



## Alcohol and road fatalities in Australia 1998

This monograph provides information on the incidence of alcohol intoxication amongst drivers, motorcycle riders and pedestrians involved in fatal road crashes during 1998.

### Fatally injured motorists 1981-1998

Over the past 18 years, the incidence of drink driving has substantially reduced. Table 1 shows that during 1981, 44 per cent of all drivers and motorcycle riders killed in road crashes had a blood alcohol concentration (BAC) of 0.050 gm/100ml or greater. This has reduced to 26 per cent in 1998.

This reduction in alcohol-related road trauma has come about as a result of strengthened legislation and enforcement in conjunction with high profile media and public education activities. These efforts have had a significant impact on public attitudes towards drink driving.

The result for 1998 represents a substantial improvement on the previous year (28%). It comes after a long period in the 1990s where further reductions in the incidence of alcohol related road fatalities appeared to have stalled.

Figure 1 illustrates the significant reduction between 1997 and 1998 in the overall number of fatally injured motorists with BACs of 0.050 gm/100ml or greater (from 238 to 208).

### Fatally injured motorists, 1998

Notwithstanding this improvement, alcohol intoxication remains one of the primary causes of road fatalities in Australia. Amongst fatally injured drivers and riders this intoxication is commonly of an extreme nature.

Table 2 shows that during 1998, 142 (18%) fatally injured drivers and motorcycle riders

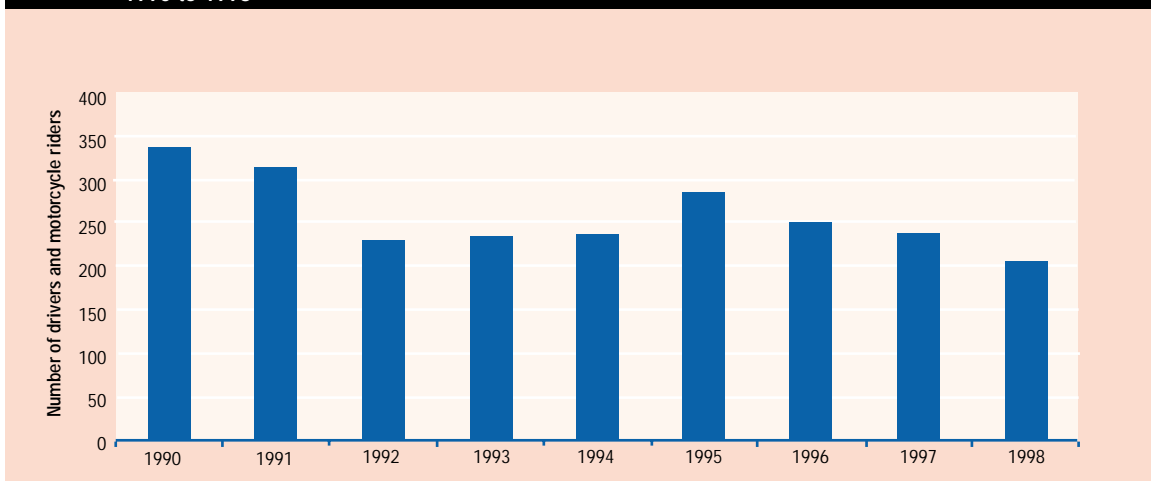
**Table 1 Percentage of fatally injured drivers and motorcycle riders with a BAC of 0.050 gm/100ml or greater, by State/Territory, 1981 to 1998**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
1981	41	38	50	44	48	43	71	23	44
1982	40	37	48	39	51	29	57	41	42
1983	36	37	47	32	55	19	70	57	40
1984	33	33	44	51	40	51	55	14	37
1985	33	38	47	44	45	37	64	12	39
1986	35	38	45	48	48	28	53	13	40
1987	32	38	39	40	47	39	45	17	37
1988	31	38	38	42	32	31	33	16	35
1989	33	32	34	37	37	44	57	25	34
1990	35	30	30	45	35	23	72	80	34
1991	33	29	31	31	34	23	63	0	32
1992	26	21	33	32	33	21	53	60	28
1993	29	28	28	31	24	43	77	0	29
1994	23	26	31	34	33	35	50	0	28
1995	29	22	33	29	33	50	56	13	30
1996	24	24	35	30	34	28	78	13	29
1997	27	23	27	32	32	25	84	20	28
1998	21	27	27	22	39	24	64	0	26

(a) Percentages relate to persons tested for blood alcohol concentration.

(b) Percentages for Australia are based on Australia-wide counts of fatally injured drivers and motorcycle riders.

**Figure 1** Number of fatally injured drivers and motorcycle riders with a BAC of 0.050 gm/100ml or greater, 1990 to 1998



who were tested had BACs of 0.150 gm/100ml or greater. In contrast, only 66 (8%) had BACs between 0.050 and 0.149 gm/100ml.

