National Institute on Alcohol Abuse and Alcoholism
Division of Biometry and Epidemiology
Alcohol Epidemiologic Data System

SURVEILLANCE REPORT # 12

TRENDS IN ALCOHOL-RELATED FATAL TRAFFIC CRASHES, UNITED STATES: 1977-1987

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Trends in Alcohol-Related Fatal Traffic Crashes, United States: 1977-1987

INTRODUCTION

This surveillance report on alcohol-related[1] fatal traffic crashes is part of a series of surveillance reports whose purpose is to provide data useful to researchers, planners, policymakers, and other professionals interested in the area of alcohol abuse and associated illness and mortality. It is hoped that these documents, prepared by the National Institute on Alcohol Abuse and Alcoholism's Alcohol Epidemiologic Data System (AEDS), will serve as a useful reference for workers in the alcohol field.

Other surveillance report topics include apparent per capita consumption of alcoholic beverages, hospital discharges with alcohol-related conditions, and liver cirrhosis mortality.

Fatal traffic crashes are the leading cause of death for persons under 40 years of age (NCHS 1988). During the 11 years between 1977 and 1987, inclusive, an average of 47,000 people per year died in traffic crashes. This translates into approximately one death every 11 minutes. Alcohol is a contributing factor in as many as 50 percent of these deaths (Department of Transportation 1985).

The recent Surgeon General's Workshop on Drunk Driving (Office of the Surgeon General 1989) emphasized the need for accurate and timely epidemiologic data to address the drinking and driving problem. Over the past six years AEDS has reported periodically on various aspects of alcohol-related traffic fatalities (Zobeck et al 1987; Aitken and Zobeck 1985; Grigson et al 1985; Lowman et al 1983; Malin et al 1982; Malin and Verdugo 1984; Verdugo et al 1983; Zobeck et al 1984; Zobeck 1986; Zobeck et al 1986). From an epidemiologic perspective there is a need to identify for alcohol-related traffic crashes:

- Groups at greatest risk of death; and
- Changes in the risk of involvement over time.

Once identified, it is also necessary to track these factors on a regular schedule. This fourth annual surveillance report on alcohol-related traffic fatalities continues the process of meeting this need.

A new feature of the current surveillance report is a section on Years of Potential Life Lost (YPLL) due to alcohol-related fatal traffic crashes. YPLL is a method for assessing the human cost (i.e., premature death) of a particular cause of death. It is calculated by subtracting the age at death from age 65 (a standard life expectancy) for each individual death and then accumulating the total across all deaths. The technique is especially useful for indicating the severity of causes of death that particularly affect youth, such as alcohol-related traffic crashes (e.g., Bertolucci et al, 1985; Centers for Disease Control, 1988a; 1988b; McDonnell. and Maynard, 1985; Romeder and McWhinnie, 1977). Data for YPLL are presented in this report on the total number, mean, and rate per 100,000 population under age 65 for all- and alcohol-related traffic crash deaths.

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[1] The terms alcohol-related and alcohol-involved are used interchangeably throughout this report.

Data Sources and Limitations

The major data source for this report is the Department of Transportation's Fatal Accident Reporting System (FARS). FARS is a fully automated data bank that collects detailed information on every traffic crash occurring in the United States in which at least one person dies within 30 days of the crash. The system is operated by the National Highway Traffic Safety Administration (NHTSA) in cooperation with the States. Data for each year are made available to the public by the following year.

Detailed data on the conditions of the crash, the vehicles involved, and the driver(s) and other person(s) involved are collected for each crash. Alcohol involvement is recorded with the following three variables:

- Alcohol-involved — the judgment of the investigating officer as to whether alcohol is present. This variable was added in 1977;
- Blood alcohol concentration (BAC) test — any one of several chemical tests that measure the amount of alcohol in the blood. Starting in 1978, coders were instructed to mark alcohol-involved "yes" if the BAC test is positive; and
- Citation for driving under the influence (DUI) — this variable was added in 1982. If a driver is cited, coders are instructed to mark alcohol-involved "yes."

A crash is considered to be alcohol-related if any one of these three variables is coded "yes" (or positive for the BAC test) for at least one driver involved in the crash. A fatality is alcohol-related if the death occurs as the result of an alcohol-related crash (i.e., whether the victim was drinking is irrelevant unless he/she was the driver).

