured drivers and motorcycle riders who were found to have a blood alcohol content of 0.05 per cent or greater.

Table 5.4: Age of drivers and motorcycle rider fatalities with BAC of 0.05% or greater* Queensland 1994-1999

Age group	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 16 years	0	0%	0	0%	1	2%	2	4%	0	0%	1	3%
17 - 24 years	16	31%	11	17%	31	52%	14	30%	11	32%	7	24%
25 - 59 years	33	65%	47	73%	28	47%	30	65%	22	65%	19	66%
60 years and over	2	4%	6	9%	0	0%	0	0%	1	3%	2	7%
Total	**51**	**100%**	**64**	**100%**	**60**	**100%**	**46**	**100%**	**34**	**100%**	**29**	**100%**

* Based on post-mortem tests

The table indicates that:

- illegal BACs have been found almost exclusively in drivers and motorcycle riders between the ages of 17 and 59 years; and
- in 1999, 24 per cent of driver and motorcycle rider fatalities with illegal BACs were aged between 17 and 24 years. This was well below the previous five-year average of 33 per cent. The result for ages 25 to 59 years of 66 per cent was above the previous five-year average of 63 per cent.

Table 5.5 provides information on the four main road user groups (drivers, motorcycle riders, bicyclists and pedestrians) in terms of positive blood alcohol tests following a fatal crash.

Table 5.5: Road user fatalities with BAC of 0.05% or greater*
Queensland 1994-1999

Roaduser type	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bicyclist	0	0%	2	3%	1	1%	0	0%	0	0%	0	0%
Driver	38	54%	49	62%	50	70%	38	57%	29	53%	20	53%
Motorcyclist	13	18%	15	19%	10	14%	8	12%	5	9%	4	11%
Pedestrian	20	28%	13	16%	10	14%	21	31%	21	38%	14	37%
Total	**71**	**100%**	**79**	**100%**	**71**	**100%**	**67**	**100%**	**55**	**100%**	**38**	**100%**

* Based on post-mortem tests

It can be seen that:

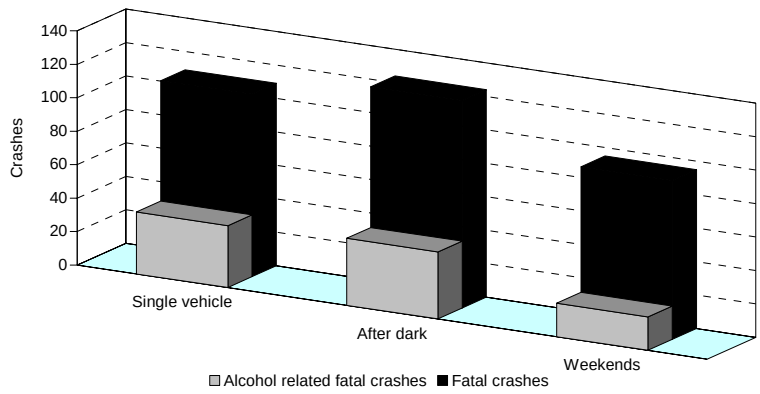
- drivers made up the largest group of alcohol-involved fatalities in 1999, constituting 53 per cent of fatalities tested with a BAC of 0.05 per cent or greater. This figure is below the previous five-year average of 59 per cent;

- the percentage of pedestrians recording a BAC of 0.05 per cent or greater in 1999 37 per cent, in line with the 1998 figure; and

- only four motorcycle rider fatalities revealed a BAC of 0.05 per cent or greater in 1999, a decrease of 60 per cent on the previous five-year average.

Figure 5.2 shows that the incidence of single vehicle crashes, crashes after dark and crashes on weekends is greatly elevated for alcohol related crashes compared with all crashes.

Fig. 5.2: Crashes involving alcohol by selected variables
Queensland 1999



5.4 Speed as a contributing factor to fatalities

Table 5.1 demonstrated that although speed was a contributing factor in four per cent of all reported crashes, it was judged to contribute to 14 per cent of fatal crashes and was the fifth most often cited contributing factor. Excessive speed for the prevailing conditions is believed to contribute to a further class of crashes.

Table 5.6 sets out information by year on the severities of crashes to which speed was judged by the reporting officer to be a contributing factor.

Table 5.6: Severity of crashes to which speed was a contributing factor
Queensland 1994-1999

Severity	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fatal	51	6%	46	5%	48	6%	51	6%	30	4%	39	5%
Hospitalisation	220	25%	214	24%	177	22%	177	22%	215	25%	207	25%
Other injury	218	25%	237	27%	259	32%	228	28%	233	27%	209	25%
Property damage	390	44%	385	44%	334	41%	348	43%	377	44%	388	46%
Total	**879**	**100%**	**882**	**100%**	**818**	**100%**	**804**	**100%**	**855**	**100%**	**843**	**100%**

The table shows that the distribution of severity levels in crashes to which speed was a contributing factor remained relatively constant from 1994 to 1997, decreasing in 1998, and showing a slight increase in 1999. The involvement of speed in fatal crashes in 1999 was 14 per cent below the 1994 to 1998 average of 45 fatal crashes.

The age groups of fatally injured road users involved in crashes to which speed was considered to be a contributing factor are presented in Table 5.7.

Table 5.7: Age of fatalities in crashes to which speed was a contributing factor
Queensland 1994-1999

Age group	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 16 years	3	5%	4	7%	3	5%	1	2%	4	12%	4	12%
17 - 24 years	27	47%	20	36%	31	55%	30	52%	19	56%	11	32%
25 - 59 years	26	46%	27	49%	19	34%	27	47%	11	32%	17	50%
60 years and over	1	2%	4	7%	3	5%	0	0%	0	0%	2	6%
Total	**57**	**100%**	**55**	**100%**	**56**	**100%**	**58**	**100%**	**34**	**100%**	**34**	**100%**

The table shows that the proportions of each age group involved in speed-related fatal crashes have shown no clear rising or falling trend over the period 1994 to 1999 generally. However, in 1999, fatal crashes involving speed among adults (aged 25 to 59 years) showed an increase of 55 per cent when compared with 1998. This age group comprised 50 per cent of all speed-related fatalities in 1999.

5.5 Fatigue as a contributing factor

It is often difficult to isolate fatigue as a factor in crashes, particularly in the more severe crashes. One means of identifying likely fatigue-related crashes is to analyse single vehicle-type crashes (such as roll-over or hit object) on open roads during high-risk times for fatigue (i.e. 2 pm to 4 pm and 10 pm to 6 am). Also included in this analysis are other crashes where police reported fatigue to be a contributing factor. Naturally, this approach will ignore crashes which occur at other times of day, occur in urban areas or are multi-vehicle collisions (e.g. head-on crashes), unless positively identified as a fatigue crash by police. However, the assumptions described above do point to factors which collectively constitute the major ingredients for fatigue crashes and therefore allow consistent analysis.

Table 5.8: Severity of fatigue related crashes*
Queensland 1994-1999

Severity	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Fatal	33	3%	47	4%	53	4%	44	4%	34	3%	22	2%
Hospitalisation	344	28%	328	25%	322	25%	334	27%	324	28%	260	27%
Other injury	358	29%	377	29%	400	31%	370	30%	314	27%	303	31%
Property damage	492	40%	538	42%	501	39%	486	39%	501	43%	395	40%
Total	**1227**	**100%**	**1290**	**100%**	**1276**	**100%**	**1234**	**100%**	**1173**	**100%**	**980**	**100%**

* Single vehicle-type crashes in 100km/h zones during typical fatigue times (2-4pm, 10pm-6am) or where police considered fatigue was a contributing factor.

The data presented in Table 5.8 indicates that:

- overall, the total number of fatigue-related crashes in 1999 was 16 per cent lower than the1998 figure and 21 per cent lower than the five-year average of 1240 crashes; while

- the number of fatigue-related fatal crashes decreased by 35 per cent in 1999 compared with 1998 and were 34 per cent below the 1994 to 1998 average.

An analysis of fatigue-related fatalities by various age groups is presented in Table 5.9.

Table 5.9: Fatalities by age group: fatigue related crashes - Queensland 1994-1999

Age group	1994		1995		1996		1997		1998		1999	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 16 years	2	5%	2	4%	5	9%	5	11%	2	5%	5	19%
17 - 24 years	6	14%	22	42%	21	38%	20	43%	20	50%	4	15%
25 - 59 years	30	71%	24	45%	27	49%	20	43%	17	43%	16	62%
60 years and over	4	10%	5	9%	2	4%	2	4%	1	3%	1	4%
Total	**42**	**100%**	**53**	**100%**	**55**	**100%**	**47**	**100%**	**40**	**100%**	**26**	**100%**

* Single vehicle-type crashes in 100km/h zones during typical fatigue times (2-4pm, 10pm-6am) or where police considered fatigue was a contributing factor.

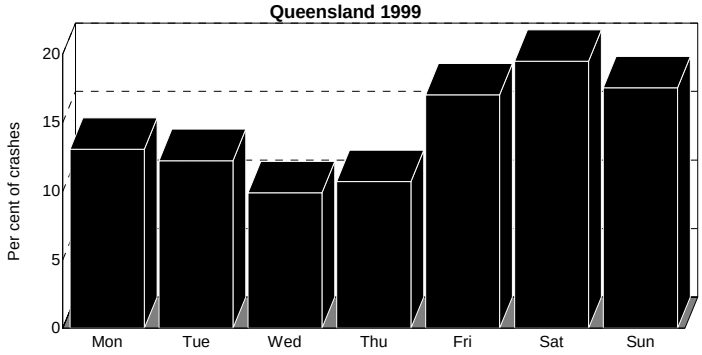
Table 5.9 indicates that:

- during 1999, the number of 17 to 24 year old fatigue-related fatalities decreased greatly when compared with this age group in 1998 and shows a 23 per cent decrease against the previous five-year average of 38 per cent; and

- 62 per cent of Queensland's fatigue-related fatalities in 1999 were aged 25 to 59 years (12 percentage points above the previous five-year average of 50 per cent).

An analysis by day of week of single-vehicle crashes on open roads during typical fatigue periods shows that, for 1999, fatigue-related crashes were most likely to occur on Saturdays and Sundays. Figure 5.3 charts the occurrence of fatigue-related crashes by day of week.

Fig. 5.3: Fatigue-related crashes by day of week
Queensland 1999



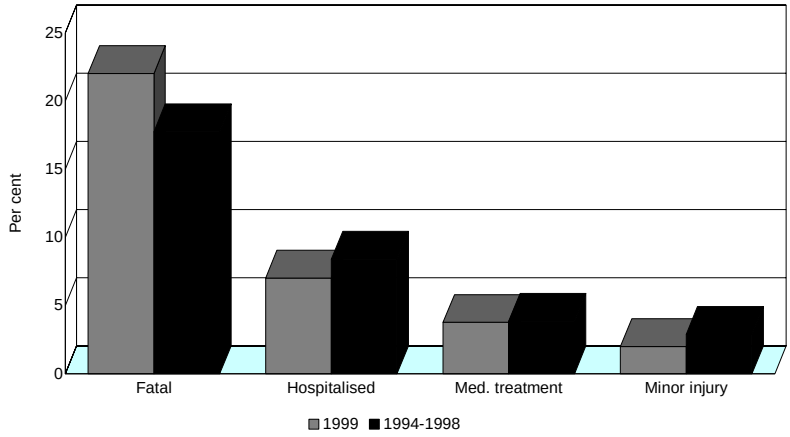
Analysis of previous years' data has revealed that the most over-represented days for fatigue-related crashes are the weekend and Friday. In 1999, this trend continued with 54 per cent of fatigue-related crashes occurring on Fridays, Saturdays and Sundays.

5.6 Seat belt usage in fatal crashes

Recent research indicates that seat belt wearing rates have improved in the general driving population over the past five years. However, in 1999 33 per cent of vehicle occupants were unrestrained (where restraint use could be determined) compared with the previous five-year average of 24 per cent.

Figure 5.4 shows that the greater the severity of a road crash, the less likely it was that seat belts were worn.

Fig 5.4: Proportion of unrestrained vehicle occupant casualties Queensland 1999 compared to 1994-1998



As indicated in Figure 5.4:

- in 1999, 22 per cent of vehicle occupant fatalities were unrestrained compared with seven per cent of hospitalised casualties, four per cent of persons medically treated, and two per cent of persons receiving minor injuries; and

- incidence rates for unrestrained fatalities in 1999 were five percentage points above the previous five-year average.