### Involved motorists, 1998

Table 3 shows the BAC profile of all drivers and motorcycle riders involved in fatal road crashes in 1998, both those killed and those who survived. Amongst drivers and motorcycle riders involved in a fatal crash that were tested some 19 per cent had a BAC of 0.050 gm/100ml or greater. (Refer below to the section Reliability of results for a qualification of this figure).

### Fatally injured pedestrians, 1998

Alcohol remains the major cause of road death amongst adult and youth pedestrians. Table 4

shows that during 1998 there were 109 fatally injured adult and youth pedestrians who had a BAC that would have made them ineligible to be in control of a motor vehicle (0.050 gm/100ml or greater). This represents 45 per cent of all fatally injured adult and youth pedestrians that were tested. In fact, over four out of five 'intoxicated' pedestrians had BACs at least triple the legal driving limit.

### Reliability of results

Throughout Australia, the autopsy process for people fatally injured in road crashes routinely includes the sampling of blood for laboratory analysis of alcohol content. Table 5 shows that BACs were obtained for 88% of drivers and motorcycle riders fatally injured in 1998.

**Table 2** Number of fatally injured drivers and motorcycle riders by BAC range and State/Territory, 1998

BAC Range	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust
0	198	120	84	59	56	17	4	3	541
.001-.049	14	10	7	6	4	2	1	0	44
.050-.149	17	10	14	8	10	2	5	0	66
.150 or above	39	37	19	10	29	4	4	0	142
Untested or unknown (a)	26	14	20	2	21	5	16	8	112
<b>Total</b>	<b>294</b>	<b>191</b>	<b>144</b>	<b>85</b>	<b>120</b>	<b>30</b>	<b>30</b>	<b>11</b>	<b>905</b>

(a) Excluded when calculating the proportion of cases with illegal BAC

<i>BAC Range</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
0	504	134	234	101	172	39	17	13	1214
.001-.049	23	74	9	8	7	2	2	0	125
.050-.149	32	22	24	10	21	6	6	0	121
.150 or above	48	47	28	13	37	6	5	0	184
Untested or unknown (a)	122	243	64	86	40	10	46	14	625
<b>Total</b>	<b>729</b>	<b>520</b>	<b>359</b>	<b>218</b>	<b>277</b>	<b>63</b>	<b>76</b>	<b>27</b>	<b>2269</b>

(a) Excluded when calculating the proportion of cases with illegal BAC

<i>BAC Range</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
0-.049	51	42	12	15	5	2	4	0	131
.050-.149	5	5	4	2	4	0	1	0	21
.150 or above	21	19	17	9	12	3	7	0	88
Untested or unknown (a)	13	7	6	5	7	1	0	2	41
<b>Total</b>	<b>90</b>	<b>73</b>	<b>39</b>	<b>31</b>	<b>28</b>	<b>6</b>	<b>12</b>	<b>2</b>	<b>281</b>

(a) Excluded when calculating the proportion of cases with illegal BAC

<i>Fatally injured drivers and motorcycle riders</i>									
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Tested	91	93	86	98	83	83	47	27	88
Untested	9	7	14	2	18	17	53	73	12
<i>All involved drivers and motorcycle riders</i>									
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>SA</i>	<i>WA</i>	<i>Tas</i>	<i>NT</i>	<i>ACT</i>	<i>Aust</i>
Tested	83	53	82	61	86	84	39	48	72
Untested or unknown	17	47	18	39	14	16	61	52	28

Omissions amongst this group generally arise as a result of technical and administrative hitches unassociated with the likelihood of alcohol intoxication of the fatally injured motorist. For this reason, high reliability can be ascribed to rates of intoxication for deceased motorists and pedestrians based solely on those cases for which BAC readings were obtained, as given in Table 1.

It is more problematic, however, to accurately identify the incidence of intoxication present amongst all drivers and motorcycle riders

involved in fatal road crashes, both those killed and those who survived. Table 5 shows that in some States and Territories the testing for alcohol intoxication amongst surviving motorists, whether via blood test or breath test, is far less common than that which occurs through the autopsy process. Only 72% of all drivers and riders involved in fatal crashes Australia-wide during 1998 were tested.

It is probably the case that in those jurisdictions with low levels of testing the

obviously intoxicated drivers and riders would tend to be tested more often than those who are not obviously intoxicated. As a result, calculation based solely on those cases for which BAC readings were obtained will tend to overstate the incidence of drink driving amongst all involved drivers and riders. This means that road safety agencies and police in some jurisdictions have a greatly reduced ability to monitor the effectiveness of their drink driving countermeasures.

### Data Sources

Data for years prior to 1990 was derived from counts sought annually at the time from each State and Territory. All other data, with the exception of that for Queensland, were derived from individual road crash records in the ATSB's Serious Road Crash Database. Data for Queensland were obtained from the Queensland Transport publication *1998 Road Traffic Crashes in Queensland: A Report on the Road Toll*.

*See also the Federal Office of Road Safety Monographs 10, 14, 15, 22 and 29.*