

NIGHT-TIME DRINK DRIVING IN ADELAIDE: 1987-1997

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ABSTRACT

This report documents the methods and results of six night-time (10pm-3am) roadside breath alcohol surveys conducted on over 40,000 drivers by the NHMRC Road Accident Research Unit in the Adelaide metropolitan area between 1987 and 1997.

The percentage of drivers on the road with alcohol levels at or above 0.01, 0.05 and 0.08 g/100mL are reported together with breakdowns by the sex and age of the driver, time of day, and day of week.

A generally uniform decrease over time was found at all BAC levels, particularly among the young and among males. Drink driving was found to increase later in the night with peak drink driving occurring on Wednesdays followed by Thursdays and Fridays.

Self-reported intentions and the perception of the likelihood of being caught by the police if drinking and driving together with driver and passenger seatbelt usage are also reported. An increasing percentage of drivers stated that they were less likely to drink and drive and more likely to be caught by police over the course of the surveys. Both driver and passenger seatbelt wearing rates are currently very high.

1. INTRODUCTION

The NHMRC Road Accident Research Unit (RARU) has conducted late night breath alcohol surveys of non-accident-involved drivers in Adelaide since 1979. The results of these surveys have been used to evaluate the effects of interventions such as random breath testing by the police, a change in the legal blood alcohol limit from 0.08 to 0.05, and publicity campaigns (McLean et al, 1980, 1984; McCaul and McLean, 1990; McLean et al, 1991; Kloeden and McLean, 1992, 1994; McLean and Kloeden, 1992). Information on attitudes to, and experience of, drink driving was also collected and related to drivers' blood alcohol levels (Moore et al, 1993; Kloeden et al, 1994). The last survey in the series was conducted in 1993.

The Office of Road Safety of the South Australian Department of Transport commissioned the NHMRC Road Accident Research Unit to conduct another in this series of surveys in 1997. This paper reports the results of that survey and compares it with previous surveys conducted during the last decade.

2. METHOD

The procedure used to obtain breath samples from a representative sample of Adelaide drivers in the 1997 roadside survey was basically the same as that which has been used since 1979 (Holubowycz, McLean and McCaul, 1991). Twenty intersections controlled by traffic signals were visited by two teams of RARU research assistants on a rostered basis. The first driver to stop at a red light was approached and asked to blow into a hand-held breath alcohol meter. The sex of the driver was recorded, together with his or her estimated age group (under 21 years / 21-29 / 30-50 / over 50). Data on seatbelt use of the driver and front passenger, if any, and the number of occupants in the vehicle were also recorded. The driver was also given a reply-paid questionnaire to fill out and mail back.

Sampling was conducted between the hours of 10pm and 3am, allowing each team to test drivers for about 40 minutes at each of five different survey sites per night. Every Thursday, Friday and Saturday night was sampled and two of the remaining four nights each week on a rotating schedule.

The 1997 survey ran from the 6th of March to the 24th of May. The Easter period (27 March to 2 April) and the Anzac Day weekend (24-26 April) were not included in the survey due to possibly atypical drinking patterns during these times.

The twenty sites used in the 1997 survey were the same as those used in previous roadside surveys conducted by RARU in Adelaide with some minor changes. They were at intersections on major roads and were selected so that no site was near an hotel or licensed premises, thus reducing the chance of testing a driver whose blood alcohol concentration (BAC) might be overestimated because of the presence of mouth alcohol.

The BAC distributions were weighted on a daily and hourly basis to allow for varying traffic flows. A correction was also made to allow for the estimated BACs of drivers who refused to provide a breath sample, using a method developed by Carlson (Wolfe, 1973; Carlson, 1979). All percentages presented in this paper have been weighted and corrected in this manner. Ninety-five per cent confidence intervals were then calculated for the weighted and corrected percentages using the delta method (Bishop, Fienberg and Holland, 1975). These confidence intervals enable a conservative assessment to be made of the statistical significance of differences in percentages.

BAC readings in previous surveys were measured using Lion Laboratories S-D2 Alcolmeters, which provide readings in 0.005 g/100mL intervals. For this survey the newer Lion Laboratories SD-400PA Alcolmeters were used which commence reading at 0.009 g/100mL and every 0.001 thereafter. This meant that readings in the range 0.005-0.008 that would have been recorded as 0.005 using the old meters registered as a zero reading with the new meters. In view of this it was decided to redefine a positive BAC (greater than zero) as a reading of 0.010 and above. This means that the percentage of drivers with a positive BAC in this report cannot be

directly compared with this percentage in previous reports. However, the percentages for surveys conducted from 1987 onwards have been recalculated so that they can be directly compared with the results from the 1997 survey.