In many instances, investigating police were unable to determine whether or not a restraint was being worn by a vehicle occupant at the time of a crash. Table 5.10 presents seat belt usage data for vehicle occupant fatalities in instances where restraint use could be determined. It should be noted that bus passengers are not included as vehicle occupants for seat belt analysis.

Table 5.10: Fatalities by seat belt usage - Queensland 1994-1999

	1994		1995		1996		1997		1998		1999	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Occupants:												
Not determined	89	33%	105	36%	89	33%	88	36%	62	32%	64	30%
Total determined	179	67%	190	64%	182	67%	155	64%	131	68%	146	70%
Total vehicle occupants	268	100%	295	100%	271	100%	243	100%	193	100%	210	100%
Of those occupants where restraint use could be determined:												
Restrained	139	78%	141	74%	137	75%	110	71%	97	74%	98	67%
Unrestrained	40	22%	49	26%	45	25%	45	29%	34	26%	48	33%
Drivers:												
Not determined	55	32%	65	37%	48	28%	49	31%	37	31%	36	29%
Total determined	119	68%	112	63%	122	72%	107	69%	83	69%	88	71%
Total drivers	174	100%	177	100%	170	100%	156	100%	120	100%	124	100%
Of those drivers where restraint use could be determined:												
Restrained	90	76%	86	77%	92	75%	75	70%	63	76%	65	74%
Unrestrained	29	24%	26	23%	30	25%	32	30%	20	24%	23	26%
Passengers:												
Not determined	34	36%	40	34%	41	41%	39	45%	25	34%	28	33%
Total determined	60	64%	78	66%	60	59%	48	55%	48	66%	58	67%
Total vehicle passengers	94	100%	118	100%	101	100%	87	100%	73	100%	86	100%
Of those passengers where restraint use could be determined:												
Restrained	49	82%	55	71%	45	75%	35	73%	34	71%	33	57%
Unrestrained	11	18%	23	29%	15	25%	13	27%	14	29%	25	43%

The data in Table 5.10 indicates that:

- the percentage of cases of fatally injured vehicle occupants where restraint use could not be determined decreased from 32 per cent in 1998 to 30 per cent in 1999;
- restraint use by fatally injured vehicle occupants indicates an increase in unrestrained occupants. In 1999, 33 per cent of drivers and passengers killed on Queensland roads were unrestrained, compared with an average of 25 per cent during the previous five-year period, showing a eight percentage point increase; and
- fatally injured drivers were more likely to be wearing a seat belt than fatally injured passengers in 1999.

Table 5.11 shows a breakdown by age group of unrestrained vehicle occupants who were fatally injured for the period 1994 to 1999. The percentages represent the proportion of all vehicle occupant fatalities in that age group (where restraint use could be determined).

Table 5.11: Unrestrained vehicle occupant fatalities by age group
Queensland 1999 compared with average (1994-1998) *

	1999			Average 1994-1998		
Age group	**Unrestrained**	**Total**	**%**	**Unrestrained**	**Total**	**%**
0 - 16 years**	9	18	50%	3	11	27%
17 - 24 years	14	37	38%	11	48	23%
25 - 39 years	16	40	40%	15	38	39%
40 - 59 years	4	22	18%	9	36	25%
60 years and over	5	27	19%	4	34	12%
Total	**48**	**144**	**33%**	**42**	**167**	**25%**

* Where restraint use could be determined

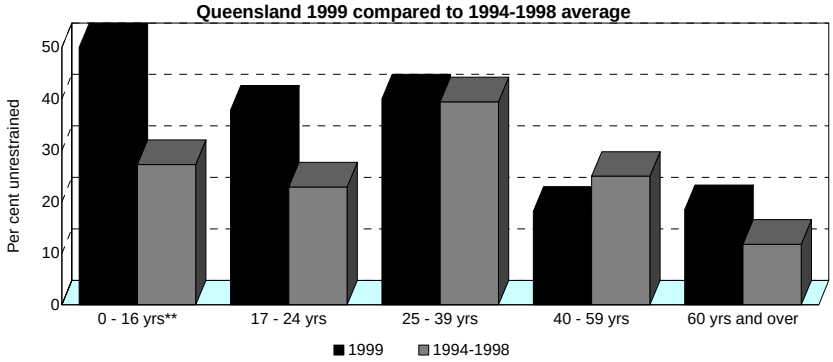
** Includes casualties of unknown age

The data presented in Table 5.11 indicate that:

- 50 per cent of vehicle occupants aged 0 to 16 years killed in road crashes during 1999 were unrestrained, making this the age group with least compliance;
- the 25 to 39 years age group, with 40 per cent non compliance, was the group next most likely to be unrestrained; and
- the greatest improvement over 1994 to 1998 occurred in the 40 to 59 years age group where the proportion of unrestrained vehicle occupants in 1999 decreased by seven percentage points.

Figure 5.5 illustrates for various age groups the proportion of unrestrained vehicle occupant fatalities in 1999 compared with the average of the previous five years.

Fig. 5.5: Proportion of unrestrained vehicle occupant fatalities by age
Queensland 1999 compared to 1994-1998 average



APPENDIX 1 GLOSSARY

Road users are defined as:

- drivers of motor vehicles other than a motorcycle
- motorcycle riders
- bicycle riders
- horse riders
- passengers of the above
- pedestrians

A *road traffic* crash is a crash reported to the police which resulted from the movement of at least one road vehicle on a road and involving death or injury to any person, or property damage.

A *property damage only* crash is a crash where at least one vehicle is towed away or the damage cost is greater than $2,500 (or $1000 prior to 1 December 1991).

The *road toll* is a count of fatalities (excluding injuries) resulting from road traffic crashes.

A *fatality* is recorded when any person dies within 30 days as a result of injuries sustained in a road traffic crash.

A *serious injury* is recorded when any person involved in a road traffic crash: (a) requires hospitalisation (i.e. is admitted to hospital) or (b) requires medical treatment.

An *injury* is recorded when any person involved in a road traffic crash: (a) requires hospitalisation; (b) requires medical treatment; or (c) receives a minor injury (i.e. first aid treatment only).

A *casualty* is the grouping of both fatalities and injuries.

A *single vehicle* crash is a crash in which only one moving motor vehicle is involved in the initial event, either in a collision (e.g. with a roadside pole) or a non-collision (e.g. a roll over). A collision with a parked car is considered a single vehicle crash because the characteristics of this type of crash are similar to crashes where a vehicle collides with a roadside object.

A *multi-vehicle* crash is a crash which involves an initial collision between any two (or more) moving motor vehicles.

A *blood alcohol content* (BAC) reading is a measure of the proportion of alcohol in a person's blood. This reading is typically obtained using a breathalyser or by conducting a blood test. Where possible, a post-mortem blood analysis is carried out on a fatally injured road user.

A *controller* is a road user who exercises control over their movements at the time of an accident (i.e. driver, rider or pedestrian). Passengers are not regarded as controllers.

A *child* is regarded as being a road user aged under 17 years.

A *young adult* is a road user aged from 17 to 24 years.

A *mature aged road user* is a person who is aged from 25 to 59 years.

An *older road user* is a person who is aged 60 years or over.

Heavy freight vehicle refers to both rigid and articulated trucks.

A *vehicle occupant* is a person travelling in a car, utility, panel van, bus, rigid truck or articulated vehicle at the time of a crash.

A *driver* is the vehicle occupant in control of a motor vehicle at the time of a crash.

A *passenger* is any other occupant of a motor vehicle at the time of a crash.

A *motorcyclist* is either the rider or pillion passenger of a motorcycle.

A *pedal cyclist* is either the rider or pillion passenger of a bicycle.

A *pedestrian* is either an ordinary pedestrian or a person on skates, rollerblades or a skateboard.

A *peak commuter* period refers to that time of day when most commuters are either travelling to or returning from work. For this report it is considered to cover the periods from 6.00 am to 10.00 am and 4.00 pm to 6.00 pm, Monday to Friday.

The *provincial cities* are: Gold Coast, Gladstone, Charters Towers, Warwick, Cairns, Maryborough, Townsville, Gympie, Mackay, Mount Isa, Bundaberg, Rockhampton, Toowoomba, Hervey Bay City, Caloundra City and Thuringowa City.

APPENDIX 2 KEY SUMMARY TABLES

In this section, major characteristics of road traffic crashes in Queensland during 1999 are presented as a series of more detailed cross-tabulations from the Queensland Road Crash System maintained by Queensland Transport's Land Transport and Safety Division. A list of summary tables contained in this section is presented below.

Table 1: Road traffic casualties by road user type - Queensland 1994-1999

	Car, Truck, Bus						Motorcycle					
	Driver			Passenger			Rider			Pillion		
Year	K	H	M	K	H	M	K	H	M	K	H	M
1994	177	2001	3027	108	1304	1889	43	596	468	2	53	37
1995	180	2088	3247	119	1294	2023	51	553	470	3	45	50
1996	174	1927	3337	105	1273	1971	39	563	507	2	43	42
1997	159	1841	3271	88	1131	1842	40	501	402	3	45	47
1998	121	1963	3214	75	1160	1803	23	525	377	2	53	33
1999	125	2124	3293	87	1189	1833	39	489	394	2	41	23

	Pedestrian			Pedal Cyclist			Other			All Road Users		
Year	K	H	M	K	H	M	K	H	M	K	H	M
1994	79	418	354	13	227	395	0	1	25	422	4600	6195
1995	92	445	391	10	211	406	1	0	12	456	4636	6599
1996	55	411	384	10	259	438	0	4	18	385	4480	6697
1997	59	373	364	12	253	410	0	2	10	361	4146	6346
1998	48	388	336	9	238	423	1	3	21	279	4330	6207
1999	49	385	318	9	240	335	3	15	21	314	4483	6217

Legend:

K = Killed, H = Admitted to hospital, M = Received medical treatment

* Includes pillion passengers

Table 2A: Road traffic casualties Queensland 1999
by road user type and age group

	Males killed by age goup										
Road user type	**0-4 years**	**5-16 years**	**17-20 years**	**21-25 years**	**26-29 years**	**30-39 years**	**40-49 years**	**50-59 years**	**60 & years**	**Not stated**	**Total**
Drivers	0	1	15	12	5	18	14	8	23	0	96
%	0.0%	1.0%	15.6%	12.5%	5.2%	18.8%	14.6%	8.3%	24.0%	0.0%	100.0
Passengers	3	8	11	7	8	5	2	0	2	2	48
%	6.3%	16.7%	22.9%	14.6%	16.7%	10.4%	4.2%	0.0%	4.2%	4.2%	100.0
Pedestrians	0	4	6	2	1	8	4	2	9	0	36
%	0.0%	11.1%	16.7%	5.6%	2.8%	22.2%	11.1%	5.6%	25.0%	0.0%	100.0
Motorcycle riders	0	2	4	6	5	13	3	2	0	0	35
%	0.0%	5.7%	11.4%	17.1%	14.3%	37.1%	8.6%	5.7%	0.0%	0.0%	100.0
Motorcycle pillions	0	0	0	0	0	0	1	0	0	0	1
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0
Bicycle riders	0	1	0	1	0	1	1	1	3	0	8
%	0.0%	12.5%	0.0%	12.5%	0.0%	12.5%	12.5%	12.5%	37.5%	0.0%	100.0
Bicycle pillions	0	0	0	0	0	0	0	0	0	0	0
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total killed	**3**	**16**	**36**	**28**	**19**	**45**	**25**	**13**	**37**	**2**	**224**
% of total	**1.3%**	**7.1%**	**16.1%**	**12.5%**	**8.5%**	**20.1%**	**11.2%**	**5.8%**	**16.5%**	**0.9%**	**100.0**

Table 2B: Road traffic casualties Queensland 1999
by road user type and age group

	Females killed by age goup										
Road user type	**0-4 years**	**5-16 years**	**17-20 years**	**21-25 years**	**26-29 years**	**30-39 years**	**40-49 years**	**50-59 years**	**60 & years**	**Not stated**	**Total**
Drivers	0	1	4	3	4	8	2	3	6	0	31
%	0.0%	3.2%	12.9%	9.7%	12.9%	25.8%	6.5%	9.7%	19.4%	0.0%	100.0
Passengers	5	6	7	5	4	2	2	3	4	0	38
%	13.2%	15.8%	18.4%	13.2%	10.5%	5.3%	5.3%	7.9%	10.5%	0.0%	100.0
Pedestrians	1	1	0	1	0	0	0	1	9	0	13
%	7.7%	7.7%	0.0%	7.7%	0.0%	0.0%	0.0%	7.7%	69.2%	0.0%	100.0
Motorcycle riders	1	0	1	0	0	2	0	0	0	0	4
%	25.0%	0.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	100.0
Motorcycle pillions	0	0	0	0	0	0	1	0	0	0	1
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0
Bicycle riders	0	0	0	0	0	0	0	0	1	0	1
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0
Bicycle pillions	0	0	0	0	0	0	0	0	0	0	0
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total killed	**7**	**8**	**12**	**9**	**8**	**12**	**5**	**7**	**20**	**0**	**88**
% of total	**8.0%**	**9.1%**	**13.6%**	**10.2%**	**9.1%**	**13.6%**	**5.7%**	**8.0%**	**22.7%**	**0.0%**	**100.0**