Even though data are available for 1975 and 1976, FARS fatality data for the present report are restricted to the years 1977 through 1987 (the most recent year for which data are available) to avoid documenting the artificial increase in the rate of alcohol involvement that arises in 1977 with the inclusion of the alcohol-involved variable (each year several thousand drivers are judged to be alcohol-involved who are not given a BAC test).

A similar problem arises in 1982 with the inclusion of the DUI variable . However, the problem is less serious. Only about 5 percent of all drivers involved in fatal crashes each year are charged with DUI and reported to FARS. Of these, less than 30 per year (on average) are not judged initially as alcohol-involved and not given a BAC test. It is not possible to exclude these drivers from analyses because they are automatically coded as alcohol-involved as a result of the DUI citation. In any event, these few drivers do not alter meaningfully the alcohol involvement rates.

The alcohol involvement rates derived from the FARS variables and discussed in this report should be viewed as conservative estimates for the following reasons:

- Police are reluctant to judge alcohol involvement even in fatal crashes (yet when they do so, they are correct over 90 percent of the time [Mercer 1985]);

- BAC tests are not administered consistently and routinely across jurisdictions; and
- Citations for DUI are given rarely (only 5 percent of all drivers involved in fatal crashes are cited each year).

In the first section of this report, several rates are presented. The denominator data for the rates are taken from the following sources:

- Population estimates — Bureau of the Census estimates of U.S. population as of July 1 of each year (The Bureau 1977-1987).
- Registered vehicles, licensed drivers, and vehicle miles traveled — Federal Highway Administration for each year (Federal Highway Administration 1978-1988).

Organization and Methodology

Past analyses of FARS data at AEDS can be grouped into three broad categories:

- General trends and fatality rates;
- BAC testing and results; and
- Young drinking drivers.

The present report continues this emphasis. The data are organized into three sections under the above topic headings. Fatality rates, frequencies, and percentages are presented in graphic and tabular form. The graphics are incorporated into the text, while all of the tables are collected into a single appendix. It is not within the scope of this report to interpret exhaustively every aspect of the data presented here; results are only highlighted. Therefore, the reader is encouraged to further analyze the data to identify observations or trends not discussed in this report.

RESULTS

General Trends and Fatality Rates

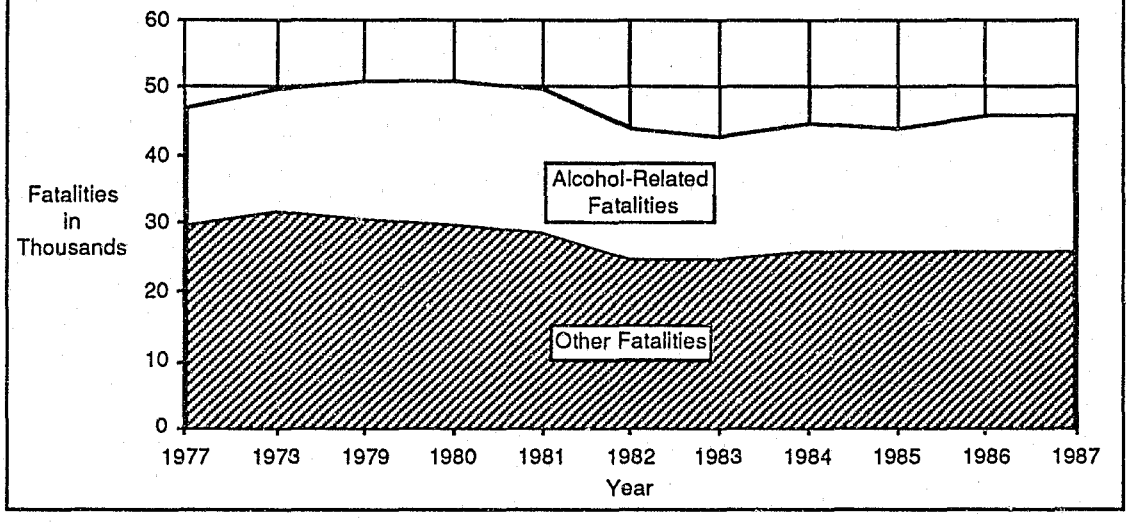
In this section, frequencies and percentages for alcohol-related traffic deaths are presented to provide an indication of the magnitude and direction of change in totals over time. First, totals for the number of traffic crashes, fatalities, and alcohol-related fatalities are presented to indicate the magnitude of the problem. Second, a series of four rates (i.e., traffic deaths per 100,000 population, per 100 million vehicle miles traveled, per 100,000 licensed drivers, and per 100,000 registered vehicles) put the raw frequencies into perspective. Third, for the first time in this series of surveillance reports, data on the years of potential life lost (YPLL) due to alcohol-related traffic crashes are presented. Fourth, a person's role in the crash (i.e., driver, passenger, etc.) is examined to determine the risk of involvement for each role. Finally, the role of the driver is examined in more detail to determine the association of age and sex with risk of involvement in traffic crashes.