3. RESULTS

Table 1 shows the number of drivers approached during the course of the six most recent surveys conducted by the Unit along with the number and percentage who refused to give a breath sample.

Table 1
Number of Drivers Approached for a Breath Sample and Refusal Rates

Year of Survey	Number Approached	Number Refused	Refusal Rate (%)
1987	7713	602	7.8
1989	6373	624	9.8
1991 pre-0.05	6789	358	5.3
1991 post-0.05	6627	324	4.9
1993	7841	350	4.5
1997	5526	300	5.4
Total	40869	2558	6.3

The percentage of night-time drivers with BACs at or above 0.01, 0.05 and 0.08 are shown in Tables 2-4 respectively. These Tables also give the breakdowns by sex and age of the drivers. Corresponding results for drivers' BACs by time of day and day of week are presented in Tables 5-7 and 8-10 respectively.

Table 2
Percentage of Drivers with a BAC of 0.01 or above: Total, Sex and Age Breakdowns
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Total	Sex of Driver		Age of Driver			
		male	female	under 21	21-29	30-50	over 50
1987	20.4	23.0	15.1	19.6	21.9	21.6	18.7
	19.5	21.8	13.6	17.1	20.1	20.1	16.1
1989	18.5	20.6	12.1	14.6	18.3	18.7	13.6
	19.4	21.4	14.8	16.9	18.8	21.2	16.3
1991-pre .05	20.5	22.7	16.5	20.2	20.8	22.9	18.7
	16.2	17.8	12.8	11.0	16.5	18.2	12.4
1991-post .05	18.4	20.1	13.0	13.6	16.9	19.6	13.9
	14.5	16.0	11.2	11.1	14.4	15.8	12.5
1993	17.1	19.0	14.3	13.5	18.2	19.8	14.2
	14.2	15.6	11.3	6.3	14.7	15.3	12.3
1997	15.2	16.6	11.4	8.5	14.8	16.7	10.5
	9.0	10.0	7.4	1.8	9.0	10.0	9.1
	15.4	17.1	12.6	13.9	16.1	17.2	14.3
	13.6	14.8	9.9	8.2	12.7	14.4	10.7
	15.0	16.7	12.5	8.4	16.2	16.5	14.7
	9.8	11.1	8.6	3.0	10.3	11.3	11.1
	8.2	9.0	6.1	0.5	7.7	8.7	7.1

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 3
Percentage of Drivers with a BAC of 0.05 or above: Total, Sex and Age Breakdowns
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Total	Sex of Driver		Age of Driver			
		male	female	under 21	21-29	30-50	over 50
1987	8.1	9.3	5.8	8.0	8.2	9.2	7.8
	7.5	8.5	4.9	6.5	7.1	8.2	6.1
1989	6.8	7.8	3.9	5.0	6.0	7.2	4.4
	7.1	8.2	4.4	5.5	6.8	7.6	6.1
1991-pre .05	7.8	9.1	5.3	7.1	8.0	8.6	7.7
	5.1	6.1	3.2	4.0	6.2	4.8	3.7
1991-post .05	6.4	7.3	3.4	3.8	5.6	6.5	4.5
	4.6	5.4	2.9	3.0	5.2	4.5	3.5
1993	5.7	6.8	3.9	5.5	7.3	5.6	4.8
	3.5	3.9	2.7	1.7	3.9	3.8	1.7
1997	4.6	5.4	2.4	2.5	5.1	4.0	2.7
	2.3	2.6	2.0	0.0	2.7	2.3	2.8
	5.1	6.0	3.6	4.5	6.3	5.3	4.5
	4.1	4.7	2.2	1.5	4.2	3.8	2.5
	3.9	4.4	3.3	3.2	4.8	4.4	2.6
	3.0	3.3	2.1	0.2	3.1	3.2	0.9
	2.8	3.1	2.7	-	3.4	2.9	4.0
	1.9	2.0	1.3	-	1.9	1.6	1.5