Table 2C: Road traffic casualties Queensland 1999
by road user type and age group

Road user type	Persons killed by age goup										
	0-4* years	5-16 years	17-20 years	21-25 years	26-29 years	30-39 years	40-49 years	50-59 years	60 & years	Not stated	Total
Drivers	0	2	19	15	9	26	16	11	29	0	127
%	0.0%	1.6%	15.0%	11.8%	7.1%	20.5%	12.6%	8.7%	22.8%	0.0%	100.0
Passengers	8	14	18	12	12	7	4	3	6	4	88
%	9.1%	15.9%	20.5%	13.6%	13.6%	8.0%	4.5%	3.4%	6.8%	4.5%	100.0
Pedestrians	1	5	6	3	1	8	4	3	18	0	49
%	2.0%	10.2%	12.2%	6.1%	2.0%	16.3%	8.2%	6.1%	36.7%	0.0%	100.0
Motorcycle riders	1	2	5	6	5	15	3	2	0	0	39
%	2.6%	5.1%	12.8%	15.4%	12.8%	38.5%	7.7%	5.1%	0.0%	0.0%	100.0
Motorcycle pillions	0	0	0	0	0	0	2	0	0	0	2
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0
Bicycle riders	0	1	0	1	0	1	1	1	4	0	9
%	0.0%	11.1%	0.0%	11.1%	0.0%	11.1%	11.1%	11.1%	44.4%	0.0%	100.0
Bicycle pillions	0	0	0	0	0	0	0	0	0	0	0
%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total killed	**10**	**24**	**48**	**37**	**27**	**57**	**30**	**20**	**57**	**4**	**314**
% of total	**3.2%**	**7.6%**	**15.3%**	**11.8%**	**8.6%**	**18.2%**	**9.6%**	**6.4%**	**18.2%**	**1.3%**	**100.0**

Table 2D: Road traffic casualties Queensland 1999
by road user type and age group

Road user type	Males injured by age goup										
	0-4 years	5-16 years	17-20 years	21-25 years	26-29 years	30-39 years	40-49 years	50-59 years	60 & years	Not stated	Total
Drivers	0	30	669	618	440	765	586	404	456	4	3970
%	0.0%	0.8%	16.9%	15.6%	11.1%	19.3%	14.8%	10.2%	11.5%	0.1%	100.0
Passengers	108	390	400	230	134	173	105	83	93	24	1733
%	6.2%	22.5%	23.1%	13.3%	7.7%	10.0%	6.1%	4.8%	5.4%	1.4%	100.0
Pedestrians	17	134	46	62	35	69	40	38	57	14	511
%	3.3%	26.2%	9.0%	12.1%	6.8%	13.5%	7.8%	7.4%	11.2%	2.7%	100.0
Motorcycle riders	1	23	108	173	140	263	159	53	30	1	950
%	0.1%	2.4%	11.4%	18.2%	14.7%	27.7%	16.7%	5.6%	3.2%	0.1%	100.0
Motorcycle pillions	0	9	4	7	4	2	0	0	1	1	28
%	0.0%	32.1%	14.3%	25.0%	14.3%	7.1%	0.0%	0.0%	3.6%	3.6%	100.0
Bicycle riders	1	249	52	73	44	73	49	19	30	8	598
%	0.2%	41.6%	8.7%	12.2%	7.4%	12.2%	8.2%	3.2%	5.0%	1.3%	100.0
Bicycle pillions	1	0	0	0	0	0	0	0	0	0	1
%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total injured	**128**	**835**	**1279**	**1163**	**797**	**1345**	**939**	**597**	**667**	**52**	**7802**
% of total	**1.6%**	**10.7%**	**16.4%**	**14.9%**	**10.2%**	**17.2%**	**12.0%**	**7.7%**	**8.5%**	**0.7%**	**100.0**

Table 2E: Road traffic casualties Queensland 1999
by road user type and age group

Road user type	Females injured by age goup										
	0-4 years	5-16 years	17-20 years	21-25 years	26-29 years	30-39 years	40-49 years	50-59 years	60 & years	Not stated	Total
Drivers	0	17	585	545	382	782	597	366	318	3	3593
%	0.0%	0.5%	16.3%	15.2%	10.6%	21.8%	16.6%	10.2%	8.9%	0.1%	100.0
Passengers	101	444	387	275	136	215	230	184	335	26	2329
%	4.3%	19.1%	16.6%	11.8%	5.8%	9.2%	9.9%	7.9%	14.4%	1.1%	100.0
Pedestrians	11	103	39	29	14	34	29	22	59	4	344
%	3.2%	29.9%	11.3%	8.4%	4.1%	9.9%	8.4%	6.4%	17.2%	1.2%	100.0
Motorcycle riders	0	3	11	12	5	25	11	6	2	0	75
%	0.0%	4.0%	14.7%	16.0%	6.7%	33.3%	14.7%	8.0%	2.7%	0.0%	100.0
Motorcycle pillions	0	2	7	4	10	5	7	8	1	1	44
%	0.0%	4.5%	15.9%	9.1%	22.7%	11.4%	15.9%	18.2%	2.3%	2.3%	100.0
Bicycle riders	0	66	17	23	10	21	10	6	4	2	158
%	0.0%	41.8%	10.8%	14.6%	6.3%	13.3%	6.3%	3.8%	2.5%	1.3%	100.0
Bicycle pillions	0	3	1	0	0	0	0	0	0	0	4
%	0.0%	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total injured	**112**	**638**	**1047**	**888**	**557**	**1082**	**884**	**592**	**719**	**36**	**6555**
% of total	**1.7%**	**9.7%**	**16.0%**	**13.5%**	**8.5%**	**16.5%**	**13.5%**	**9.0%**	**11.0%**	**0.5%**	**100.0**

Table 2F: Road traffic casualties Queensland 1999
by road user type and age group*

Road user type	Persons injured by age goup										
	0-4 years	5-16 years	17-20 years	21-25 years	26-29 years	30-39 years	40-49 years	50-59 years	60 & years	Not stated	Total
Drivers	0	47	1254	1163	822	1547	1183	770	774	7	7563
%	0.0%	0.6%	16.6%	15.4%	10.9%	20.5%	15.6%	10.2%	10.2%	0.1%	100.0
Passengers	209	834	787	505	270	388	335	267	428	50	4062
%	5.1%	20.5%	19.4%	12.4%	6.6%	9.6%	8.2%	6.6%	10.5%	1.2%	100.0
Pedestrians	28	237	85	91	49	103	69	60	116	18	855
%	3.3%	27.7%	9.9%	10.6%	5.7%	12.0%	8.1%	7.0%	13.6%	2.1%	100.0
Motorcycle riders	1	26	119	185	145	288	170	59	32	1	1025
%	0.1%	2.5%	11.6%	18.0%	14.1%	28.1%	16.6%	5.8%	3.1%	0.1%	100.0
Motorcycle pillions	0	11	11	11	14	7	7	8	2	2	72
%	0.0%	15.3%	15.3%	15.3%	19.4%	9.7%	9.7%	11.1%	2.8%	2.8%	100.0
Bicycle riders	1	315	69	96	54	94	59	25	34	10	756
%	0.1%	41.7%	9.1%	12.7%	7.1%	12.4%	7.8%	3.3%	4.5%	1.3%	100.0
Bicycle pillions	1	3	1	0	0	0	0	0	0	0	5
%	20.0%	60.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0
Total injured	**240**	**1473**	**2326**	**2051**	**1354**	**2427**	**1823**	**1189**	**1386**	**88**	**14357**
% of total	**1.7%**	**10.3%**	**16.2%**	**14.3%**	**9.4%**	**16.9%**	**12.7%**	**8.3%**	**9.7%**	**0.6%**	**100.0**

Table 3A: Road traffic casualties Queensland 1999
by road user type, age group and sex: persons killed

Age group	Drivers			Motor cyclists			Pedal cyclists		
	Male	Female	Not stated	Male	Female	Not stated	Male	Female	Not stated
0-4 years	0	0	0	0	1	0	0	0	0
5-16 years	1	1	0	2	0	0	1	0	0
17-20 years	15	4	0	4	1	0	0	0	0
21-25 years	12	3	0	6	0	0	1	0	0
26-29 years	5	4	0	5	0	0	0	0	0
30-34 years	11	4	0	3	0	0	1	0	0
35-39 years	7	4	0	10	2	0	0	0	0
40-49 years	14	2	0	3	0	0	1	0	0
50-59 years	8	3	0	2	0	0	1	0	0
60 years & over	23	6	0	0	0	0	3	1	0
Not stated	0	0	0	0	0	0	0	0	0
Total killed	96	31	0	36	5	0	8	1	0

Age group	Pedestrians			Passengers			Total		
	Male	Female	Not stated	Male	Female	Not stated	Male	Female	Not stated
0-4 years	0	1	0	3	5	0	3	7	0
5-16 years	4	1	0	8	6	0	16	8	0
17-20 years	6	0	0	11	7	0	36	12	0
21-25 years	2	1	0	7	5	0	28	9	0
26-29 years	1	0	0	8	4	0	19	8	0
30-34 years	4	0	0	4	1	0	24	5	0
35-39 years	4	0	0	0	1	0	21	7	0
40-49 years	4	0	0	3	3	0	25	5	0
50-59 years	2	1	0	0	3	0	13	7	0
60 years & over	9	9	0	2	4	0	37	20	0
Not stated	0	0	0	2	0	2	2	0	2
Total killed	36	13	0	48	39	2	224	88	2

Table 3B: Road traffic casualties Queensland 1999

by road user type, age group and sex: persons injured

Age group	Drivers			Motor cyclists			Pedal cyclists		
	Male	Female	Not stated	Male	Female	Not stated	Male	Female	Not stated
0-4 years	0	0	0	1	0	0	2	0	0
5-16 years	30	17	0	32	5	0	249	69	0
17-20 years	669	585	0	112	18	0	52	18	0
21-25 years	618	545	0	180	16	0	73	23	0
26-29 years	440	382	0	144	15	0	44	10	0
30-34 years	424	388	0	149	18	0	35	8	0
35-39 years	341	394	0	116	12	0	38	13	0
40-49 years	586	597	0	159	18	0	49	10	0
50-59 years	404	366	0	53	14	0	19	6	0
60 years & over	456	318	0	31	3	0	30	4	0
Not stated	4	3	4	2	1	0	8	2	0
Total injured	**3972**	**3595**	**4**	**979**	**120**	**0**	**599**	**163**	**0**

Age group	Pedestrians			Passengers			Total		
	Male	Female	Not stated	Male	Female	Not stated	Male	Female	Not stated
0-4 years	17	11	0	108	101	0	128	112	0
5-16 years	134	103	0	390	444	0	835	638	0
17-20 years	46	39	0	400	387	0	1279	1047	0
21-25 years	62	29	0	230	275	0	1163	888	0
26-29 years	35	14	0	134	136	0	797	557	0
30-34 years	35	15	0	103	115	0	746	544	0
35-39 years	34	19	0	70	100	0	599	538	0
40-49 years	40	29	0	105	230	0	939	884	0
50-59 years	38	22	0	83	184	0	597	592	0
60 years & over	57	59	0	93	335	0	667	719	0
Not stated	14	4	0	24	26	11	52	21	15
Total injured	**512**	**344**	**0**	**1740**	**2333**	**11**	**7802**	**6540**	**15**

Table 4A: Road traffic casualties Queensland 1999
Restraint details by age group: persons killed

Restraint details	0 - 4 years	5 - 16 years	17 - 20 years	21 - 25 years	26 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60 years & over	Not stated	Total
Fitted:											
Worn	4	7	15	12	8	12	11	7	22	0	98
Not worn	2	4	8	6	6	7	1	2	5	0	41
Unknown if worn	1	2	11	4	6	8	5	1	4	0	42
Not fitted	0	1	2	0	0	2	1	0	0	0	6
Unknown	1	1	1	5	1	4	1	4	2	2	22
Not applicable	2	9	11	10	6	24	11	6	24	2	105
Total killed	**10**	**24**	**48**	**37**	**27**	**57**	**30**	**20**	**57**	**4**	**314**

