The incidence of alcohol in fatally injured adult pedestrians

Prepared for Road Safety Division, Department for Transport

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CONTENTS

Executive Summary

In this study, the results of blood alcohol tests obtained from Coroners in England and Wales and Procurators Fiscal in Scotland for the five year period 1995-99 have been analysed to examine the extent to which alcohol plays a part in pedestrian fatalities. Records linking blood alcohol concentrations (BAC) to accident details obtained from the national road accident database (STATS19) were available for 1748 (42% of 4153 total cases) adult pedestrian fatalities (those aged 16 and over who died within 12 hours of a road accident) during this five-year period.

This is a summary of the principal findings from this study relating to age and sex and these are compared with those from an earlier study in 1985-89 (Everest, 1992). Since that earlier study the overall number of fatally injured adult pedestrians has reduced by about one half, but the proportion that had consumed any alcohol (defined to be BAC in excess of 9mg/100ml) has increased from 40% to 48%. The figure for those pedestrians found to have a BAC in excess of the drink-drive limit (80mg/100ml) in 1989 was 31%; by 1999 this had increased to 39%.

Of most concern is the increase in fatally injured pedestrians with high alcohol levels in their bloodstream at the time of the accident. Since 1979 there has been a 50% increase in the number of pedestrians killed who had a BAC above 2.5 times the drink drive limit.

The proportion of pedestrian fatalities aged from 16 to 60 who had been drinking was substantial. This was above 50% throughout this age range and for most of the ages it was over 60%. Furthermore, over 70% of those aged from 16 to 34 had consumed some alcohol.

There is evidence of an increase in drinking in both sexes. The younger age groups show the greatest changes in alcohol consumption over the decade. The proportion of male pedestrian fatalities aged 16-19 who had been drinking has increased from 59% to 78% and for females the increase was from 38% to 50%; both of these figures represent an increase of almost a third.

There has been a slight increase since the earlier study in the proportion of fatally injured female pedestrians aged under 30 who had consumed alcohol (from 44% to 49%). However, this increase is most marked in those with BAC between 201 and 300mg/100ml, (from 8.1% to 14.9%) and in those with a BAC exceeding 300mg/100ml (from 1.5% to 4.1%).

This study has shown that, although many trends and patterns have remained unchanged since the previous study, there have also been several changes of consequence. In particular, the overall proportion who had been drinking increased from 40% to 48%; increases in alcohol consumption were greatest in those under age 20, rising by one-third for both males and females. There was also a general increase in consumption for those under age 30. There is evidence that young women in particular are drinking considerably more, for women in this age group the greatest rise was in those with BAC above 200mg/100ml.

However, it is important to note that, as much as these findings reflect changes in alcohol consumption, they are also a reflection of the effectiveness of the anti-drink-driving campaigns, and the shift in societal attitudes against driving after consuming alcohol, particularly in younger people. Nevertheless, the results suggest a need for further education of all road users as to the dangers of travelling with excess alcohol in the system. Such an initiative would benefit greatly from a multi-agency approach, involving professionals from the health services working together with those from road safety.

Reference

Everest J T (1992). *The involvement of alcohol in fatal accidents to adult pedestrian*s. Research Report RR343. Crowthorne: TRL Limited.

1 Introduction

Over 42,000 pedestrians were injured in road accidents in Great Britain in 1999 including 870 who were killed, which is approximately one quarter of all road users killed that year (DETR, 2000). Although this represents a substantial reduction from the 60,000+ pedestrian casualties in 1989, when one third of fatalities were pedestrians (Everest, 1992), this is still a serious cause for concern. The vulnerability of the child and elderly pedestrian is well recognised and this is illustrated by the fact that out of 9825 pedestrians killed or seriously injured in 1999, 51% were either under 16 or at least 70 years old.

The remaining group of adult pedestrians aged 16-69, although making up only half of the total population of injured pedestrians, is more likely to have been drinking than their younger or older counterparts, and for this group the consumption of alcohol is associated with a considerably increased accident risk. Clayton *et al.* (2001) reported that the risk of fatal accident involvement for adult pedestrians starts to increase rapidly at blood alcohol concentrations (BAC) above 120mg/100ml. Similar studies in Australia (Alexander *et al.*, 1990) suggest that, at alcohol levels of 150mg/100ml and above, the risk of a pedestrian having an accident is 15 times greater.