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 4
Percentage of Drivers with a BAC of 0.08 or above: Total, Sex and Age Breakdowns
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Total	Sex of Driver		Age of Driver			
		male	female	under 21	21-29	30-50	over 50
1987	4.3	5.3	2.4	4.9	4.1	4.9	3.3
	3.9	4.7	1.9	3.8	3.4	4.2	2.4
1989	3.4	4.1	1.3	2.7	2.7	3.5	1.4
	3.4	3.9	2.0	2.5	3.4	3.5	3.3
1991-pre .05	3.8	4.5	2.7	3.6	4.2	4.2	4.5
	2.5	3.0	1.4	1.4	2.9	2.4	1.8
1991-post .05	2.9	3.3	1.3	1.4	2.6	2.7	2.0
	2.1	2.5	1.1	1.2	2.5	2.0	1.4
1993	2.9	3.5	1.9	2.1	3.6	3.0	2.6
	1.5	1.8	1.0	1.2	1.5	1.8	0.7
1997	2.1	2.4	0.9	0.8	2.2	1.8	1.0
	1.1	1.2	0.8	0.0	1.5	0.9	1.2
	2.5	3.0	1.5	2.0	3.2	2.5	2.0
	1.8	2.1	0.6	0.4	1.8	1.5	0.8
	1.8	2.1	1.4	2.6	2.0	2.3	1.3
	1.2	1.4	0.6	0.0	1.0	1.4	0.2
	1.3	1.6	1.3	-	2.1	1.3	2.1
	0.8	0.8	0.4	-	0.9	0.5	0.4

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 5
Percentage of Drivers with a BAC of 0.01 or above by Time of Day
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Time of Day				
	10pm-11pm	11pm-12am	12am-1am	1am-2am	2am-3am
1987	18.0	18.4	25.2	30.4	32.3
	16.2	16.6	23.0	27.8	29.4
1989	14.5	14.8	20.9	25.2	26.4
	15.5	18.9	21.0	28.0	24.9
1991-pre .05	17.3	20.9	23.4	31.1	28.4
	12.1	15.1	21.5	22.7	19.1
1991-post .05	13.6	16.9	18.6	24.8	21.3
	12.0	12.8	19.5	17.5	21.7
1993	10.7	13.4	19.1	19.7	16.1
	11.2	14.5	17.6	16.5	16.4
1997	13.5	14.5	21.8	20.3	25.1
	7.0	8.5	12.1	10.9	14.7
	10.5	11.2	17.1	14.8	18.3
	12.6	16.1	19.8	18.9	19.0
	9.9	12.9	15.5	14.2	13.8
	8.4	10.0	14.2	13.1	17.5
	5.7	7.0	10.0	8.7	11.9

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 6
Percentage of Drivers with a BAC of 0.05 or above by Time of Day
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Time of Day				
	10pm-11pm	11pm-12am	12am-1am	1am-2am	2am-3am
1987	8.0	5.6	11.2	14.5	15.6
	6.8	4.5	9.7	12.5	13.4
1989	5.6	3.5	8.1	10.6	11.1
	5.0	6.1	7.8	13.3	11.5
1991-pre .05	6.1	7.3	9.4	15.6	14.3
	3.8	4.1	7.2	8.3	9.8
1991-post .05	3.9	4.8	6.2	10.9	8.8
	2.7	4.1	6.9	7.2	10.7
1993	4.6	5.1	8.8	10.3	12.3
	2.6	3.1	4.0	5.0	6.0
1997	2.9	3.2	5.7	6.3	7.4
	1.0	2.8	3.0	3.5	5.4
	3.4	5.1	8.5	9.1	13.5
	2.0	3.1	5.4	5.2	7.8
	3.3	3.9	5.1	6.3	7.7
	1.9	2.3	2.9	3.6	4.2
	1.5	3.8	4.2	4.9	7.3
	0.5	1.9	1.9	2.2	3.6

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 7
Percentage of Drivers with a BAC of 0.08 or above by Time of Day
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Time of Day				
	10pm-11pm	11pm-12am	12am-1am	1am-2am	2am-3am
1987	4.0	2.8	6.8	8.6	9.5
	3.2	2.1	5.6	7.1	7.7
1989	2.3	1.4	4.4	5.5	5.9
	1.6	3.0	4.1	8.4	6.0
1991-pre .05	2.2	3.9	5.3	10.3	8.1
	1.6	2.1	3.1	4.4	5.5
1991-post .05	1.0	2.1	2.9	6.4	3.9
	0.9	2.2	4.1	3.8	4.0
1993	2.2	2.8	4.2	5.9	7.4
	1.2	1.4	1.6	2.0	2.6
1997	1.0	1.4	2.1	3.0	3.6
	0.5	1.1	1.7	1.2	2.4
	1.3	3.0	5.4	5.2	5.4
	0.4	1.5	2.8	2.3	2.5
	1.7	1.9	2.3	2.8	3.6
	0.7	0.9	0.9	1.2	1.5
	0.9	1.7	2.5	2.0	3.6
	0.1	0.5	0.8	0.4	1.2