Table 4B: Road traffic casualties Queensland 1999
Restraint details by age group: persons injured

Restraint details	0 - 4 years	5 - 16 years	17 - 20 years	21 - 25 years	26 - 29 years	30 - 39 years	40 - 49 years	50 - 59 years	60 years & over	Not stated	Total
Fitted:											
Worn	181	705	1627	1304	840	1552	1223	874	1020	20	9346
Not worn	6	42	56	50	34	45	34	24	25	2	318
Unknown if worn	14	63	195	173	125	193	157	84	83	15	1102
Not fitted	4	19	20	20	9	13	16	7	14	1	123
Unknown	4	32	130	102	68	108	76	37	42	15	614
Not applicable	31	612	298	402	278	516	317	163	202	35	2854
Total killed	**240**	**1473**	**2326**	**2051**	**1354**	**2427**	**1823**	**1189**	**1386**	**88**	**14357**

Table 5A: Road traffic casualties Queensland 1999
Seat belt usage by age group: persons killed

Age group	Total killed *	Unknown seat belt usage	Unrestrained	Restrained
0-4	8	2	2	4
5-11	4	1	0	3
12-16	11	2	5	4
17-20	37	12	10	15
21-24	21	9	4	8
25-29	27	7	8	12
30-34	20	7	4	9
35-39	12	5	4	3
40-49	19	6	2	11
50-59	14	5	2	7
60-69	13	3	3	7
70-79	15	3	2	10
80+	5	0	0	5
Not stated	4	2	2	0
Total	**210**	**64**	**48**	**98**

Table 5B: Road traffic casualties Queensland 1999
Seat belt usage by age group: persons injured

Age group	Total seriously injured *	Unknown seat belt usage	Unrestrained	Restrained
0-4	146	15	10	121
5-11	259	21	9	229
12-16	357	54	41	262
17-20	1458	260	68	1130
21-24	948	170	46	732
25-29	985	178	50	757
30-34	676	127	26	523
35-39	669	96	25	548
40-49	1027	164	39	824
50-59	716	99	28	589
60-69	451	55	15	381
70-79	343	30	11	302
80+	130	10	7	113
Not stated	39	23	2	14
Total	**8204**	**1302**	**377**	**6525**

* Does not include occupants of buses or tractors

Table 6: Road traffic casualties Queensland 1999
Seat belt and helmet wearing details by injury severity

Road user type/safety device used	Killed	Seriously injured	Other injury	Total
Driver:				
Restraint worn	65	4295	1874	6234
Fitted but not worn	20	149	28	197
No restraint fitted	3	41	10	54
Not stated	36	817	300	1153
Sub total driver	124	5302	2212	7638
Passenger:				
Restraint worn	33	2244	871	3148
Fitted but not worn	20	124	13	157
No restraint fitted	3	57	10	70
Not stated	28	490	100	618
Sub total passenger	84	2915	994	3993
Total vehicle occupants	**208**	**8217**	**3206**	**11631**
Pedal cycle rider & pillion:				
Helmet worn	7	416	145	568
No helmet worn	2	111	20	133
Not stated	0	42	28	70
Total pedal cycle rider & pillion	**9**	**569**	**193**	**771**
Motorcycle cycle rider & pillion:				
Helmet worn	31	858	145	1034
No helmet worn	7	34	2	43
Not stated	3	43	17	63
Total motor cycle rider & pillion	**41**	**935**	**164**	**1140**

Table 7: Road traffic casualties Queensland 1999
by road user type and most severe injury sustained: persons killed

Nature of injury	Drivers*	Motor cyclists	Pedal cyclists	Pedestrians	Passengers**	Other	TOTAL
Fractures							
Skull & Face	9	2	0	2	4	0	17
Spine & Trunk	4	2	0	1	3	0	10
Upper Limbs	0	0	0	0	0	0	0
Lower Limbs & Mult	0	0	0	0	0	0	0
Sub-Total	13	4	0	3	7	0	27
Lacerations							
Head & Face	0	0	0	0	0	0	0
Neck & Trunk	1	0	0	0	2	0	3
Upper Limbs	0	0	0	0	0	0	0
Lower Limbs	1	0	0	0	0	0	1
Sub-Total	2	0	0	0	2	0	4
Other							
Intracranial	34	10	2	19	30	0	95
Concussion	0	0	0	0	0	0	0
Internal	66	22	7	27	45	0	167
Nerve/Spinal Cord Injury	0	0	0	0	0	0	0
Crush Injury	3	1	0	0	2	0	6
Blood Vessel Injury	2	2	0	0	1	0	5
Foreign Matter in Orifice	0	0	0	0	0	0	0
Burn	4	0	0	0	0	0	4
Dislocation	0	0	0	0	0	0	0
Sprain/Strain	0	0	0	0	0	0	0
Abrasions	0	0	0	0	0	0	0
Contusion	0	0	0	0	0	0	0
Shock	0	0	0	0	0	0	0
Other	4	0	0	0	2	0	6
Sub-total	113	35	9	46	80	0	283
Total fatalities	128	39	9	49	89	0	314

* Includes horse riders

** Includes pillion passengers

Table 8A: Road traffic crashes Queensland 1999
Involved controllers by road user type and age group: males only

Age group	Driver		Motorcyclist		Bicyclist	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	2	1	1	1	1	0
5-7	0	0	0	0	17	15
8-12	3	3	1	1	103	85
13-15	43	42	15	13	110	80
16-19	2765	2060	99	63	71	43
20-24	3230	2032	191	108	72	31
25-29	2582	1486	195	114	62	17
30-34	1954	1043	162	79	41	9
35-39	1816	942	133	77	37	11
40-49	2840	1369	178	92	52	17
50-59	2165	1056	62	39	20	4
60-69	1090	612	22	13	19	9
70+	910	668	10	6	14	8
Not stated	193	162	3	3	8	7
Total	19593	11476	1072	609	627	336

Age group	Pedestrian		Other road user		Total	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	17	16	0	0	21	18
5-7	32	29	0	0	49	44
8-12	49	39	0	0	156	128
13-15	39	30	0	0	207	165
16-19	58	36	3	1	2996	2203
20-24	66	41	19	11	3578	2223
25-29	47	18	14	5	2900	1640
30-34	47	25	14	6	2218	1162
35-39	31	20	20	12	2037	1062
40-49	44	22	31	22	3145	1522
50-59	40	22	19	10	2306	1131
60-69	33	19	5	2	1169	655
70+	33	22	4	1	971	705
Not stated	13	9	2	2	219	183
Total	549	348	131	72	21972	12841

Legend:

Inv - Number of controllers* involved in a crash

Resp - The controller considered most responsible for the crash by police

* Controller - see definitions, Appendix 1

Table 8B: Road traffic crashes Queensland 1999
Involved controllers by road user type and age group: females only

Age group	Driver		Motorcyclist		Bicyclist	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	0	0	1	1	0	0
5-7	0	0	0	0	1	1
8-12	0	0	0	0	33	29
13-15	11	11	3	3	29	14
16-19	1434	935	8	3	17	13
20-24	1705	904	17	14	24	8
25-29	1394	680	6	2	16	8
30-34	1167	499	9	5	12	3
35-39	1193	544	18	11	9	3
40-49	1897	814	12	5	10	5
50-59	1102	511	6	5	7	2
60-69	520	295	1	1	1	0
70+	381	277	1	1	4	4
Not stated	42	30	0	0	2	0
Total	10846	5500	82	51	165	90

Age group	Pedestrian		Other road user		Total	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	12	8	0	0	13	9
5-7	19	17	0	0	20	18
8-12	35	29	0	0	68	58
13-15	42	28	1	1	86	57
16-19	43	21	0	0	1502	972
20-24	33	13	0	0	1779	939
25-29	16	8	3	1	1435	699
30-34	20	8	0	0	1208	515
35-39	14	4	2	1	1236	563
40-49	30	12	2	1	1951	837
50-59	23	11	0	0	1138	529
60-69	23	9	1	1	546	306
70+	45	17	0	0	431	299
Not stated	5	3	0	0	49	33
Total	360	188	9	5	11462	5834

Legend:

Inv - Number of controllers* involved in a crash

Resp - The controller considered most responsible for the crash by police

* Controller - see definitions, Appendix 1

Table 8C: Road traffic crashes Queensland 1999
Involved controllers by road user type and age group: persons only

Age group	Driver		Motorcyclist		Bicyclist	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	2	1	2	2	1	0
5-7	0	0	0	0	18	16
8-12	3	3	1	1	136	114
13-15	54	53	18	16	139	94
16-19	4199	2995	107	66	88	56
20-24	4935	2936	208	122	96	39
25-29	3976	2166	201	116	78	25
30-34	3121	1542	171	84	53	12
35-39	3009	1486	151	88	46	14
40-49	4737	2183	190	97	62	22
50-59	3267	1567	68	44	27	6
60-69	1610	907	23	14	20	9
70+	1291	945	11	7	18	12
Not stated	732	614	7	7	12	8
Total	30936	17398	1158	664	794	427

Age group	Pedestrian		Other road user		Total	
	Inv	Resp	Inv	Resp	Inv	Resp
0-4	29	24	0	0	34	27
5-7	51	46	0	0	69	62
8-12	84	68	0	0	224	186
13-15	81	58	1	1	293	222
16-19	101	57	3	1	4498	3175
20-24	99	54	19	11	5357	3162
25-29	63	26	17	6	4335	2339
30-34	67	33	14	6	3426	1677
35-39	45	24	22	13	3273	1625
40-49	74	34	33	23	5096	2359
50-59	63	33	19	10	3444	1660
60-69	56	28	6	3	1715	961
70+	78	39	4	1	1402	1004
Not stated	20	13	3	3	774	645
Total	911	537	141	78	33940	19104

Legend:

Inv - Number of controllers* involved in a crash

Resp - The controller considered most responsible for the crash by police

* Controller - see definitions, Appendix 1

Table 9A: Blood alcohol analysis Queensland 1999
Controllers* killed in road traffic crashes

Blood alcohol analysis	Drivers	Motor cyclists	Pedal cyclists	Pedestrians	Other	Total
No blood analysis	29	13	7	17	0	66
Negative	68	18	2	14	0	102
Positive						
.01 - .04	4	2	0	2	0	8
.05 - .07	1	1	0	4	0	6
.08 - .14	10	1	0	3	0	14
.15 - .19	4	2	0	5	0	11
.20 - .24	2	0	0	1	0	3
.25 & over	7	1	0	2	0	10
Total positive	28	7	0	17	0	52
Total controllers	**125**	**38**	**9**	**48**	**0**	**220**
Total tested	96	25	2	31	0	154
% positive	29.2	28.0	0.0	54.8	0.0	33.8

Table 9B: Blood alcohol analysis Queensland 1999
Controllers* injured in road traffic crashes

Blood alcohol analysis	Drivers	Motor cyclists	Pedal cyclists	Pedestrians	Other	Total
No test required	4552	698	713	835	1	6799
Refused test	30	1	0	1	0	32
Negative	2543	280	41	18	0	2882
Positive						
.01 - .04	28	3	0	0	0	31
.05 - .07	41	3	0	0	0	44
.08 - .14	120	24	1	1	0	146
.15 - .19	135	9	0	0	0	144
.20 - .24	81	7	1	0	0	89
.25 & over	33	1	1	1	0	36
Total positive	438	47	3	2	0	490
Total controllers	**7563**	**1026**	**757**	**856**	**1**	**10203**
Total tested	2981	327	44	20	0	3372
% positive	14.7	14.4	6.8	10.0	0.0	14.5

* Controller - for definition see Glossary, Appendix 1

Table 10A: Blood alcohol analysis by age group Queensland 1999
Controllers* killed in road traffic crashes

Blood alcohol analysis	Under 17 years	17 - 20 years	21 - 24 years	25 - 29 years	30 - 39 years	40 - 49 years	50 years & over	Total
Failure to supply	0	0	0	0	0	0	0	0
Negative	2	17	12	6	19	10	36	102
Positive	2	17	12	6	19	10	36	102
.01 - .04	0	2	1	1	2	0	2	8
.05 - .07	1	2	1	0	2	0	0	6
.08 - .14	2	1	3	1	6	0	1	14
.15 - .19	0	1	1	1	4	2	2	11
.20 - .24	0	0	3	0	0	0	0	3
.25 & over	0	0	1	1	2	4	2	10
Total positive	3	6	10	4	16	6	7	52
Total tested for alcohol	5	23	22	10	35	16	43	154
% positive	60.0	26.1	45.5	40.0	45.7	37.5	16.3	33.8