The risk of non-fatal injury is also considerably increased by alcohol consumption. A hospital-based TRL study of drinking behaviours of road accident casualties showed a high rate of previous drinking (Everest *et al.*, 1991), 37% among pedestrians. This compares with a recent study (Clayton *et al.*, 2001) where 40% of adult pedestrian casualties tested for alcohol had been drinking.

Recognising the need for action to reduce pedestrian fatalities and the role that alcohol plays in many of these accidents, the Department for Transport has commissioned TRL to report results from a sample of fatally injured pedestrians, aged 16 and over, who died within 12 hours of an accident for the period 1995 –1999, and compare these with a similar sample for 1985 - 1989. An earlier report (Everest, 1992) investigated a similar sample of pedestrian fatalities for the late 1980s and the present analysis updates those results.

2 Methodology

Blood alcohol concentrations for road users aged 16 or more who died within 12 hours of being injured in an accident have been recorded at TRL since 1967 using returns made by Coroners in England and Wales, and by Procurators Fiscal in Scotland since 1978. BAC is not reported for about half the road accident fatalities for a number of reasons:

- the casualty died more than 12 hours after the accident, this accounts for about 20% of cases (TRL, 2000);
- a test was not carried out;
- a blood transfusion had taken place;
- TRL depends on the voluntary co-operation of the Coroners and Procurators Fiscal, and some data are not reported.

These returns are matched to STATS19 casualty records using the date, time and location of the accident and the age and sex of the fatality, which enables additional variables such as lighting conditions and road class to be examined.

The majority of the data in this report relates to the aggregated dataset for the five-year period 1995-1999 of all pedestrian fatalities for whom the BAC is known (1748). In the following sections, cases where a variable under consideration is unknown have been excluded from the analysis, hence for some analyses the sample is less than 1748.

There are references throughout this report to pedestrians who had *not* been drinking (BAC ≤9mg/100ml) and those who had been drinking (BAC >9mg/100ml). Also referenced is the legal limit for drivers, which is 80mg/100ml. In addition, following on from the discussion of previous research which has identified an increased risk of accident associated with higher levels of alcohol, figures are provided for 120mg/100ml (1.5 times the legal limit for driving) and 150mg/100ml, to investigate the extent to which alcohol might have been a factor in these accidents.

Figures are also given in relation to 200mg/100ml, which is one of the selection criteria for High Risk (drink/driving) Offenders, and over 300mg/100ml, when sufficient alcohol has been consumed to lead to very heavy intoxication. At these levels it is highly probable that alcohol would have been a contributory factor in the accident.

3 Results

For the five year period 1995-99, 4153 adult (aged 16 and over) pedestrians were fatally injured and the BAC was known for 1748 (42%) of these. Since the earlier study in 1985-89 (TRRL, 1991) the overall number of fatally injured pedestrians has reduced by about one half but the proportion that had consumed any alcohol has increased from 40% to 48% (TRL, 2001). Appendix B shows, for men and women of different age groups, the proportion of cases for whom BAC was known. This shows that the two samples are broadly similar and so the two data sets are representative. In other words any differences between the two sets of results are not due to differences between the two sets of data.

Table 1 shows the percentage of pedestrians killed in road accidents testing positive for alcohol in 1989 and 1999. The proportion of pedestrians found to have a BAC in excess of the drink-drive limit (80mg/100ml) in 1989 was 31%; by 1999 this figure had increased to 39%. It is clear from this table that there has been an increase in the proportion of fatally injured pedestrians who have consumed alcohol to a level above the drink drive limit. Whereas, over the same period there has been a reduction in the percentage of motor vehicle drivers killed who have tested positive.

Table 1 Percentage of different groups of fatally injured road users testing positive for alcohol

	1989	*1999*	*Change (%)*
Pedestrians with any alcohol	40%	48%	+8%
Pedestrians over 80mg/100ml	31%	39%	+8%
Motor vehicle drivers with any alcohol	34%	33%	-1%
Motor vehicle drivers over 80mg/100ml	22%	21%	-1%

3.1 Age

This section refers to the 1653 adult pedestrian fatalities whose age was known. The proportion of pedestrian fatalities in each age group with a BAC exceeding the given levels is shown in Figure 1.

Figure 1 shows that the proportion of pedestrians who had been drinking was above 50% for all age groups from 16 to 60. For all age groups up to age 60, over 40% of fatalities had a BAC in excess of the drink drive limit (80mg/100ml).