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 8
Percentage of Drivers with a BAC of 0.01 or above by Day of Week
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Day of Week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1987	20.3	21.5	25.8	28.1	26.9	22.4	16.5
	17.3	18.3	22.7	25.7	24.8	20.6	13.4
1989	14.3	15.1	19.7	23.4	22.7	18.7	10.4
	19.6	18.7	24.1	25.2	25.5	22.9	16.7
1991-pre .05	16.2	15.5	20.6	22.7	23.2	20.8	13.3
	12.7	12.4	17.2	20.2	20.9	18.6	10.0
1991-post .05	17.6	15.4	21.1	20.9	19.5	19.6	16.4
	14.4	12.7	18.1	18.6	17.5	17.8	13.5
1993	11.2	10.1	15.2	16.3	15.6	15.9	10.5
	17.0	17.0	17.1	19.8	20.2	16.2	11.4
1997	14.0	13.9	14.1	17.7	18.2	14.5	8.9
	10.9	10.8	11.1	15.5	16.2	12.7	6.4
1993	13.8	15.8	15.4	17.2	19.7	17.0	13.8
	11.3	13.3	13.0	15.3	17.9	15.2	11.0
1997	8.9	10.9	10.5	13.5	16.0	13.4	8.3
	6.7	6.8	11.9	11.9	9.6	9.6	5.9
	4.5	4.5	9.0	9.9	7.9	7.8	3.7

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 9
Percentage of Drivers with a BAC of 0.05 or above by Day of Week
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

Year of Survey	Day of Week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1987	9.0	8.6	12.3	13.2	11.6	9.2	7.6
	7.0	6.6	10.1	11.5	10.1	8.0	5.5
1989	5.0	4.6	7.8	9.7	8.6	6.8	3.4
	7.9	9.7	11.1	9.5	10.1	7.9	6.1
1991-pre .05	5.8	7.5	8.7	7.9	8.6	6.6	4.1
	3.7	5.2	6.2	6.4	7.1	5.3	2.1
1991-post .05	6.5	5.1	8.6	8.2	6.0	7.5	6.5
	4.5	3.7	6.7	6.7	4.9	6.3	4.7
1993	2.6	2.2	4.8	5.1	3.8	5.1	2.8
	7.4	5.9	7.0	7.2	6.4	6.1	4.6
1997	5.4	4.0	5.2	5.9	5.3	5.0	3.1
	3.4	2.2	3.3	4.5	4.2	3.9	1.5
1993	3.5	3.5	5.3	5.2	5.4	4.8	3.6
	2.3	2.4	3.8	4.2	4.4	3.9	2.3
1997	1.2	1.3	2.4	3.2	3.4	2.9	0.9
	2.1	1.8	4.3	2.9	2.6	1.6	2.2
	3.4	3.0	6.2	3.8	3.5	2.3	3.5
	0.8	0.6	2.5	1.9	1.7	0.8	0.8

Note: small figures represent the 95% statistical confidence intervals of the percentages

Table 10
Percentage of Drivers with a BAC of 0.08 or above by Day of Week
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)