Table 10B: Blood alcohol analysis by age group Queensland 1999
Controllers* not killed but may have been injured in road traffic crashes

Blood alcohol analysis	Under 17 years	17 - 20 years	21 - 24 years	25 - 29 years	30 - 39 years	40 - 49 years	50 years & over	Total
Failure to supply	1	10	11	11	24	8	5	70
Negative	78	2391	2033	1285	2467	1924	2427	12605
Positive								
.01 - .04	4	37	18	12	25	6	12	114
.05 - .07	5	35	25	15	20	10	7	117
.08 - .14	9	112	106	67	103	35	35	467
.15 - .19	1	57	82	73	81	43	33	370
.20 - .24	0	15	34	27	47	25	23	171
.25 & over	0	4	3	8	20	13	11	59
Total positive	**19**	**260**	**268**	**202**	**296**	**132**	**121**	**1298**
Total tested for alcohol	**97**	**2651**	**2301**	**1487**	**2763**	**2056**	**2548**	**13903**
% positive	19.6	9.8	11.6	13.6	10.7	6.4	4.7	9.3

* Controller - for definition see Glossary, Appendix 1

Table 11A: Road traffic crashes Queensland 1999
Time of day and day of week - Total crashes

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight - 2am	56	35	51	62	90	177	156	627
2am - 4am	43	30	40	49	53	151	110	476
4am - 6am	66	49	57	86	100	108	101	567
6am - 8am	214	228	233	223	214	159	133	1404
8am - 10am	391	345	348	414	325	248	175	2246
10am - noon	311	277	269	282	327	396	284	2146
Noon - 2pm	277	313	304	282	322	376	283	2157
2pm - 4pm	397	388	422	425	542	300	250	2724
4pm - 6pm	466	395	480	464	552	347	295	2999
6pm - 8pm	218	244	279	269	365	298	202	1875
8pm - 10pm	135	135	155	185	228	198	143	1179
10pm - midnight	79	99	107	129	223	206	92	935
Total	**2653**	**2538**	**2745**	**2870**	**3341**	**2964**	**2224**	**19335**

Table 11B: Road traffic crashes Queensland 1999
Time of day and day of week - Casualty crashes

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight - 2am	29	19	25	35	50	87	84	329
2am - 4am	16	14	20	25	35	71	49	230
4am - 6am	35	29	32	48	55	58	51	308
6am - 8am	128	129	132	128	123	74	68	782
8am - 10am	218	200	189	229	180	134	109	1259
10am - noon	169	158	146	169	190	216	165	1213
Noon - 2pm	154	168	181	158	202	219	161	1243
2pm - 4pm	229	236	253	263	326	166	143	1616
4pm - 6pm	271	225	267	270	314	196	191	1734
6pm - 8pm	124	141	151	159	205	159	98	1037
8pm - 10pm	71	70	83	89	129	104	77	623
10pm - midnight	42	48	52	60	116	109	54	481
Total	**1486**	**1437**	**1531**	**1633**	**1925**	**1593**	**1250**	**10855**

Table 11C: Road traffic crashes Queensland 1999
Time of day and day of week - Persons killed

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight - 2am	1	4	1	0	4	7	8	25
2am - 4am	1	0	0	1	1	6	2	11
4am - 6am	3	1	0	4	2	3	4	17
6am - 8am	4	2	3	2	3	3	9	26
8am - 10am	4	1	1	7	2	3	4	22
10am - noon	4	6	3	2	11	5	3	34
Noon - 2pm	3	3	0	1	3	10	3	23
2pm - 4pm	7	2	6	4	5	2	10	36
4pm - 6pm	3	2	2	2	10	4	8	31
6pm - 8pm	0	2	8	8	7	3	0	28
8pm - 10pm	3	4	2	6	4	5	2	26
10pm - midnight	3	3	4	4	12	5	4	35
Total	**36**	**30**	**30**	**41**	**64**	**56**	**57**	**314**

Table 11D: Road traffic crashes Queensland 1999
Time of day and day of week - Persons injured

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
Midnight - 2am	29	19	31	40	62	121	110	412
2am - 4am	21	19	27	30	45	112	62	316
4am - 6am	50	31	35	59	71	71	70	387
6am - 8am	153	168	162	149	161	100	84	977
8am - 10am	291	244	247	304	231	183	148	1648
10am - noon	231	201	200	221	242	302	251	1648
Noon - 2pm	218	213	229	198	274	302	218	1652
2pm - 4pm	312	308	318	357	398	253	214	2160
4pm - 6pm	368	285	308	361	413	270	282	2287
6pm - 8pm	170	179	186	216	257	238	125	1371
8pm - 10pm	92	91	130	129	172	140	109	863
10pm - midnight	47	58	65	87	162	154	63	636
Total	**1982**	**1816**	**1938**	**2151**	**2488**	**2246**	**1736**	**14357**

Table 12: Road traffic casualties Queensland 1999
Road users by vehicle type and injury severity

Road user type	Killed	Admitted to hospital	Medical treatment	Other injury	Total casualties
Driver					
Car, station wagon	98	1717	2735	1855	6405
Utility, panel van	21	291	393	305	1010
4-wheel drive	1	13	16	13	43
Rigid truck	1	33	45	24	103
Articulated truck	4	49	64	30	145
Bus	0	6	13	6	25
Other motor vehicle	3	10	15	10	38
Sub-total	128	2119	3281	2243	7769
Motorcycle rider	39	485	388	153	1065
Pedal cycle rider	9	237	330	191	767
Other/not stated	0	1	0	0	1
Sub-total	48	723	718	344	1833
Passenger:					
Car, station wagon	74	985	1518	872	3449
Utility, panel van	9	160	217	120	506
4-wheel drive	0	7	19	12	38
Rigid truck	0	9	14	5	28
Articulated truck	3	9	8	0	20
Road train/Bdouble/triple	0	0	0	0	0
Bus	1	12	48	20	81
Other motor vehicle	0	4	6	1	11
Sub-total	87	1186	1830	1030	4133
Motorcycle pillion	2	39	22	11	74
Pedal cycle pillion	0	3	1	1	5
Other/not stated	0	0	0	0	0
Sub-total	2	42	23	12	79
Pedestrian sub-total	49	380	314	163	906
Total casualties	**314**	**4450**	**6166**	**3792**	**14720**

Table 13: Road traffic crashes Queensland 1999
Type of unit most responsible by crash severity

Type of unit	Crash severity									
	F	%	H	%	M	%	O	%	All crashes	%
Car/station wagon	139	51	2165	62	3093	69	1849	71	13930	72
Utility, panel van	38	14	399	11	554	12	323	12	2454	13
Rigid truck	3	1	78	2	121	3	57	2	522	3
Articulated vehicle	14	5	76	2	89	2	52	2	444	2
Omnibus	2	1	14	0	39	1	22	1	110	1
Motorcycle	30	11	324	9	201	4	78	3	664	3
Tractor	5	2	12	0	17	0	12	0	78	0
Towed device (Caravan)	1	0	0	0	0	0	2	0	13	0
Bicycle	3	1	168	5	164	4	89	3	428	2
Pedestrian	34	12	251	7	164	4	87	3	537	3
Animal - ridden	0	0	1	0	0	0	0	0	1	0
Animal - stock	0	0	0	0	0	0	0	0	0	0
Animal - other	0	0	0	0	0	0	0	0	0	0
Railway rolling stock	0	0	0	0	0	0	0	0	0	0
4-wheel drive	2	1	19	1	26	1	15	1	98	1
Road train/Bdouble/triple	0	0	0	0	1	0	0	0	5	0
Other	0	0	1	0	0	0	0	0	1	0
Not stated	2	1	5	0	13	0	1	0	49	0
Total number of crashes	**273**	**100**	**3513**	**100**	**4482**	**100**	**2587**	**100**	**19334**	**100**

Type of unit	Injury severity									
	K	%	Hl	%	Ml	%	Mm	%	Total casualties	%
Car/station wagon	170	54	2872	65	4365	71	2808	74	10215	70
Utility, panel van	41	13	536	12	782	13	461	12	1820	12
Rigid truck	3	1	89	2	162	3	81	2	335	2
Articulated vehicle	18	6	104	2	112	2	62	2	296	2
Omnibus	2	1	21	0	66	1	36	1	125	1
Motorcycle	32	10	343	8	228	4	92	2	695	5
Tractor	5	2	14	0	29	0	15	0	63	0
Towed device (Caravan)	2	1	0	0	0	0	2	0	4	0
Bicycle	3	1	168	4	167	3	97	3	435	3
Pedestrian	34	11	257	6	171	3	94	2	556	4
Animal - ridden	0	0	1	0	0	0	0	0	1	0
Animal - stock	0	0	0	0	0	0	0	0	0	0
Animal - other	0	0	0	0	0	0	0	0	0	0
Railway rolling stock	0	0	0	0	0	0	0	0	0	0
4-wheel drive	2	1	26	1	40	1	33	1	101	1
Road train/Bdouble/triple	0	0	0	0	1	0	0	0	1	0
Other	0	0	1	0	0	0	0	0	1	0
Not stated	2	1	5	0	14	0	2	0	23	0
Total number of crashes	**314**	**100**	**4437**	**100**	**6137**	**100**	**3783**	**100**	**14671**	**100**

Legend:

F - worst casualty fatal
H - worst casualty admitted to hospital
M - worst casualty required medical treatment
O - worst casualty minor injury (first-aid or no treatment)

K - Killed
Hl - admitted to hospital
Ml - required medical treatment
Mm - minor injury (first-aid or no treatment)

Table 14: Single vehicle crashes Queensland 1999 by vehicle type and crash severity

Vehicle type	Fatal crashes	Serious injury	Other injury	Property damage only	Total crashes
Car/station wagon	63	1735	469	2448	4715
Utility/panel van	16	337	82	456	891
Truck	2	41	11	82	136
Articulated vehicle	8	87	18	100	213
Omnibus	12	3	8	23	46
Motorcycle	16	317	38	13	384
Bicycle	1	55	5	0	61
Other vehicle	2	10	5	20	37
Total crashes	**120**	**2585**	**636**	**3142**	**6483**

Table 15: Road traffic crashes and casualties, Queensland 1999: by roadway feature and traffic control

	Road feature/traffic control	Total crashes	Casualty crashes	Persons killed	Persons injured
Intersection					
Cross roads controlled by:	- person	5	4	0	4
	- traffic lights	1850	1013	11	1373
	-stop/give way signs	1188	637	19	937
	- pedestrian crossing	19	17	1	19
Uncontrolled cross roads		668	354	4	482
T-junction controlled by:	- person	5	2	0	2
	- traffic lights	843	484	3	664
	-stop/give way signs	786	443	4	591
	- pedestrian crossing	20	17	0	18
Uncontrolled T-junction		2423	1382	26	1825
Y-junction controlled by:	- person	0	0	0	0
	- traffic lights	17	11	0	13
	-stop/give way signs	8	5	0	8
	- pedestrian crossing	0	0	0	0
Uncontrolled Y-junction		23	13	0	21
Other intersections controlled by:	- person	1	1	0	1
	- traffic lights	48	26	0	40
	-stop/give way signs	633	343	2	408
	- pedestrian crossing	2	2	0	2
Uncontrolled other intersection		296	160	3	207
Railway level crossing controlled by:	- lights	17	9	0	13
	- signs	15	10	0	10
Uncontrolled railway level crossing		5	4	0	6
Other roadway features					
Bridge, culvert, causeway		274	158	4	220
Straight road:	- median opening	29	9	0	10
	- merge lane	65	44	3	61
	- person	40	22	2	30
	- lights	73	42	4	55
	- signs	38	23	0	29
	- pedestrian crossing	81	61	1	70
No features		7032	3909	137	4977
Curved road:	- view open	1923	1154	60	1578
	- view obscured	908	496	30	683
Total crashes		**19335**	**10855**	**314**	**14357**

Table 16A: Road traffic crashes Queensland 1999
Roadway features by crash severity