Of most concern are those with very high BAC levels, which previous studies have indicated are associated with a considerable increase in accident risk – in these cases it is likely that alcohol played a part in the accident. In those aged under 35 , over 50% of fatalities had a BAC above 120mg/100ml and for those aged 25-49 over one-third had a BAC of more than 200mg/100ml – 2½ times the legal limit for driving. The proportion with a BAC above 200mg/100ml falls to one-quarter by the mid-fifties age group and is below 5% by age 70.

The proportion of adult pedestrians whose BAC exceeded 300mg/100ml was highest in those in their late forties (18%). These results agree closely with those from the earlier study.

3.2 Sex

Tables 2 and 3 summarise BAC levels by age group for male and female adult pedestrian fatalities from the period 1985-89 and also for 1995-1999.

Since the last survey the greatest differences in alcohol consumption have occurred in the younger age groups (both male and female). The proportion of pedestrian fatalities aged 16-19 who had been drinking has increased from 59% to 78% for males over the decade, and from 38% to 50% for females, i.e. increases of almost one-third over the period.

However, from a road safety perspective it is important to focus on those who had consumed larger amounts of alcohol, rather than those who had consumed any alcohol. To simplify the data contained in Table 2, Figures 2-5 compare the two samples in terms of the proportions of male and female fatalities who had a BAC over the 80mg/100ml drink drive limit and those with a BAC level above 200mg/100ml.

Figure 2 shows that, for all age groups up to age 60, there has been an increase in the incidence of males with BACs above 80mg/100ml. This increase is most pronounced in the youngest age group, where the change from 52% to 68% represents an increase of 31%.

Figure 3 shows a broadly similar pattern in female pedestrian fatalities, with the percentage of females in the 16-19 age group with BACs above 80mg/100ml increasing from 28 to 41%, an increase of 46%. However, in the 30-39 age group there is a very different finding. In this age group there has been a sharp decline in the percentage of fatalities with a BAC above 80mg/100ml, from 51% to 28%, a drop of 45%.

Overall, there has been a slight increase in the proportion of fatally injured female pedestrians aged under 30 who had consumed alcohol (from 44% to 49%) since the earlier study. However, this increase is most marked in those with very high BAC readings, as shown in Figure 5.

Figure 4 shows, for male fatalities, the percentage of each age group with a BAC reading in excess of 200mg/100ml. In all age groups apart from those aged 70+ there has been a small but consistent increase of approximately 5%, (8% in those aged 60-69).

Figure 5 presents the same statistics for female fatalities. For females in the 20-29 age range there has been a major