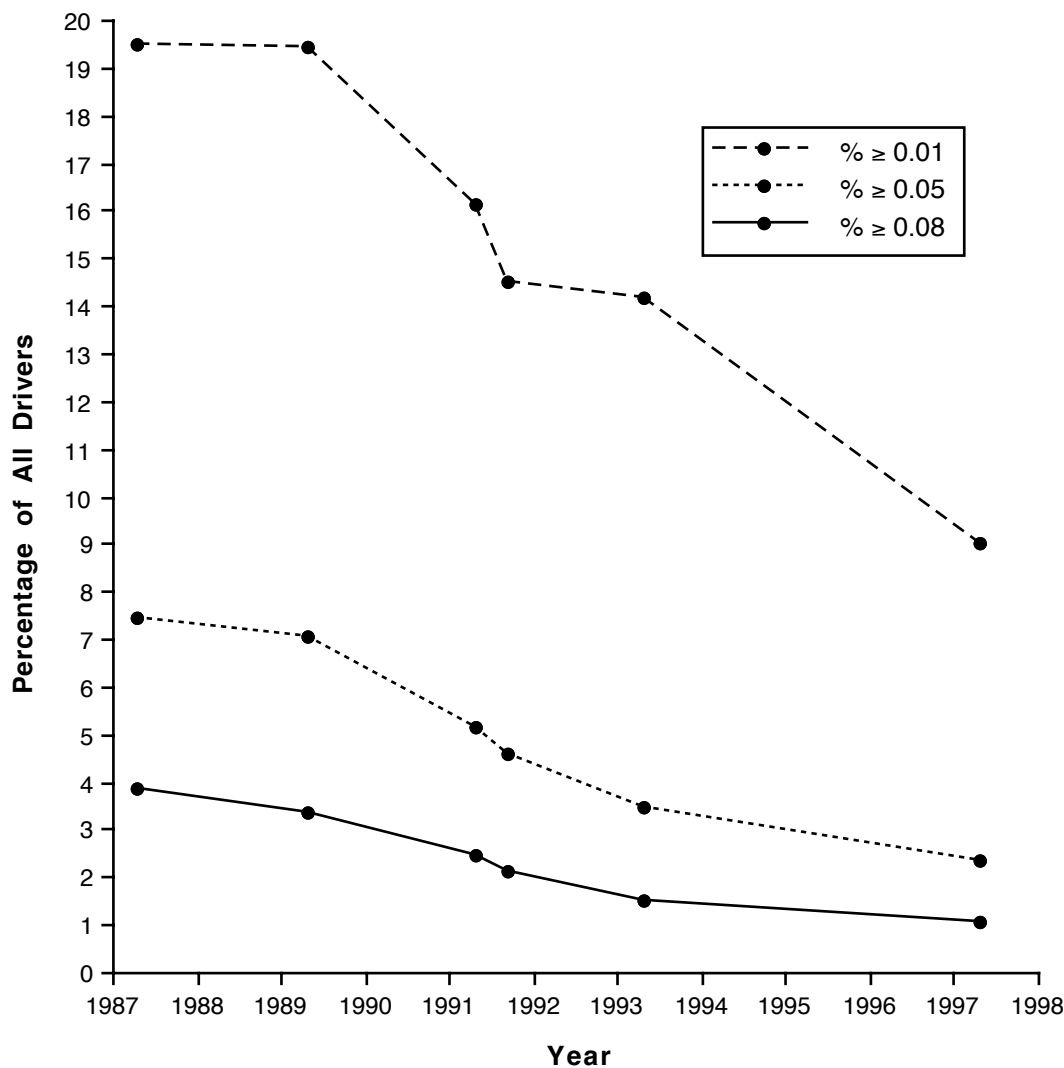
Year of Survey	Day of Week						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1987	5.4	3.8	6.9	7.2	6.5	5.5	5.6
	3.9	2.5	5.2	5.9	5.4	4.5	3.8
1989	2.3	1.2	3.6	4.5	4.2	3.6	2.0
	4.4	4.4	5.3	5.9	5.4	4.2	3.4
1991-pre .05	2.9	3.0	3.8	4.7	4.3	3.3	2.0
	1.4	1.6	2.2	3.5	3.2	2.4	0.5
1991-post .05	3.5	3.0	4.4	4.2	3.2	3.6	4.2
	2.1	1.9	3.1	3.1	2.4	2.8	2.8
1993	0.8	0.8	1.8	2.1	1.6	1.9	1.4
	5.3	2.2	5.0	3.3	3.2	3.2	2.4
1997	3.6	1.2	3.4	2.4	2.4	2.4	1.3
	1.9	0.2	1.9	1.5	1.6	1.7	0.3
1993	1.6	1.9	2.6	2.9	2.9	1.9	1.7
	0.9	1.1	1.7	2.2	2.2	1.3	0.9
1997	0.2	0.3	0.7	1.5	1.5	0.8	0.0
	0.8	0.1	2.5	1.6	0.9	0.6	1.4
	1.6	0.4	3.9	2.3	1.4	1.1	2.5
	0.0	0.0	1.1	0.8	0.4	0.2	0.3

Note: small figures represent the 95% statistical confidence intervals of the percentages

3.1 Overall BAC Levels

As can be seen in Tables 2 to 4, there has been a continual decline in the proportion of late night drivers who have been drinking and those who were above the specified BAC levels over the past decade. From 1987 to 1997 there has been a reduction of 54% in the percentage of drivers at or above 0.01; a reduction of 69% in the percentage of drivers at or above 0.05; and a reduction of 72% in the percentage of drivers at or above 0.08 (Figure 1).