Trends in the Number of Traffic Crash Deaths

The proportion of traffic crash deaths that are alcohol-related has risen 6 percentage points (from 37 percent in 1977 to 43 percent in 1987) for the 11 years studied (see Table 1 in the appendix). The effect this increase has had is reflected by the fact that total traffic deaths have decreased 1 percent over the 11 years, while alcohol-involved deaths have increased 14 percent.

Figure 1 shows both alcohol- and nonalcohol-related deaths increased in 1978 and 1979 before leveling off for the next two years. In 1982 and 1983, there was a drop in deaths for both classes of fatality. In 1984, both classes of traffic crash death rose, but in 1985, there again was a slight decrease in both classes of fatality. However, in 1986, there was a sharp increase (11 percent) in alcohol-related deaths while nonalcohol-related deaths showed only a modest (1 percent) increase. In 1987, there was only a slight change from totals for 1986; nonalcohol-related deaths increased 2 percent and alcohol-related deaths decreased 1 percent.

Figure 1. Alcohol-Related Traffic Fatalities: 1977-1987



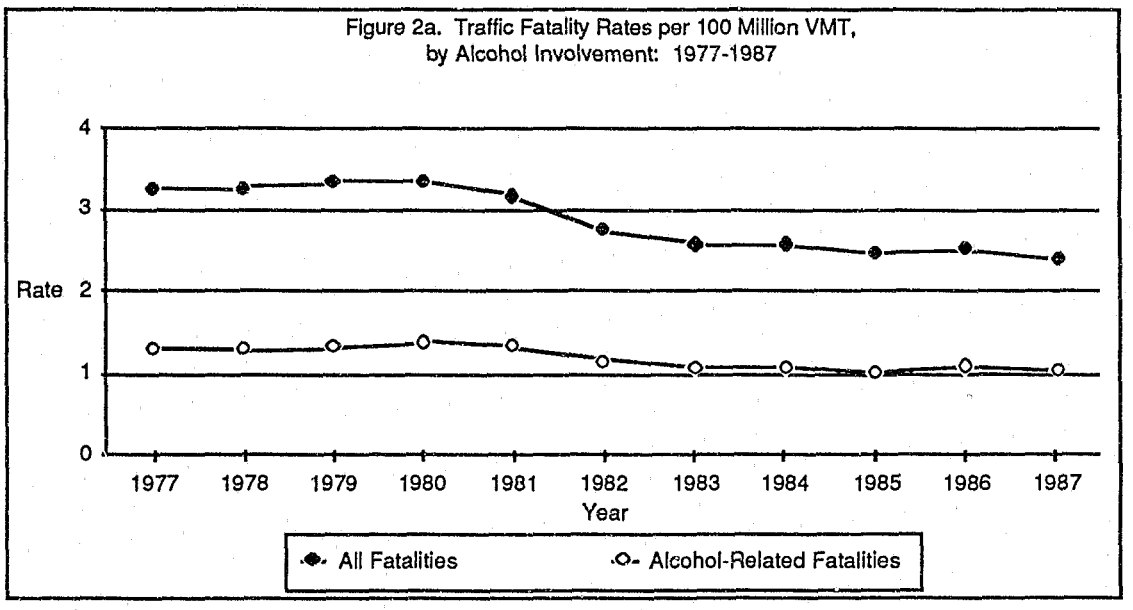
Trends in the Rates of Traffic Crash Deaths