Road way feature	Crash severity					
	Fatal	Admitted to hospital	Received medical treatment	Other injury	Non-injury	Total
Cross	31	586	923	467	1714	3721
T junction	31	657	1004	614	1752	4058
Y junction	0	9	16	4	19	48
Multiple road	0	6	12	8	19	45
Interchange	4	41	76	37	121	279
Roundabout	0	77	167	111	326	681
Bridge, causeway	3	67	55	33	116	274
Railway crossing	0	12	7	3	14	36
Median opening	0	3	4	2	20	29
Merge lane	2	13	19	12	23	69
Miscellaneous	0	0	0	0	0	0
No special features	202	2042	2198	1296	4357	10095
Total crashes	**273**	**3513**	**4481**	**2587**	**8481**	**19335**

Table 16B: Road traffic crashes Brisbane Statistical Division 1999
Roadway features by crash severity

Road way feature	Crash severity					
	Fatal	Admitted to hospital	Received medical treatment	Other injury	Non-injury	Total
Cross	8	251	431	211	652	1553
T junction	10	311	540	308	870	2039
Y junction	0	7	9	1	12	29
Multiple road	0	4	4	6	10	24
Interchange	3	24	52	27	84	190
Roundabout	0	26	71	42	100	239
Bridge, causeway	0	9	15	9	20	53
Railway crossing	0	1	0	0	2	3
Median opening	0	1	0	2	10	13
Merge lane	0	5	11	8	9	33
Miscellaneous	0	0	0	0	0	0
No special features	51	597	829	513	1571	3561
Total crashes	**72**	**1236**	**1962**	**1127**	**3340**	**7737**

Table 17: Road traffic crashes and casualties Queensland 1999 by region, crash severity and gender

Crashes and casualties	Brisbane City	Rest of BSD*	Provincial cities	Rest of Qld	Total Qld
Crashes					
Fatal crashes	39	33	64	137	273
Serious injury crashes	2077	1108	2611	2198	7994
Other injury crashes	807	319	862	598	2586
Total casualty crashes	2923	1460	3544	2926	10853
Property damage only crashes	2283	1074	2997	2128	8482
Total crashes	5206	2534	6534	5061	19335
Casualties					
Fatalities					
Males	30	32	52	110	224
Females	11	6	25	46	88
Not stated	0	0	1	1	2
Total fatalities	41	38	78	157	314
Seriously injured					
Males	1349	783	1821	1783	5736
Females	1209	683	1563	1373	4828
Not stated	2	3	5	0	10
Total seriously injured	2560	1469	3389	3156	10574
Other injured					
Males	629	240	663	525	2057
Females	552	224	590	352	1718
Not stated	2	0	5	1	8
Total other injured	1183	464	1258	878	3783
Total casualties					
Males	2008	1055	2536	2418	8017
Females	1772	913	2178	1771	6634
Not stated	4	3	11	2	20
Total casualties	3784	1971	4725	4191	14671

* Brisbane Statistical Division

Table 18: Road traffic crashes and casualties Queensland 1999
by Local Government Area

Local Government Area	Crashes		Persons									
			Drivers and passengers		Pedestrians		Motorcycle riders and pillions		Pedal cycle riders		Others	
	Total reported	Involving casualties	K	I	K	I	K	I	K	I	K	I
Aramac Shire Council	4	2	0	3	0	0	0	0	0	0	0	0
Atherton Shire Council	71	35	1	47	0	2	0	2	0	0	0	0
Balonne Shire Council	36	23	1	29	0	2	0	0	0	0	0	0
Banana Shire Council	94	49	1	58	0	1	0	7	1	2	0	0
Barcaldine Shire Council	9	6	0	6	0	0	0	3	0	0	0	0
Barcoo Shire Council	7	6	0	7	0	0	0	0	0	0	0	0
Bauhinia Shire Council	28	17	2	21	0	0	0	1	0	0	0	0
Beaudesert Shire Council	225	141	4	153	1	6	3	20	0	2	0	0
Belyando Shire Council	44	33	0	38	0	2	0	2	0	2	0	0
Bendemere Shire Council	4	2	0	2	0	0	0	0	0	0	0	0
Biggenden Shire Council	7	7	0	7	0	0	0	0	0	0	0	0
Blackall Shire Council	12	10	1	9	1	1	0	0	0	0	0	0
Boonah Shire Council	88	48	3	50	0	0	1	9	0	3	0	0
Booringa Shire Council	5	4	0	5	0	0	0	1	0	0	0	0
Boulia Shire Council	8	5	0	6	0	0	0	0	0	0	0	0
Bowen Shire Council	86	53	5	69	0	2	0	8	0	2	0	0
Brisbane City Council	5202	2926	26	2978	7	317	7	262	1	188	0	0
Broadsound Shire Council	57	44	0	52	0	3	0	4	0	0	0	0
Bulloo Shire Council	4	2	0	4	0	0	0	0	0	0	0	0
Bundaberg City Council	266	133	2	112	0	18	0	15	1	15	0	0
Bungil Shire Council	12	7	0	8	0	0	0	0	0	0	0	0
Burdekin Shire Council	100	62	9	95	0	1	0	5	1	1	0	0
Burke Shire Council	13	9	0	11	0	2	0	2	0	0	0	0
Burnett Shire Council	77	46	2	53	0	0	0	2	2	2	0	0
Caboolture Shire Council	515	295	4	314	1	17	1	38	0	20	0	0
Cairns City Council	761	336	1	270	2	32	1	53	0	52	0	0
Calliope Shire Council	112	68	0	89	0	1	2	9	0	2	0	0
Caloundra City Council	420	208	5	257	1	16	2	19	0	11	0	0
Cambooya Shire Council	21	13	0	13	0	0	0	1	0	0	0	0
Cardwell Shire Council	71	39	6	46	0	3	0	4	0	1	0	0
Carpentaria Shire Council	8	6	0	9	0	0	0	0	0	0	0	0
Charters Towers City Council	41	22	0	19	0	4	0	1	0	1	0	0
Chinchilla Shire Council	33	24	1	27	1	1	0	1	0	2	0	0
Clifton Shire Council	8	5	0	7	0	0	0	0	0	0	0	0
Cloncurry Shire Council	31	19	1	27	0	1	0	1	0	0	0	0
Cook Shire Council	58	42	1	78	0	0	1	7	0	1	0	0
Cooloola Shire Council	247	119	4	141	2	12	0	9	1	2	0	0
Crows Nest Shire Council	36	14	0	17	0	0	0	3	0	0	0	0
Croydon Shire Council	6	4	0	4	0	0	0	1	0	0	0	0
Dalby Town Council	39	19	1	14	0	1	0	4	0	5	0	0
Dalrymple Shire Council	53	30	1	32	0	0	1	7	0	0	0	0
Diamantina Shire Council	6	4	0	4	0	0	0	1	0	0	0	0
Douglas Shire Council	107	54	2	59	0	5	2	11	0	3	0	0
Duaringa Shire Council	51	25	0	32	0	1	0	1	0	1	0	0
Eacham Shire Council	50	28	2	22	0	2	0	6	0	1	0	0
Eidsvold Shire Council	6	3	0	2	0	0	0	1	0	0	0	0

Table 18: Road traffic crashes and casualties Queensland 1999 by Local Government Area (cont'd)

Local Government Area	Crashes		Persons									
			Drivers and passengers		Pedestrians		Motorcycle riders and pillions		Pedal cycle riders		Others	
	Total reported	Involving casualties	K	I	K	I	K	I	K	I	K	I
Emerald Shire Council	61	38	0	53	0	2	0	5	0	3	0	0
Esk Shire Council	120	74	7	80	0	2	2	11	0	1	0	0
Etheridge Shire Council	16	9	0	15	0	0	0	0	0	0	0	0
Fitzroy Shire Council	51	33	3	32	0	0	0	2	0	2	0	0
Flinders Shire Council	28	19	3	33	0	0	0	0	0	0	0	0
Gatton Shire Council	118	65	3	79	1	1	0	6	0	3	0	0
Gayndah Shire Council	21	11	1	17	0	0	0	2	0	1	0	0
Gladstone City Council	167	75	0	71	1	3	0	9	0	12	0	0
Gold Coast City Council	1840	1164	7	1128	7	116	5	128	1	115	0	0
Goondiwindi Town Council	17	6	0	7	0	0	0	0	0	1	0	0
Herberton Shire Council	14	10	0	12	0	1	0	2	0	0	0	0
Hervey Bay City Council	178	104	6	147	0	5	1	10	0	7	0	0
Hinchinbrook Shire Council	80	50	1	53	0	3	0	5	0	5	0	0
Ilfracombe Shire Council	4	3	0	2	0	1	0	0	0	0	0	0
Inglewood Shire Council	27	12	1	19	0	0	0	0	0	1	0	0
Ipswich City Council	810	399	4	444	4	38	1	40	0	23	0	0
Isis Shire Council	72	36	2	49	0	2	1	1	0	0	0	0
Isisford Shire Council	5	2	0	2	0	0	0	0	0	0	0	0
Jericho Shire Council	6	3	0	4	0	0	0	0	0	0	0	0
Johnstone Shire Council	114	66	1	64	1	6	1	10	0	5	0	0
Jondaryan Shire Council	65	41	0	55	0	0	0	1	0	1	0	0
Kilcoy Shire Council	32	17	0	21	0	1	0	0	0	0	0	0
Kilkivan Shire Council	38	23	1	25	0	0	0	0	0	0	0	0
Kingaroy Shire Council	58	35	2	40	0	3	0	4	0	2	0	0
Kolan Shire Council	43	28	2	36	0	0	1	0	0	1	0	0
Laidley Shire Council	78	43	0	64	0	0	1	3	0	3	0	0
Livingstone Shire Council	122	74	4	96	1	1	1	3	0	2	0	0
Logan City Council	817	451	12	485	1	33	1	33	0	22	0	0
Longreach Shire Council	18	6	0	8	0	0	0	0	0	0	0	0
Mackay City Council	478	273	8	312	1	23	0	35	0	22	0	0
Mareeba Shire Council	104	56	1	47	0	4	0	14	0	2	0	0
Maroochy Shire Council	690	382	11	423	2	23	1	33	0	30	0	0
Maryborough City Council	125	77	0	88	0	9	0	11	0	12	0	0
Mckinlay Shire Council	18	11	1	16	0	0	0	0	0	0	0	0
Millmerran Shire Council	23	14	0	17	0	0	0	1	0	0	0	0
Mirani Shire Council	25	13	0	17	0	0	0	1	0	1	0	0
Miriam Vale Shire Council	37	18	0	30	0	0	0	1	0	0	0	0
Monto Shire Council	17	8	0	9	0	0	0	0	0	1	0	0
Mornington Shire Council	2	2	0	2	0	0	0	0	0	0	0	0
Mount Isa City Council	90	40	1	30	0	6	0	5	0	8	0	0
Mount Morgan Shire Council	6	2	0	1	0	0	0	1	0	0	0	0
Mundubbera Shire Council	19	11	1	15	0	0	0	1	0	0	0	0
Murgon Shire Council	12	6	0	13	0	0	0	0	0	0	0	0
Murilla Shire Council	20	13	4	20	0	0	0	1	0	1	0	0

Table 18: Road traffic crashes and casualties Queensland 1999 by Local Government Area (cont'd)