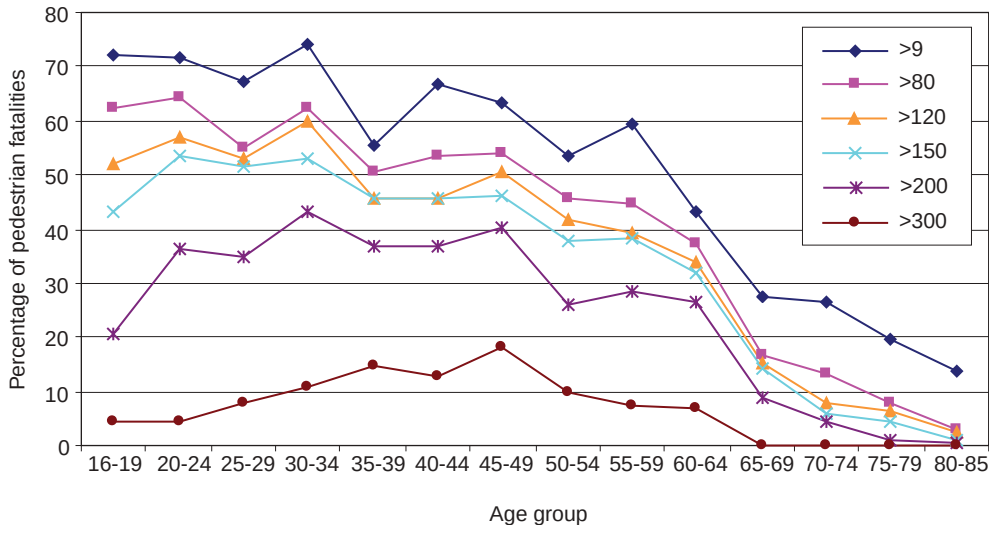

Figure 1 The variation of BAC level by age group

Table 2 BAC level by age group for male fatally injured adult pedestrians

	MALE														
	Age groups														
BAC (mg/100ml)	*16-19*	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*70-74*	*75-79*	*80-85*	*All*
1985-89															
0-9	41%	27%	39%	29%	37%	45%	30%	33%	52%	47%	55%	64%	69%	79%	47%
10-80	7%	9%	5%	7%	7%	7%	11%	12%	6%	8%	11%	16%	18%	13%	10%
81-120	9%	8%	4%	4%	1%	4%	2%	5%	8%	7%	8%	4%	4%	5%	5%
121-150	7%	7%	5%	4%	7%	7%	4%	7%	4%	3%	3%	3%	2%	1%	4%
151-200	17%	17%	8%	17%	9%	6%	13%	10%	10%	8%	10%	5%	3%	1%	10%
201-300	17%	25%	30%	27%	19%	21%	24%	22%	14%	20%	9%	6%	3%	–	16%
>300	1%	8%	9%	11%	21%	11%	17%	11%	6%	6%	5%	1%	1%	–	7%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	152	186	113	96	120	104	108	122	117	153	169	153	175	145	1913
1995-99															
0-9	22%	22%	29%	22%	38%	32%	28%	41%	38%	42%	70%	59%	74%	81%	41%
10-80	10%	8%	13%	11%	5%	12%	10%	8%	14%	9%	4%	17%	12%	15%	11%
81-120	9%	7%	2%	3%	4%	7%	3%	5%	6%	5%	2%	9%	3%	1%	5%
121-150	10%	2%	2%	8%	0%	0%	6%	5%	2%	3%	0%	4%	2%	1%	3%
151-200	26%	20%	17%	10%	10%	11%	7%	10%	11%	5%	9%	3%	7%	0%	11%
201-300	18%	37%	28%	36%	26%	25%	24%	20%	21%	25%	15%	8%	2%	1%	21%
>300	4%	5%	9%	11%	18%	12%	22%	11%	9%	11%	0%	0%	0%	0%	8%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	89	111	100	92	82	81	68	79	66	76	46	76	91	73	1130

Table 3 BAC level by age group for female fatally injured adult pedestrians

	FEMALE														
	Age groups														
BAC (mg/100ml)	*16-19*	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*70-74*	*75-79*	*80-85*	*All*
1985-89															
0-9	62%	47%	57%	45%	43%	67%	51%	72%	76%	86%	89%	91%	92%	92%	81%
10-80	10%	14%	11%	3%	7%	10%	10%	4%	10%	5%	6%	3%	7%	6%	7%
81-120	9%	4%	11%	10%	13%	7%	5%	2%	2%	2%	1%	2%	–	1%	3%
121-150	5%	8%	–	10%	7%	–	2%	–	3%	1%	1%	2%	1%	–	2%
151-200	2%	20%	11%	–	10%	3%	5%	2%	2%	2%	2%	1%	–	–	2%
201-300	10%	4%	11%	26%	7%	13%	24%	13%	2%	2%	2%	1%	–	–	4%
>300	2%	2%	–	6%	13%	–	2%	6%	5%	–	–	–	–	–	1%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	58	49	28	31	30	30	41	47	58	81	115	180	226	210	1184
1995-99															
0-9	50%	58%	46%	47%	74%	36%	68%	67%	53%	86%	76%	92%	88%	90%	76%
10-80	9%	4%	12%	18%	5%	18%	5%	8%	20%	–	18%	8%	11%	8%	10%
81-120	14%	8%	–	–	11%	9%	5%	–	–	–	–	–	–	–	2%
121-150	5%	12%	–	–	–	–	–	–	–	–	2%	–	1%	1%	1%
151-200	9%	4%	15%	12%	5%	–	–	17%	7%	5%	2%	–	–	1%	4%
201-300	9%	12%	23%	12%	5%	23%	16%	4%	20%	8%	2%	–	–	–	6%
>300	5%	4%	4%	12%	–	14%	5%	4%	–	–	–	–	–	–	2%
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	22	26	26	17	19	22	19	24	15	37	45	61	88	102	523