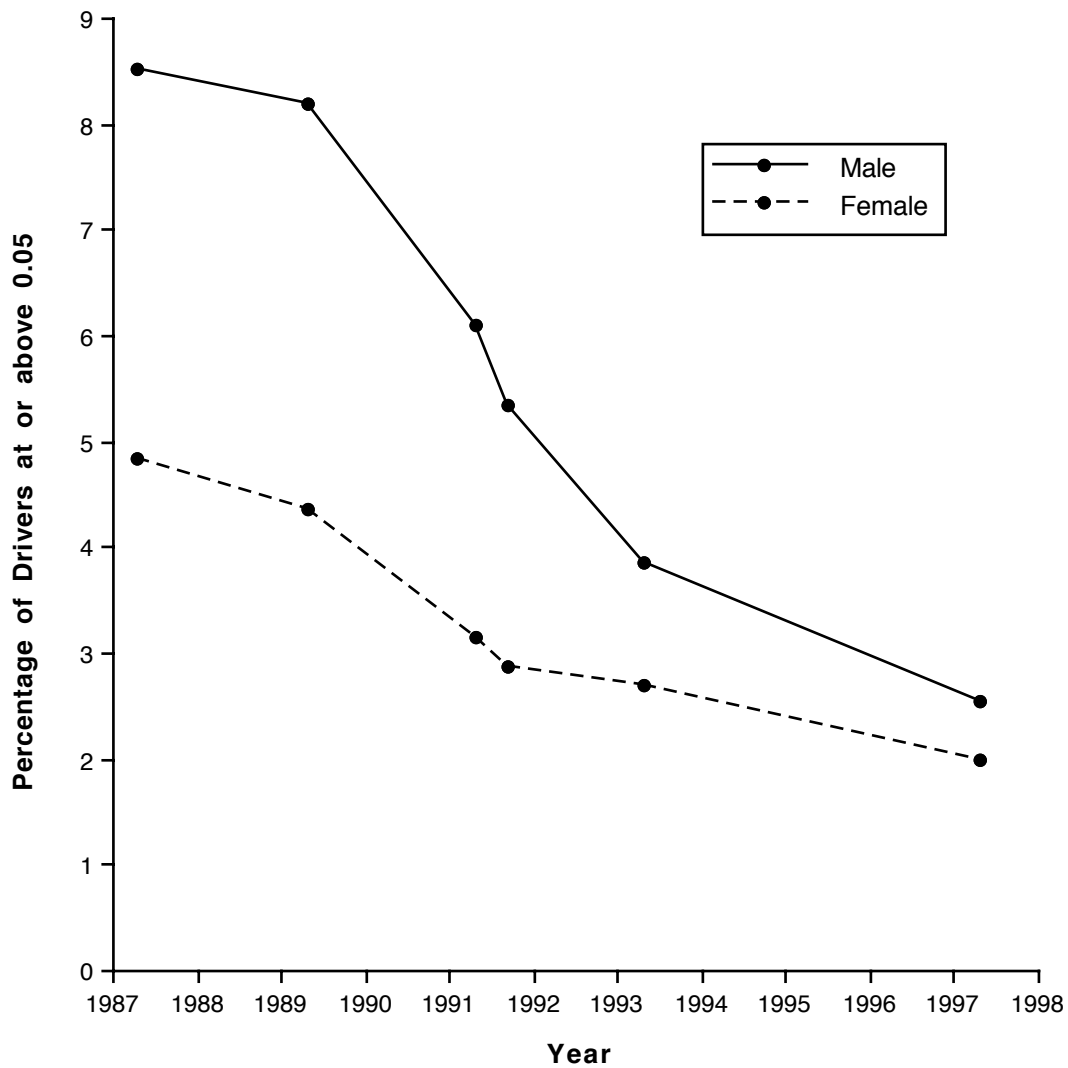
Figure 1
Percentage of Drivers at or above the Given BAC Levels
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)



3.2 Sex of Driver

Tables 2 to 4 also show the levels of drink driving by the sex of the driver over time. The data for drivers at or above 0.05 are presented graphically in Figure 2. While the percentage of drivers at this level has always been greater for males than for females, it can be seen that the proportional reductions over time for females have not been as great as for males leading to the two groups having more similar levels of drink driving over the years.

Figure 2
Percentage of Drivers at or above a BAC of 0.05 by Sex of Driver
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)



3.3 Age of Driver

The relationship between the estimated age of the driver and their BACs over time is also presented in Tables 2 to 4. Reductions in drink driving at all of the BAC levels presented can be seen in all age groups over the decade from 1987. The small numbers of drivers under 21 years of age and over 50 probably account for much of the variation seen in these groups at the higher BAC levels. It is interesting to note that of the 287 drivers judged to be under 21 years of age who provided a breath sample in 1997, not one of them was at or above the legal limit of 0.05.

3.4 Time of Day

As can be seen in Tables 5 to 7, drink driving has been and continues to be primarily a late night activity, especially at the higher BAC levels. The differences between drink driving from 10 to 11 pm and later at night have also tended to become more pronounced over time. For example, in 1997, the percentage of drivers with illegal BACs was more than five times greater between 2 am and 3 am than between 10 pm and 11 pm.