Local Government Area	Crashes		Persons									
			Drivers and passengers		Pedestrians		Motorcycle riders and pillions		Pedal cycle riders		Others	
	Total reported	Involving casualties	K	I	K	I	K	I	K	I	K	I
Murweh Shire Council	28	19	0	22	0	0	0	2	0	1	0	0
Nanango Shire Council	44	27	1	31	1	2	1	2	0	0	0	0
Nebo Shire Council	35	25	0	32	0	0	0	3	0	0	0	0
Noosa Shire Council	189	104	4	107	1	4	0	9	0	10	0	0
Paroo Shire Council	8	4	0	2	0	0	1	1	0	0	0	0
Peak Downs Shire Council	28	20	1	32	0	0	0	1	0	0	0	0
Perry Shire Council	8	7	0	10	0	0	0	0	0	0	0	0
Pine Rivers Shire Council	380	243	2	267	2	14	1	20	0	16	0	0
Pittsworth Shire Council	18	8	0	11	0	0	0	2	0	0	0	0
Quilpie Shire Council	8	5	0	11	0	0	0	0	0	0	0	0
Redcliffe City Council	211	115	1	111	3	11	0	9	0	19	0	0
Redland Shire Council	340	206	1	267	1	16	1	11	0	5	0	0
Richmond Shire Council	11	8	1	6	0	0	0	1	0	1	0	0
Rockhampton City Council	407	185	3	185	3	17	0	25	0	19	0	0
Roma Town Council	28	15	0	13	0	1	0	4	0	1	0	0
Rosalie Shire Council	30	19	3	17	0	0	0	4	0	0	0	0
Sarina Shire Council	72	42	1	51	0	0	0	2	0	3	0	0
Stanthorpe Shire Council	54	28	2	41	0	0	0	1	0	2	0	0
Tambo Shire Council	4	3	0	4	0	0	0	0	0	0	0	0
Tara Shire Council	27	15	1	18	0	0	0	2	0	0	0	0
Taroom Shire Council	10	4	0	4	0	0	0	0	0	0	0	0
Thuringowa City Council	157	103	7	93	0	9	0	19	0	9	0	0
Tiaro Shire Council	44	27	2	27	0	0	0	2	0	1	0	0
Toowoomba City Council	515	279	1	290	1	21	0	35	0	19	0	0
Torres Shire Council	16	10	1	17	0	3	0	1	0	0	0	0
Townsville City Council	513	274	1	239	2	11	0	49	0	39	0	0
Waggamba Shire Council	37	15	2	22	0	0	0	0	0	0	0	0
Wambo Shire Council	28	16	1	26	0	0	0	1	0	0	0	0
Warroo Shire Council	5	5	0	9	0	0	0	0	0	0	0	0
Warwick Shire Council	124	72	6	91	0	3	0	9	0	2	0	0
Whitsunday Shire Council	87	52	0	46	0	7	0	9	0	6	0	0
Winton Shire Council	17	12	0	20	0	0	0	0	0	0	0	0
Wondai Shire Council	15	10	0	12	0	0	0	0	0	1	0	0
Woocoo Shire Council	12	8	0	12	0	0	0	2	1	1	0	0
TOTAL for QUEENSLAND	**19335**	**10855**	**215**	**11633**	**49**	**855**	**41**	**1126**	**9**	**761**	**0**	**0**

K - Killed

I - Injured

Table 19: Annual road toll, population and vehicles on register

Queensland, 1953 - 1999

Year	Persons killed						Population ('000)	Motor vehicles ('000)
	Driver*	Motor cyclist	Pedal cyclist	Pedestrian	Passenger	Total killed		
1953	45	60	16	64	91	276	1,298.4	266.2
1954	46	60	18	64	85	273	1,322.8	284.2
1955	55	52	17	76	77	277	1,350.7	307.7
1956	68	43	15	89	108	323	1,378.9	326.6
1957	80	47	30	62	104	323	1,420.5	345.1
1958	92	41	29	89	102	353	1,449.3	365.2
1959	106	32	23	92	100	353	1,477.2	383.8
1960	103	31	17	78	117	346	1,502.3	406.7
1961	102	28	18	91	98	337	1,540.3	321.7
1962	131	32	21	100	119	403	1,562.8	453.3
1963	139	20	32	96	111	398	1,595.4	459.0
1964	164	25	12	115	145	461	1,626.5	497.4
1965	183	18	19	101	146	467	1,659.4	536.1
1966	181	20	20	102	143	466	1,687.1	563.4
1967	201	13	20	110	158	502	1,715.8	588.5
1968	197	16	9	82	173	477	1,747.7	620.9
1969	226	19	18	109	184	556	1,779.7	649.9
1970	223	22	13	111	158	527	1,812.8	686.1
1971	255	44	24	78	193	594	1,874.9	726.5
1972	217	55	18	98	184	572	1,924.7	774.0
1973	219	71	19	121	208	638	1,981.6	827.0
1974	215	83	10	107	174	589	2,033.0	889.7
1975	225	72	22	107	209	635	2,072.3	917.0
1976	196	83	16	89	185	569	2,110.4	1,012.2
1977	215	97	27	92	141	572	2,151.0	1,067.2
1978	237	70	15	92	198	612	2,191.6	1,129.6
1979	242	94	13	95	172	616	2,239.7	1,183.4
1980	211	87	14	87	158	557	2,301.7	1,256.9
1981	237	92	16	66	183	594	2,387.9	1,355.6
1982	255	94	18	71	164	602	2,456.5	1,439.5
1983	178	92	19	61	160	510	2,503.3	1,496.1
1984	192	74	16	66	157	505	2,547.1	1,533.5
1985	201	77	20	72	132	502	2,597.1	1,546.1
1986	186	75#	15#	65	140+	481	2,648.5	1,567.4
1987	165	55	14	73	135	442	2,703.4	1,575.3
1988	225	53	21	78	162	539	2,780.7	1,616.2
1989	173	47	19	68	121	428	2,864.6	1,693.4
1990	153	50	18	65	113	399	2,932.2	1,751.9
1991	163	41	16	66	109	395	2,999.9	1,787.0
1992	167	43	18	75	113	416	3,030.5	1,832.8
1993	189	47	10	49	101	396	3,112.6	1,847.2
1994	177	45	13	79	108	422	3,116.0	1,975.5
1995	180	54	10	92	120	456	3,277.3	2,038.9
1996	174	41	10	55	105	385	3,354.7	2,171.9
1997	159	43	12	59	87	360	3,440.2	2,232.9
1998	122	25	9	48	75	279	3,456.3	2,307.5
1999	128	41	9	49	87	314	3,525.6	2,385.6

* Includes horse riders

Includes pillions from 1986

+ Includes pillions prior to 1986

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Casualties by severity										
Fatalities	399	395	416	396	422	456	385	360	279	314
Hospitalised	3970	3959	4004	4052	4600	4636	4481	4146	4393	4437
Medical treatment	5764	4826	5473	5876	6205	6692	6836	6481	6320	6137
Minor injury	1789	2493	2926	3131	3587	3932	4131	3928	4008	3783
Total	11922	11673	12819	13455	14814	15716	15833	14915	15000	14671
Fatalities by age group										
0-11 years*	34	25	26	19	22	25	20	21	17	18
12-16 years	11	17	22	18	18	21	20	17	14	20
17-24 years	125	96	119	122	103	121	107	113	79	76
25-59 years	143	180	172	174	194	208	172	155	121	143
60 years and over	86	77	77	63	85	81	66	54	48	57
Total	399	395	416	396	422	456	385	360	279	314
Fatalities by age group: female										
0-11 years*	10	7	10	9	8	12	8	5	4	8
12-16 years	2	5	5	9	6	8	5	3	6	7
17-24 years	39	24	32	25	29	29	19	39	18	17
25-59 years	44	49	47	40	46	63	55	41	36	36
60 years and over	40	34	33	23	38	32	30	21	17	20
Total	135	119	127	106	127	144	117	109	81	88
Fatalities by age group: male										
0-11 years*	24	18	16	10	14	13	12	16	12	8
12-16 years	9	12	17	9	12	13	15	14	8	13
17-24 years	86	72	87	97	74	92	88	74	61	59
25-59 years	99	131	125	134	148	145	117	114	85	107
60 years and over	46	43	44	40	47	49	36	33	31	37
Total	264	276	289	290	295	312	268	251	197	224
Fatalities by road user										
Drivers	153	162	168	189	177	181	174	158	122	127
Passengers	113	106	113	101	108	119	105	88	75	87
Motorcyclists	50	45	43	47	45	54	41	43	25	41
Bicyclists	18	16	18	10	13	10	10	12	9	9
Pedestrians	65	66	74	49	79	92	55	59	48	49
Other	0	0	0	0	0	0	0	0	0	1
Total	399	395	416	396	422	456	385	360	279	314
Fatalities by driver/rider blood alcohol content										
Tested	151	158	152	182	164	194	170	171	128	121
Untested	43	43	49	50	53	36	41	26	15	42
Total	194	201	201	232	217	230	211	197	143	163
Nil	102	103	96	123	103	112	105	112	86	86
0.01 - 0.04	3	6	4	7	10	18	5	13	8	6
0.05 - 0.14	13	13	18	14	20	20	19	21	15	13
0.15 - 0.24	22	28	25	32	23	31	31	15	14	8
0.25 and over	11	8	9	6	8	13	10	10	5	8
Total	151	158	152	182	164	194	170	171	128	121

* May include unknown age of fatality

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fatalities by seatbelt usage										
Not determined	9	82	114	105	89	105	89	88	62	64
Restrained	13	133	120	110	139	141	137	110	97	98
Unrestrained	6	51	44	70	40	46	45	45	34	48
Total	28	266	278	285	268	292	271	243	193	210
Fatalities by helmet usage										
Not determined	4	24	0	1	2	3	5	2	7	3
Worn	0	3	17	5	5	9	11	9	4	9
Not worn	0	34	44	51	51	52	35	44	23	38
Total	4	61	61	57	58	64	51	55	34	50
Injuries by age group										
0-11 years	66	716	790	863	850	930	935	886	858	867
12-16 years	54	809	847	829	899	1035	979	926	954	853
17-24 years	312	3588	3954	4202	4631	4611	4572	4143	4199	4007
25-59 years	403	4862	5476	5806	6583	7178	7379	7090	7162	7177
60 years and over	82	1125	1283	1293	1384	1443	1525	1438	1470	1380
Unstated	45	178	53	66	45	63	58	72	78	73
Total	962	11278	12403	13059	14392	15260	15448	14555	14721	14357
Injuries by age group: female										
0-11 years	25	335	351	353	373	434	381	366	372	388
12-16 years	26	321	365	358	371	439	437	397	408	364
17-24 years	119	1428	1541	1742	1938	1959	1962	1765	1862	1774
25-59 years	174	2182	2322	2561	2905	3228	3351	3282	3376	3283
60 years and over	40	577	656	686	747	725	792	777	756	716
Unstated	28	107	34	30	20	21	24	16	21	30
Total	412	4950	5269	5730	6354	6806	6947	6603	6795	6555
Injuries by age group: male										
0-11 years	41	381	439	510	477	496	553	520	486	479
12-16 years	28	488	482	471	528	596	542	529	546	489
17-24 years	193	2160	2413	2460	2693	2652	2610	2378	2337	2233
25-59 years	229	2680	3154	3245	3678	3950	4028	3806	3785	3894
60 years and over	42	548	627	607	637	718	733	661	714	664
Unstated	17	65	16	23	14	27	26	38	34	43
Total	550	6322	7131	7316	8027	8439	8492	7932	7902	7802
Injuries by road user type										
Drivers	445	5098	5662	6149	7055	7677	7725	7457	7628	7566
Passengers	313	3377	3593	3917	4250	4402	4434	4089	4112	4065
Motorcyclists	92	1168	1278	1340	1374	1357	1396	1204	1220	1100
Bicyclists	48	866	961	792	784	816	916	913	876	763
Pedestrians	62	757	889	854	918	994	963	884	877	858
Other	2	12	19	6	11	12	12	7	6	5
Total	962	11278	12402	13058	14392	15258	15446	14554	14719	14357

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Injuries by blood alcohol content of driver/rider										
Tested	572	1019	1518	1690	1904	2042	2203	2285	2730	3064
Untested	6695	6135	6511	6568	7317	7814	7820	7274	6888	6360
Total	7267	7154	8029	8258	9221	9856	10023	9559	9618	9424
Nil	140	612	1071	1220	1374	1477	1595	1773	2239	2578
0.01 - 0.04	14	21	21	29	32	41	31	33	42	33
0.05 - 0.14	165	155	159	182	200	228	233	228	225	187
0.15 - 0.24	215	195	209	216	257	255	307	223	195	230
0.25 and over	38	36	58	43	41	41	37	28	29	36
Total	572	1019	1518	1690	1904	2042	2203	2285	2730	3064
Injuries by seatbelt usage										
Not determined	1801	1466	1431	1381	1529	1702	1794	1874	1851	1718
Restrained	6130	6330	7141	8019	9101	9685	9684	9045	9224	9310
Unrestrained	578	499	499	552	508	534	517	482	477	434
Total	8509	8295	9071	9952	11138	11921	11995	11401	11552	11462
Injuries by helmet usage										
Not determined	2030	1016	173	75	100	108	129	136	154	130
Worn	4	909	1600	1905	1876	1889	1939	1779	1765	1573
Not worn	0	121	483	157	193	188	256	209	183	168
Total	2034	2046	2256	2137	2169	2185	2324	2124	2102	1871
Crashes by severity										
Fatal	347	359	363	357	368	408	338	321	257	273
Hospitalisation	3123	3041	3232	3204	3612	3654	3559	3328	3514	3529
Medical treatment	4108	3454	3967	4172	4469	4800	4936	4761	4609	4501
Minor injury	1128	1788	2054	2170	2469	2800	2872	2697	2757	2596
Property damage	9213	9526	9551	9667	9912	9602	9208	8236	8419	8543
Total	17919	18168	19167	19570	20830	21264	20913	19343	19556	19442
Fatal crashes - crash nature										
Hit object	84	85	82	101	93	105	93	95	80	65
Hit pedestrian	63	63	73	44	73	88	55	55	46	47
Head-on	45	53	67	55	62	70	46	48	23	47
Angle	65	69	53	71	60	50	60	54	44	36
Overturned	44	46	39	53	35	47	45	25	24	27
Rear-end	14	15	17	7	11	16	10	8	8	12
Fall from vehicle	9	8	20	9	10	11	13	11	8	12
Sideswipe	12	15	9	7	10	10	9	16	11	19
Hit parked vehicle	7	1	1	2	6	7	4	3	6	5
Hit animal	4	3	2	7	4	3	3	5	6	1
Other	0	1	0	1	4	1	0	1	1	2
Total	347	359	363	357	368	408	338	321	257	273