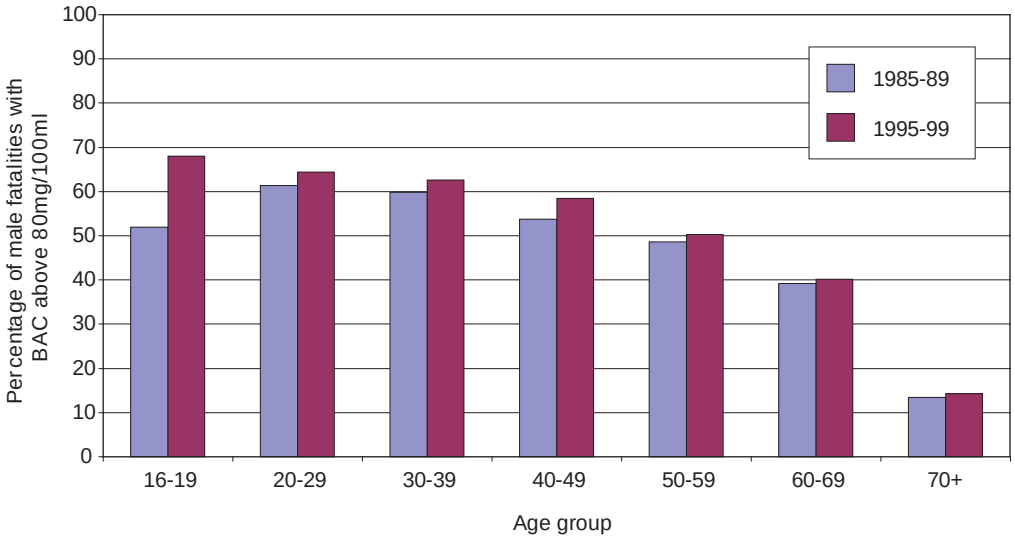

Figure 2 Percentage of male fatalities in each age group with BAC level above 80mg/100ml for 1985-89 and 1995-99

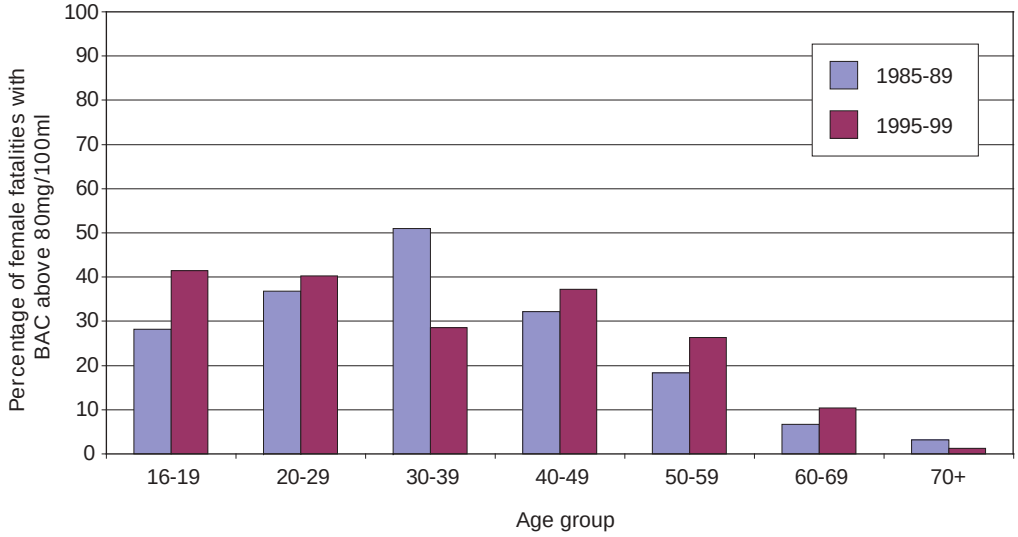

Figure 3 Percentage of female fatalities in each age group with BAC above 80mg/100ml for 1985-89 and 1995-99