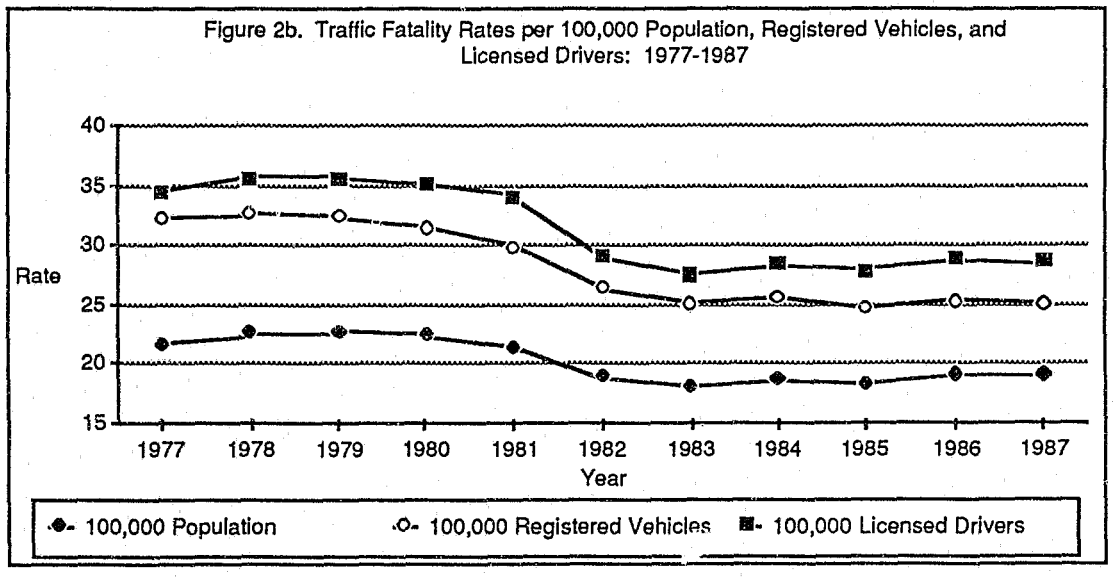
Raw frequencies by themselves are sometimes misleading. Each year, associated factors are subject to change, such as population, vehicle miles traveled (VMT), licensed drivers, and registered vehicles. Expressing traffic crash fatalities as rates per these denominators places them within the context of associated risk factors. Figures 2a-c present the different rates for all fatalities and alcohol-related fatalities, and Table 2 (see appendix) presents the data for the four rates for both kinds of fatality.

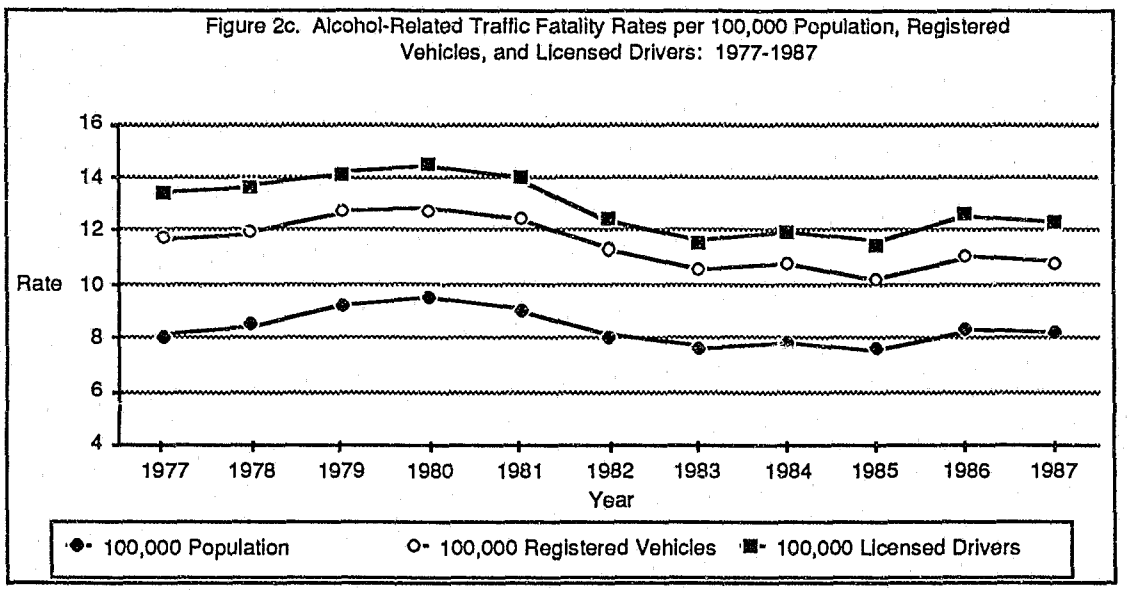
The various fatality rates suggest different interpretations of the trends in alcohol-involved deaths than do the raw totals. For each of the four rates, total fatalities per risk factor have decreased (26, 12, 22, and 17 percent for fatalities per 100 million VMT, 100,000 population, 100,000 registered vehicles, and 100,000 licensed drivers, respectively) much more substantially than the 1 percent decrease indicated by the raw frequencies. For alcohol-involved fatalities, three of the four rates indicate there has been a decrease in the rate of these deaths as well (21, 8, and 8 percent for fatalities per 100 million VMT, per 100,000 registered vehicles, and per 100,000 licensed drivers, respectively). This is in contrast to the 14 percent increase in such deaths