3.5 Day of Week

Tables 8 to 10 show the levels of late night drink driving by day of week over time. Although Wednesday through Saturday has consistently had higher percentages of drinking drivers (at or above 0.01) over the decade, there do appear to be some changes in the higher BAC levels. In 1997, the peak day for drink driving at or above 0.05 and 0.08 was Wednesday, followed to a lesser extent by Thursday and Friday, while Saturday actually recorded the lowest proportion of drivers at or above 0.05 in 1997. The differences between Wednesday and Saturday were statistically significant.

3.6 Drink Driving Perceptions and Intentions

The objective measurement of the BACs of Adelaide drivers gives a good indication of actual drink driving behaviour but it does not provide reasons for the changes which have been observed during the past decade. To complement the objective data, drivers were asked to rate their perceptions of, and intentions about, drink driving.

Each driver approached was handed a reply paid mail questionnaire containing the following questions:

“If you thought that you could be over the legal blood alcohol limit, would you drive? - Every time / almost every time / often / occasionally / rarely / never”

“Imagine that you were driving with a blood alcohol level over the legal limit. Do you think you would be caught by the police? - Every time / almost every time / often / occasionally / rarely / never”

Table 11 shows the number and percentage of questionnaires returned by the drivers and Table 12 shows the grouped responses to the above questions.

Table 11
Number and Percentage of Questionnaires Returned
1987-1997

Year of Survey	Number of Questionnaires Returned	Percentage of Questionnaires Returned
1987	3152	40.9
1989	2160	33.9
1991 (Pre-0.05)	2844	41.9
1991 (Post-0.05)	2828	42.7
1993	3130	39.9
1997	2021	36.6

Table 12
Intentions and Perceptions of Drivers
1987-1997

Year of Survey	Would drive over BAC limit at least occasionally	Would be caught by police at least occasionally
1987	20.7	59.1
1989	17.6	64.2
1991 (Pre-0.05)	13.1	66.9
1991 (Post-0.05)	13.5	68.8
1993	10.0	68.4
1997	8.1	75.2

It appears that, over the decade, a decreasing proportion of drivers has been prepared to drive with BACs over the legal limit which is in agreement with the observed behaviour of drivers. In parallel with this drivers also had an increasing perception of the risk of being caught by the police if driving with an illegal BAC. This suggests that random breath testing, and the associated publicity, are contributing to a change in drivers' perceptions about drinking and driving and that this may be a major factor in the reduction of drink driving in the Adelaide metropolitan area.

3.7 Seatbelt Usage

Table 13 shows the seatbelt usage rates for both drivers and front seat passengers for all surveys over the last decade. It can be seen that the wearing rates increased markedly from 1987 to 1989 and have remained at a high level, around 96 per cent, since then. The wearing rate among drivers with a BAC at or above 0.05 in 1997 was found to be 93.6 per cent. While this is slightly lower than that for drivers as a whole it is still very high.

Table 13
Seatbelt Wearing Rates among Adelaide Drivers
10pm to 3am, 1987-1997

Year of Survey	Per cent of drivers wearing belt	Per cent of passengers wearing belt
1987	87.5	85.0
1989	96.0	96.1
1991 (Pre-0.05)	95.8	93.6
1991 (Post-0.05)	96.0	94.6
1993	97.5	96.8
1997	96.7	96.9

4. DISCUSSION

Figure 3 shows the rate of change in the proportion of all drivers at or above the specified BAC levels from 1987 to 1997. The percentages for each BAC level and year are plotted on a logarithmic scale and so the slopes of the curves provide a directly comparable indication of the rates of decrease in those percentages. It is apparent that the rate of decrease has been mostly uniform across all three BAC levels.