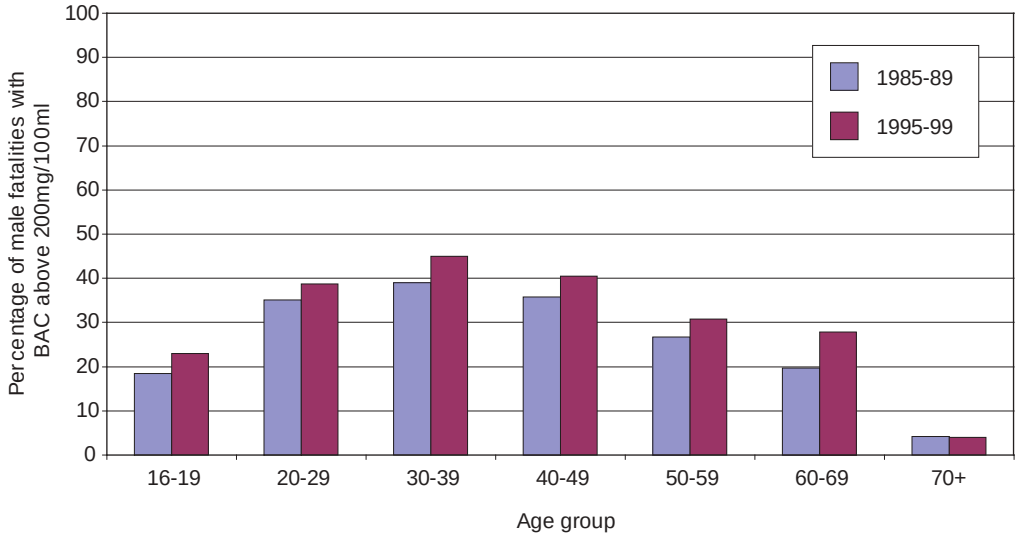

Figure 4 Percentage of male fatalities in each age group with BAC above 200mg/100ml for 1985-89 and 1995-99

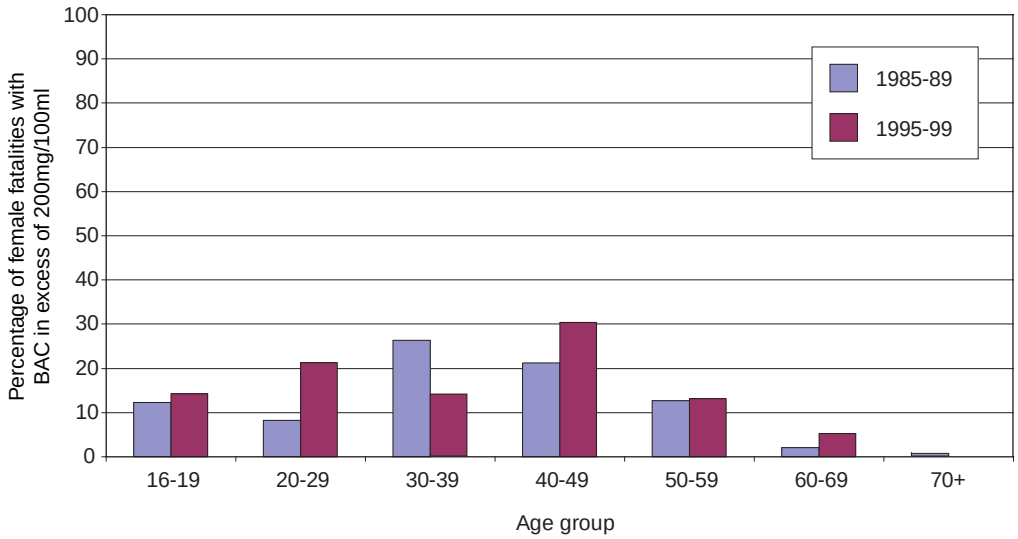

Figure 5 Percentage of female fatalities in each age group with BAC above 200mg/100ml for 1985-89 and 1995-99

increase in those with a BAC reading in excess of 200mg/100ml rising from 8% to 21%, an increase of 163%. For the 40-49 age group the increase – from 21% to 30% - is smaller but still of some concern, representing a 43% increase between the two surveys.

Although the absolute numbers are relatively low, these increases in heavy alcohol consumption among younger women reflect the social changes cited earlier and point to the need for further research and educational programmes to raise awareness of the dangers associated with excessive alcohol consumption.

Interestingly, for those in the 30-39 age group there is a similar finding to that previously observed with regard to alcohol levels above 80mg/100ml: in this age group there has been a significant decrease in the percentage of female pedestrian fatalities with BAC readings above 200mg/100ml: down from 26% to 14%, a fall of 46%.

4 Discussion

Previous research has consistently highlighted the increased risk associated with high levels of alcohol, in all modes of transport. Education and public awareness programmes have successfully changed people's attitudes towards drinking and driving, with a consequent reduction in the numbers of drivers killed who have high levels of alcohol in their system. However, this reduction in drink driving has been partially offset by an increase in the number of pedestrians travelling with excess alcohol in their system.

4.1 The increase in drinking pedestrians

This report has highlighted the extent of the problem and has shown that, since the last similar survey, there has been a significant increase in the incidence of alcohol in pedestrian fatalities. Over 40% of pedestrian fatalities aged up to 60 had a BAC in excess of 80mg/100ml. However, the increased numbers of pedestrians with very high levels of alcohol in their bloodstream is of most concern. In these cases there is a high probability that alcohol had a contributory role in the accident.

The greatest differences in alcohol consumption have occurred in the younger age groups, with nearly a third of male pedestrians and nearly a half of female pedestrians in the 16-19 age range having a BAC above the drink drive limit.