suggested by the raw frequencies. However, in 1987, unlike some previous surveillance reports (see Zobeck 1986, Zobeck et al 1987), the rate of alcohol-involved fatalities per 100,000 population shows a net increase (2 percent) since 1977.

The raw totals indicate more people died in 1987 than in 1977 as a result of alcohol-related traffic crashes. However, the rates suggest when important associated variables, particularly the number of vehicle miles traveled, are considered there has been a decrease in the rate of such deaths. The rates are better indicators than the raw frequencies of the trends in alcohol-related deaths because they incorporate such significant risk factors as vehicle miles traveled and licensed drivers. However, the rates do mask the absolute number of traffic deaths.







Trends in Years of Potential Life Lost

In 1987, YPLL due to all traffic crashes among males totaled 1,027,956 years compared with 388,780 years among females (see Table 3 in the appendix). These figures represent a 9 and 4 percent decrease, respectively, in YPLL due to traffic crashes from 1977's totals of 1,129,628 years and 404,133 years. However, in 1987 half (519,312) of the YPLL among males and 40 percent (156,042) among females was attributable to alcohol-related crashes (these 1987 totals represent a 10 and 16 percent increase, respectively, over 1977 totals). Despite the decrease in YPLL for all traffic crash deaths, the proportion of alcohol-related YPLL has shown a steady increase across the 11 years studied, regardless of sex. Among males, this proportion has increased 9 percentage points, from 42 percent in 1977 to 51 percent in 1987. Among females it has increased 7 percentage points, from 33 percent in 1977 to 40 percent in 1987.

This difference in trends for YPLL between all- and alcohol-related traffic crash deaths was also seen with the rate of YPLL per 100,000 population under age 65. In 1987, this rate for all deaths declined 18 and 13 percent among males and females, respectively, since 1977, while for alcohol-related deaths it declined less than 1 percent among males and actually increased 5 percent among females.

Despite the increase in the number and rate of alcohol-related YPLL over the 11 years studied, the mean YPLL has remained relatively constant for both sexes at about 35 to 37 years for each death due to all- and alcohol-related traffic crashes.

Person's Role in Fatal Traffic Crashes

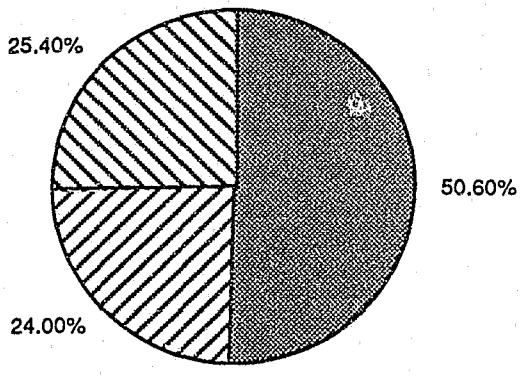
Analyses of FARS data suggest alcohol involvement and risk of death varies by a person's role (i.e., driver, passenger, or nonoccupant[2]) in the crash (see Table 4 in the appendix). In 1987, half of all driver deaths were alcohol related. Alcohol involvement in passenger deaths was only slightly lower at 45 percent. Both rates, however, have risen since 1977 (8 and 5 percentage points, respectively).