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fatal crashes - traffic control										
Police	0	0	1	1	1	0	0	0	0	0
Road/Rail worker	0	0	0	2	0	0	0	0	0	2
Operating traffic lights	13	24	19	14	26	24	23	10	12	13
Railway-lights only	0	3	2	2	2	1	0	1	0	0
Railway-lights & boom gate	0	0	3	0	2	1	0	1	2	0
Stop sign	9	10	9	13	5	9	10	16	9	8
Give way sign	19	14	12	14	14	17	13	10	12	14
Railway crossing sign	0	0	2	3	0	1	4	0	2	0
Pedestrian crossing sign	4	1	6	0	3	5	3	3	1	2
Miscellaneous	2	2	1	0	0	0	0	0	0	0
No traffic control	300	305	308	308	315	350	285	280	219	234
Fatal crashes - speed limit										
0-50 km/h	1	2	3	1	5	3	7	1	6	10
60 km/h	122	148	149	136	148	152	142	115	75	84
70-90 km/h	52	45	44	41	49	46	39	42	46	62
100km/h and over	172	164	167	179	166	207	150	163	130	117
Fatal crashes after dark										
Total	139	149	161	150	154	171	142	152	102	124
Fatal crashes - roadway feature										
Wet road	0	0	0	0	0	0	11	31	48	42
Crossroad	41	41	32	45	36	44	47	27	25	31
Roundabout	3	1	2	0	2	2	3	1	2	0
Other intersection	40	54	58	50	54	59	55	48	31	35
Bridge/causeway	16	15	10	9	12	16	7	12	11	3
Fatal crashes - day of week										
Monday	41	47	53	41	42	45	36	30	31	33
Tuesday	40	35	36	41	43	43	48	44	25	24
Wednesday	42	41	46	45	54	58	34	45	32	29
Thursday	47	44	44	45	50	52	46	42	36	35
Friday	63	66	69	59	65	74	53	56	39	57
Saturday	67	74	67	65	59	67	60	64	55	50
Sunday	47	52	48	61	55	69	61	40	39	45
Fatal crashes - location										
Brisbane City	44	59	57	49	53	58	50	39	34	39
Rest of BSD	56	55	56	53	60	44	39	37	26	33
Provincial cities	48	63	54	66	58	69	79	61	54	46
Rest of state	199	182	196	189	197	237	170	184	143	155
Total	347	359	363	357	368	408	338	321	257	273

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Fatal crashes - contributing factors										
Disobeyed traffic rules	82	110	107	125	125	128	115	110	73	96
Alcohol/drugs	97	138	107	98	103	132	101	101	86	85
Inexperience	0	26	69	57	82	102	91	95	62	52
Speed	32	52	66	80	51	46	48	51	30	39
Other driver conditions	0	23	45	51	42	50	32	26	31	25
Age	0	30	54	35	36	41	30	28	25	28
Rain/wet road	0	19	47	25	35	41	22	16	29	10
Negligence	0	12	19	15	31	25	14	17	19	19
Inattention	17	31	25	15	24	41	26	26	28	47
Road conditions	0	21	32	35	23	29	26	9	14	14
Other	4	29	48	21	23	41	31	36	22	32
Vehicle defects	8	17	23	21	11	17	13	7	13	14
Fatigue	13	17	14	11	11	12	20	15	10	5
No street lighting	0	27	15	3	6	7	5	9	9	1
Fatal crashes - units involved										
Car	285	325	310	313	335	347	292	286	209	229
Utility/van	89	75	89	72	85	107	84	78	75	73
Rigid Truck	37	38	38	34	31	28	24	24	17	17
Articulated Truck	31	24	34	41	38	49	34	31	29	31
Bus	4	12	4	7	7	6	6	2	7	12
Motorcycle	48	45	44	47	46	57	44	44	25	44
Tractor	0	5	3	5	5	7	7	6	3	5
Bicycle	18	16	18	10	12	10	11	12	10	10
Towed device	2	1	0	2	0	0	1	0	1	1
Pedestrian	69	69	79	56	86	96	59	61	48	52
Animal - ridden	0	0	1	1	0	0	0	0	2	0
Animal - stock	0	2	2	5	4	2	2	5	3	1
Animal - other	4	1	0	2	0	1	1	0	2	0
Railway stock	2	5	5	5	4	4	4	3	4	0
Other	3	3	2	0	0	2	0	3	2	8
Total	592	621	629	600	653	716	569	555	437	483
Fatal crashes - units towing										
Total	14	12	15	17	17	25	32	39	37	36
Fatal crashes - driver involvement by licence type										
Open	370	415	404	377	398	408	344	325	251	284
Provisional	49	37	42	59	79	91	64	74	46	57
Learner	12	6	17	7	9	16	14	14	14	14
Not licensed	46	63	50	68	55	69	57	50	43	49
Inappropriate/restricted	7	3	4	3	1	7	7	4	3	4
Total	484	524	517	514	542	591	486	467	357	408

* Disobeyed traffic rules does not include Alcohol/Drugs, Inexperience, Speed and Inattention

** Driver conditions do not include Inattention, Negligence, Inexperience, Fatigue, Age

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Injury crashes - crash nature										
Hit object	1147	1264	1447	1723	1877	1951	2037	2064	2013	2037
Hit pedestrian	739	716	826	781	835	903	886	827	796	777
Head-on	373	384	379	371	392	473	452	299	321	311
Angle	2926	2860	3085	3155	3521	3723	3661	3569	3530	3404
Overturned	980	879	877	867	884	978	869	764	742	681
Rear-end	1123	1205	1490	1521	1844	1972	2119	2053	2186	2158
Fall from vehicle	282	211	324	285	292	252	323	271	281	265
Sideswipe	418	396	431	465	505	561	567	516	583	525
Hit parked vehicle	254	234	243	247	271	293	296	259	276	287
Hit animal	99	117	123	118	104	120	120	124	87	122
Other	18	17	28	13	25	28	37	40	65	59
Injury crashes - traffic control										
Police	14	15	20	15	14	16	9	2	9	5
Road/Rail worked	9	15	12	12	18	12	26	24	24	21
Operating traffic lights	0	5	4	6	6	5	3	2	1	2
Flashing amber lights	949	921	1079	1136	1348	1479	1497	1502	1520	1563
Railway-lights only	8	1	1	4	1	9	1	1	2	2
Railway-lights & boom gate	0	6	13	14	21	10	12	18	13	9
Stop sign	0	4	2	7	4	9	9	5	3	1
Give way sign	431	455	466	469	468	558	491	472	440	430
Railway crossing sign	616	655	802	857	999	1139	1154	1057	1087	1005
Pedestrian crossing sign	0	4	5	7	12	7	11	5	3	3
Miscellaneous	146	123	135	100	118	117	127	95	110	94
No traffic control	7	4	0	1	1	0	2	1	0	0
Injury crashes - speed limit										
0-50 km/h	64	91	107	105	133	162	164	174	205	867
60 km/h	5609	5530	6190	6398	7024	7644	7686	7333	7314	6158
70-90 km/h	766	748	822	882	1024	1016	1094	1019	1235	1414
100km/h and over	1920	1914	2134	2161	2369	2432	2423	2260	2126	2187
Injury crashes after dark										
Total	2371	2253	2568	2600	2908	3205	3228	2873	2885	2897
Injury crashes - roadway feature										
Wet road	0	0	0	0	0	1	489	1554	1786	1941
Crossroad	1800	1745	1946	1985	2201	2291	2228	2067	1995	1980
Roundabout	139	181	232	252	256	308	319	335	353	356
Other intersection	1806	1836	2182	2255	2520	2784	2853	2710	2719	2497
Bridge/causeway	151	165	161	150	166	207	200	120	170	156
Injury crashes - day of week										
Monday	1136	1107	1239	1308	1433	1529	1505	1405	1501	1459
Tuesday	1134	1161	1213	1318	1420	1486	1595	1513	1450	1421
Wednesday	1128	1174	1332	1354	1449	1590	1625	1665	1638	1506
Thursday	1290	1234	1435	1425	1588	1668	1701	1654	1693	1603
Friday	1455	1435	1606	1615	1793	1897	1906	1721	1847	1878
Saturday	1233	1216	1319	1421	1681	1675	1728	1590	1445	1550
Sunday	983	956	1109	1105	1186	1409	1307	1238	1306	1209

Table 20: Annual trend data

Queensland 1990-1999

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Injury crashes - location										
Brisbane City	2297	2284	2546	2592	2973	3173	3140	2975	3017	2887
Rest of BSD	1254	1326	1520	1628	1791	1946	1770	1510	1612	1428
Provincial cities	1827	1758	1957	2018	2215	2316	2337	2225	2203	2081
Rest of state	2981	2915	3230	3308	3571	3819	4120	4076	4048	4230
Injury crashes - contributing factors										
Disobeyed traffic rules	3118	3325	3659	3865	4349	4578	4604	4315	4389	4200
Alcohol/drugs	735	765	826	858	934	1045	1035	979	938	873
Inexperience	11	645	1288	1851	2436	2726	2823	2818	2601	2265
Speed	244	269	441	369	438	451	436	405	448	418
Other driver conditions	10	538	880	951	869	889	1023	912	844	619
Age	4	247	448	420	456	522	580	610	668	530
Rain/wet road	9	423	874	1038	1163	1317	1146	781	1011	927
Negligence	4	160	266	187	242	209	177	214	297	385
Inattention	1297	1966	2416	2290	2812	2657	2701	2850	3337	3506
Road conditions	11	433	713	681	709	909	857	586	594	563
Other	105	608	988	897	923	1136	1400	1565	1435	1344
Vehicle defects	254	359	435	412	460	450	425	418	421	364
Fatigue	132	157	211	192	239	219	253	253	244	218
No street lighting	2	121	94	63	77	83	69	42	63	53
Injury crashes - units involved										
Car	9804	9906	10918	11407	13102	14091	14130	13564	13817	13440
Utility/van	1891	1823	2061	2252	2446	2672	2659	2450	2472	2440
Rigid Truck	491	453	454	451	546	559	490	474	454	471
Articulated Truck	276	243	314	299	369	369	377	344	377	385
Bus	113	128	152	116	122	150	169	177	159	177
Motorcycle	1125	1160	1287	1318	1361	1347	1383	1194	1190	1113
Tractor	30	43	51	57	73	63	77	91	94	95
Bicycle	919	900	1009	823	811	840	944	945	899	789
Towed device	31	18	10	11	17	10	5	3	9	11
Pedestrian	871	830	965	906	998	1090	1022	945	929	916
Animal - ridden	9	6	11	5	4	2	6	4	4	1
Animal - stock	0	77	79	69	65	84	79	91	64	89
Animal - other	95	44	40	54	42	39	39	38	27	34
Railway stock	22	20	22	27	30	22	25	19	18	20
Other	45	32	34	29	39	34	55	33	34	148
Total	15722	15683	17407	17824	20025	21372	21460	20372	20547	20129
Injury crashes - units towing										
Total	207	227	249	269	329	376	470	530	554	544
Injury crashes - driver involvement by licence type										
Open	10329	10546	11734	11575	12719	13472	13818	13184	13314	13056
Provisional	1384	1103	1390	2179	2913	3079	2829	2546	2660	2550
Learner	197	246	276	323	287	321	357	375	431	427
Not licensed	927	1018	995	996	1202	1356	1377	1357	1429	1409
Inappropriate/restricted	60	46	55	58	54	83	65	48	47	40
Total	12897	12959	14450	15131	17175	18311	18446	17510	17881	17482

* Disobeyed traffic rules does not include Alcohol/Drugs, Inexperience, Speed and Inattention

** Driver conditions do not include Inattention, Negligence, Inexperience, Fatigue, Age