In the introduction it was noted that Clayton *et al.* (2001) and others have found an increase in the risk of an accident for pedestrians who have consumed large quantities of alcohol. For this reason it was decided to look at BAC bands of 120mg/100ml and 150mg/100ml, as well as higher levels.

This showed that, in younger age groups particularly, many pedestrian fatalities had consumed high levels of alcohol. Over 50% of those in aged under 35 had a BAC of above 120mg/100ml and over one-third of the fatalities aged 25-49 had consumed alcohol to 2½ times the legal limit for driving.

The results also showed that more than 1 in 5 male pedestrians aged 45-49 had a BAC exceeding 300mg/100ml.

It is probable that the findings reflect changes in society's attitudes towards drinking and driving, particularly the younger generation, who are generally very negative towards drink driving. However, the figures may also reflect the changes (increases) in alcohol consumption generally.

The increase in the incidence of alcohol in those aged under 20 is a serious cause for concern. The Royal College of Physicians Report (2001) shows that alcohol consumption among under-age drinkers (11-15) more than doubled between 1990 and 1996. Furthermore, recent Home Office research (2000) shows that drinking levels increase substantially after 16 with around 60% of both males and females reporting feeling very drunk at some time during the last year.

Further evidence of a drink problem with British teenagers comes from the ESPAD report (2000) which covered interviews with 60,000 15-16 year olds in 30 countries; the UK was second behind Denmark for

frequency in drinking. This pattern of drinking continues with increasing age to include the '18-30 culture' and reflects changes in lifestyles since the 1980s. In particular, the ESPAD report highlights apparent differences in drinking culture between those aged under and over 30 for both males and females. For males aged under 30 there has been an increase in the proportion who had been drinking, from 65% to 76%. For the men aged 30 and over there was a smaller increase in the proportion who had been drinking, from 49% to 53%.

4.2 Increased drinking in women

In the past 10-20 years there has been a noticeable shift in female attitudes towards alcohol, with young women increasingly drinking large amounts of alcohol. This change is reflected in the data: the most dramatic increases have been in the percentages of young females with very high BAC levels.

For females in the 20-29 age range the percentage with a BAC reading in excess of 200mg/100ml has risen from 8% to 21%, an increase of 163%. For the 40-49 age group the increase – from 21% to 30% - is smaller but still of concern, representing a 43% increase between the two surveys. These increases in alcohol consumption among younger women, particularly at the higher alcohol levels, are considerable cause for concern. Clearly, young women may be at even greater risk of harm when travelling late at night whilst drunk.

While, overall, the statistics suggest an increase in female drinking, women in the 30-39 age group appear to buck the trend. In recent years there has been a move towards women having children later in life, which could partly explain the intriguing finding that – in direct contrast to their younger and older sisters - women in the 30-39 age group appear to be drinking less. In this age group there has been a sharp decrease in the percentage of fatalities with a BAC above 80mg/100ml, from 51% to 28%, a drop of 45%, as well as a significant decrease in the percentage with BAC readings above 200mg/100ml: down from 26% to 14%, a fall of 46%.

4.3 Risk reduction strategies

The results presented in this report pose a dilemma for those involved in road safety education and policy. The findings reflect positive changes in attitudes towards drink driving, with increased numbers of drinkers choosing to walk rather than take the car. However, it is clear that there would be considerable merit in developing some form of awareness campaign to highlight the increased risk to pedestrians associated with high levels of alcohol.

Such a campaign might use case studies involving injury-accident victims talking about their experience and the role that alcohol played in the accident (see for example, Clayton and Colgan, 2001). Given the increased cost to the Health Service due to alcohol-related accidents, together with the impact on health generally, there would be considerable merit in a multi-agency approach, involving road safety and health professionals.

The research has highlighted that an awareness campaign would be of benefit to men and women. But, given the additional increased dangers to women when incapacitated by drink, young women particularly would benefit from an awareness campaign encouraging them to plan how they are going to get home at the end of the evening.

Another approach would be to focus on the group: encouraging individuals to look out for one another, to stick together and to share responsibility. There could also be merit in a collaborative approach involving local authorities, licensed taxi authorities and public transport operators, to encourage more use of public transport and taxis, particularly for larger groups who can share the cost.

There is also a need to raise the awareness of drivers that at certain times of day and night, particularly in urban areas, there is a high probability that many pedestrians will have consumed alcohol, often in considerable quantities, and that as a consequence their behaviour may be erratic, unpredictable and in some cases, dangerous.