Further analysis of person role in crashes indicates drivers are more likely to die in either alcohol- or nonalcohol-related crashes than other person roles, but drivers constitute a larger proportion of fatalities in alcohol-related crashes than they do in nonalcohol-related crashes (Figures 3a and b).

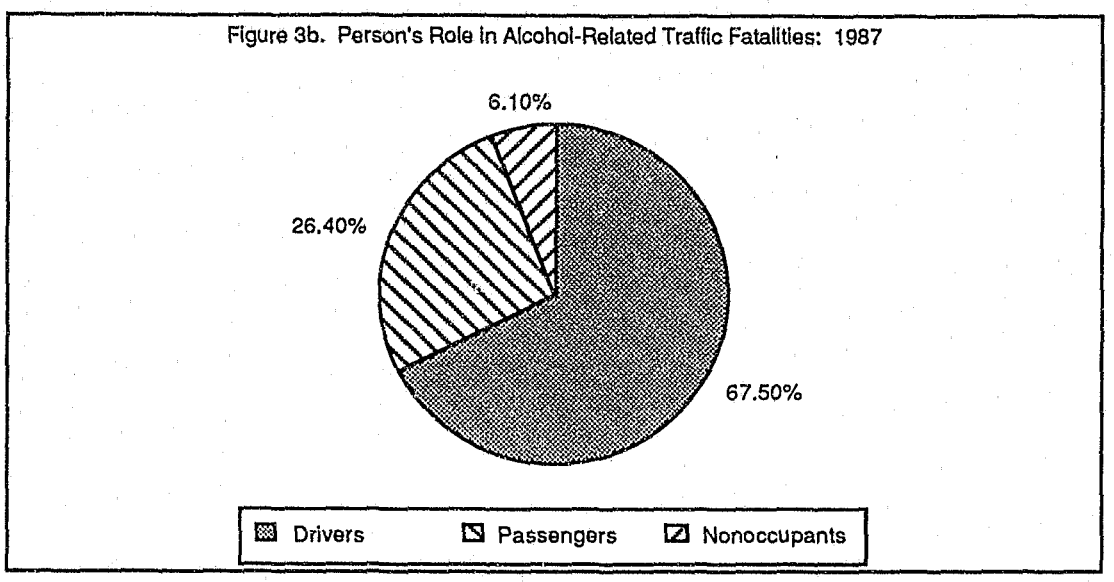
More detailed data (see Table 5 in the appendix) on drivers show male drivers involved in fatal crashes are more likely to have been drinking than female drivers, although the proportions have shifted somewhat as the proportion of women drinking and driving has increased (from 15 percent in 1977 to 19 percent in 1987). Frequencies from Table 5 also indicate male drivers are far more likely to be involved in alcohol-related fatal crashes than female drivers (roughly 9 out of 10 drivers in such crashes are male).

Data in Table 5 also show that while the number of drivers involved in all fatal crashes has risen 2 percent since 1977 (from 59,832 to 61,434), the number of drivers involved in alcohol-related crashes has increased 17 percent (from 15,827 to 18,524). Closer examination of this increase reveals that while the number of alcohol-involved male drivers has increased 12 percent (from 14,199 to 15,926), the number of alcohol-involved female drivers has increased 59 percent (from 1,628 to 2,590).

Figure 3a. Person's Role in Non-Alcohol-Related Traffic Fatalities: 1987



2 The nonoccupant category includes the more detailed categories of pedestrian, pedacyclist, other nonoccupant role, and unknown person role. In an earlier traffic fatality surveillance report (Zobeck 1986) data for each of these categories were presented. However, since the majority of persons in these categories are pedestrians, all cases have been combined into a single category (nonoccupant) for the present report.



BAC Testing and Results

In this section, two aspects of BAC tests are examined:

- Rates of testing — across state jurisdictions and driver age-sex differentials; and
- Test results — scores of 0.10 gm/100 ml percent [3] or more and mean scores.

Rates of Testing

In the discussion of the limitations of the FARS data, it was noted that BAC tests are not administered consistently across jurisdictions. Table 6 (see appendix) presents the data to support this statement. In 1977, only 10 states tested their dead drivers (and reported the results to FARS[4]) 80 percent or more of the time. A further indication of the problem is the wide range in testing rates. In 1977, the rate ranged from 0 percent for New Mexico and North Dakota to 91 percent for Oregon, with a nationwide rate of 42 percent.