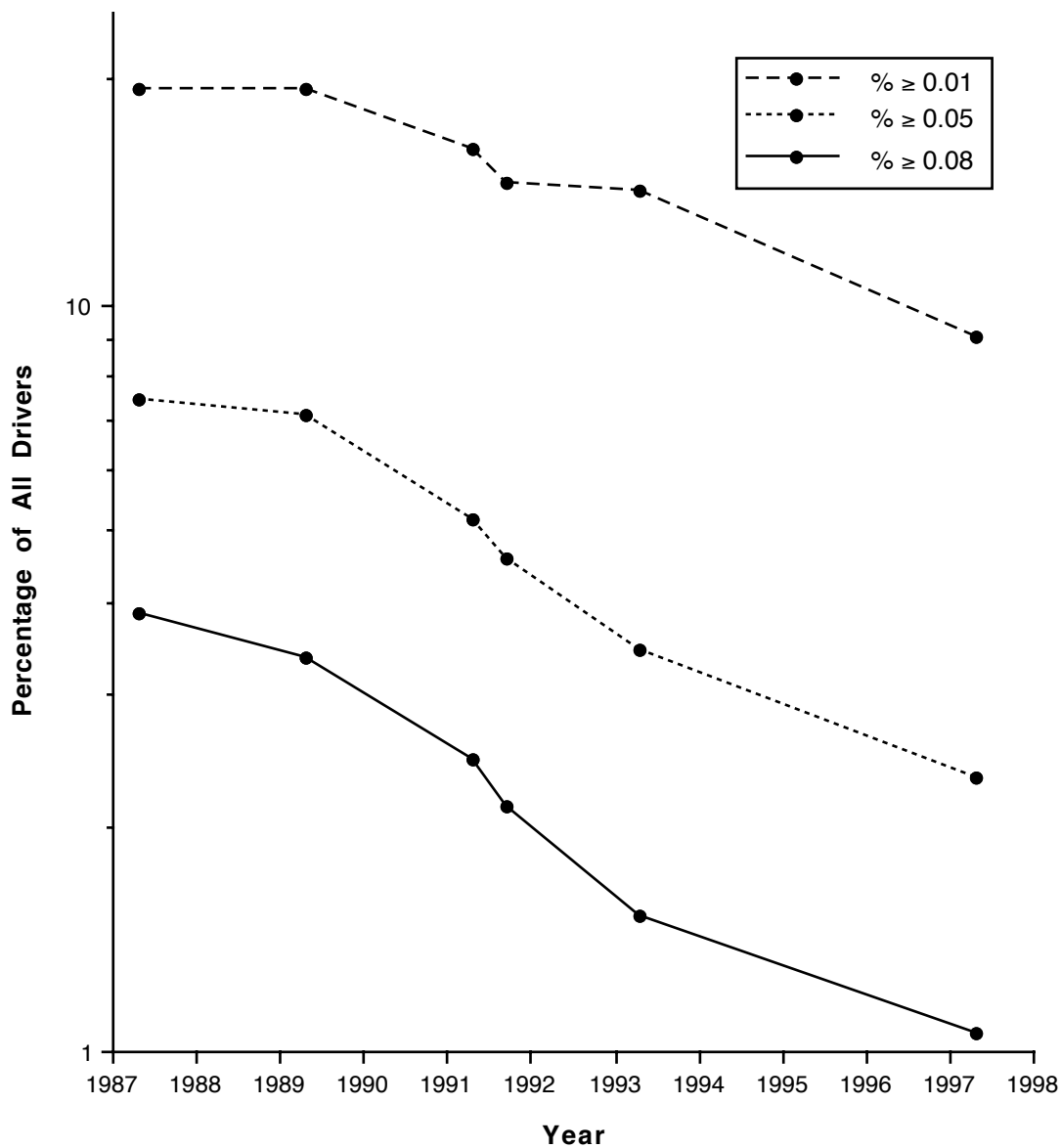
A larger proportion of male drivers had been drinking at all BAC levels than was the case for female drivers in all of the surveys reported here. The percentage of drivers who have been drinking has been decreasing for both males and females, but more rapidly for males. This means that the difference between the two groups is also decreasing. Indeed, the percentages of male and female drivers at or above both 0.05 and 0.08 in the 1997 survey were not statistically significantly different. If this trend continues, drink driving countermeasures aimed specifically at females will begin to play a more important role in reducing the drink driving problem.

Drink driving at all levels is generally decreasing at all driver ages with especially promising drops occurring among the young.

The 1997 results obtained by time of day showed, as has consistently been the case in previous surveys, that there was a steady increase in illegal drink driving from 10pm to 3am. The results obtained by day of week showed that the highest levels of drink driving occurred on Wednesday nights followed by Thursday and Friday nights. Saturday nights showed especially low levels of drink driving, suggesting that many persons on the roads on Saturday nights may be taking actions, such as designating non drinking drivers, to avoid drink driving.

Late night drink driving continues to decrease in Adelaide. It appears that the combination of publicity and enforcement used in South Australia over the past decade, and possibly other yet to be identified factors, have been effective in changing both attitudes and behaviour in regard to drinking and driving.

Figure 3
Rate of Change in the Percentage of All Drivers at or above the given BAC Levels
Adelaide, 10pm-3am, 1987-1997 (weighted and corrected for refusal bias)



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