5 Acknowledgements

This research was funded by the Road Safety Division of the Department for Transport and was carried out in the Safety Group at TRL. The authors would like to thank the Coroners in England and Wales and the Procurators Fiscal in Scotland for their co-operation in providing TRL with the information on the L407 form. The authors are also grateful to Fred James for prompt supply of the Coroners' data, Diana Coates for her administrative support and data preparation and Jeremy Broughton who carried out the quality review and auditing of this report.

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Appendix A: TRL L407 form

CONFIDENTIAL
TRL Form L407/CM

Safety Department
TRL Limited
FREEPOST (Licence No. SCE 964)
Crowthorne, Berks RG45 6ZY

Details of Fatal Road Casualty aged 16 years or more who died within 12 hours of being injured in a road accident

1. ACCIDENT

Date.... Time of day.

Location ... .

Brief Story.....
.....
.....

Speed limit on road (✓ tick one)

30	40	50	60	70

2. DECEASED

Name ...

Age ..... Sex ...

Occupation .....

Died on (date) ... at (time) ....

Road user class ....

Vehicle class.....

3. BLOOD SAMPLE

Sample taken on (date)..... at time).....

Blood alcohol level ..... mg alcohol per 100ml blood

Sample not taken: Reason: Blood transfusion/Badly burned/ Not known/ Exsanguine
Other .....

If you wish to claim a fee for this return at the standard rate please tick ☐

Signed .....Coroner/Procurator Fiscal
..... Area/ District
.....Date

Appendix B: Age and gender of the fatally injured adult pedestrians in the two samples

The following tables show that for the two studies the proportions where BAC was known for men and women are broadly similar for each age group.

		16-19	*20-29*	*30-39*	*40-49*	*50-59*	*60-69*	*70+*	*All*
1995-99									
Male	BAC known	89	211	174	149	145	122	240	1130
	BAC unknown	102	204	159	122	136	173	453	1349
	N	191	415	333	271	281	295	693	2479
	BAC known	47%	51%	52%	55%	52%	41%	35%	46%
Female	BAC known	22	52	36	41	39	82	251	523
	BAC unknown	46	62	49	53	56	116	437	819
	N	68	114	85	94	95	198	688	1342
	BAC known	32%	46%	42%	44%	41%	41%	36%	39%
1985-89									
Male	BAC known	152	299	216	212	239	322	473	1913
	BAC unknown	149	311	196	205	216	316	834	2227
	N	301	610	412	417	455	638	1307	4140
	BAC known	50%	49%	52%	51%	53%	50%	36%	46%
Female	BAC known	58	77	61	71	105	196	616	1184
	BAC unknown	75	105	76	90	109	246	955	1656
	N	133	182	137	161	214	442	1571	2840
		44%	42%	45%	44%	49%	44%	39%	42%

Abstract

In this study, the results of blood alcohol tests obtained from Coroners in England and Wales and Procurators Fiscal in Scotland for the five year period 1995-99 have been analysed to examine the extent to which alcohol plays a part in pedestrian fatalities. Records linking blood alcohol concentrations (BAC) to accident details obtained from the national road accident database (STATS19) were available for 1748 (42% of 4153 total cases) adult pedestrian fatalities (those aged 16 and over who died within 12 hours of a road accident) during this five-year period.

This is a summary of the principal findings from this study relating to age and sex and these are compared with those from an earlier study in 1985-89 (Everest, 1992). Since that earlier study the overall number of fatally injured adult pedestrians has reduced by about one half, but the proportion that had consumed any alcohol (defined to be BAC in excess of 9mg/100ml) has increased from 40% to 48%. The figure for those pedestrians found to have a BAC in excess of the drink-drive limit (80mg/100ml) in 1989 was 31%; by 1999 this had increased to 39%.

Related publications

TRL232 *Drinking and driving in Great Britain - a review* by G Maycock. 1997 (price £25)

RR343 *The involvement of alcohol in fatal accidents to adult pedestrians* by J T Everest. 1992 (price £25, code E)

RR311 *Drinking behaviour and breath alcohol concentrations of raod accident casualties* by J T Everest, S Banks, P A Hewer and J Mineiro. 1991 (price £20, code B)

SR332 *A controlled study of the role of alcohol in fatal adult pedestrian accidents* by A B Clayton, A C Booth, and P E McCarthy. 1977 (price £20)

CT47.3 Pedestrian accident studies update (2000-2002) *Current Topics in Transport: selected abstracts from TRL Library's database* (price £20)

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