Testing rates for surviving drivers are even lower than they are for dead drivers because many states prohibit mandatory testing of these drivers (although refusal to submit to a test may be used as evidence in some jurisdictions). No state tested more than 80 percent of its surviving drivers in 1977. The rate ranged from 0 percent for New Mexico and North Dakota to 68 percent for Delaware, with a nationwide rate of 11 percent.

The BAC testing situation has improved considerably since 1977, as the data for 1987 show (see Table 6). In 1987, more than twice (26) as many states tested their dead drivers 80 percent or more of the time as in 1977. The lowest rate is now 9 percent for Mississippi, with a nationwide

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[3] Blood Alcohol Concentration (BAC) is expressed as the weight of the amount of alcohol in a specified volume of blood (e.g., 0.10 grams of ethanol/100ml of blood).

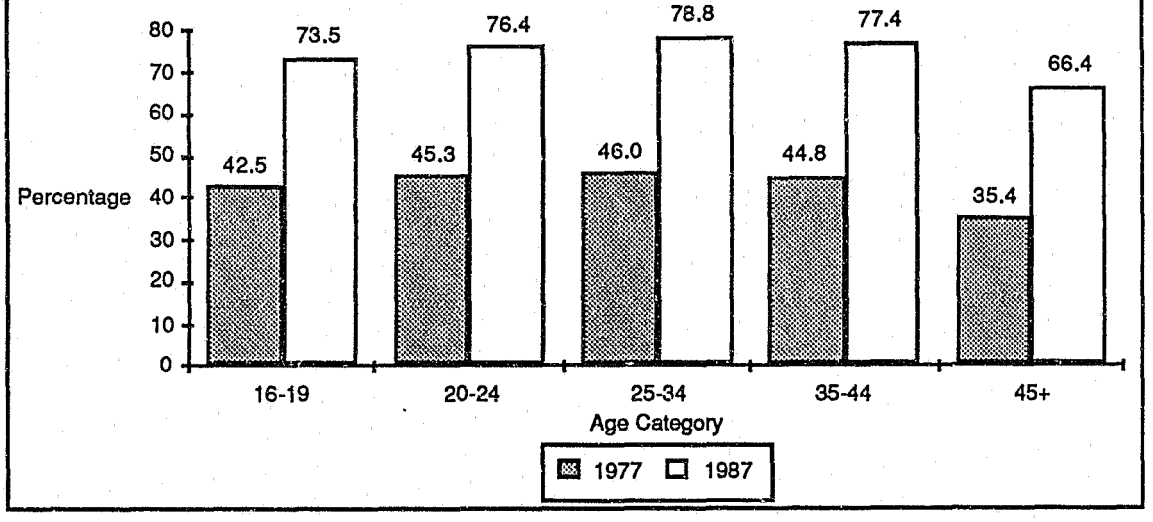
[4] In the majority of states some drivers are tested but the results are not reported.

rate of 73 percent. However, in 1987, for the first time in the four years that this surveillance report has been produced, the number of states testing their dead drivers 80 percent or more of the time has dropped from the previous year (from 29 in 1986 to 26 in 1987). Yet, even with this drop, the national rate of testing of dead drivers has risen from 71 percent in 1986 to 73 percent in 1987. It will be interesting to monitor this rate in future reports since data from the Department of Transportation (1988) indicate there are currently 10 states[5] that require testing of all drivers killed in crashes but that are still testing below 80 percent of these drivers. Increased compliance with these laws could improve the situation.

The increase in testing also can be demonstrated with driver age-sex differentials (see Table 7 in the appendix). Testing of dead male drivers shows an increase since 1977 of more than 30 percentage points across all age groups (Figure 4a). Testing of dead female drivers also shows a substantial increase across all age groups; (ranging from 27 to 30 percentage points [Figure 4b]). For both sexes, individuals in the 45-year-old and above age group have the lowest rate of testing (66 and 62 percent for males and females, respectively).

Although surviving drivers of both sexes are tested less frequently than dead drivers, they also show an increase in the testing rate across all age groups (Figures 5a and b). However, the increase is less substantial and uniform than it is for dead drivers. (Interestingly, the 1986 and 1987 proportions for surviving female drivers in each age category are 1 to 3 percentage points lower than the corresponding proportions for 1985 [see Zobeck et al 1987])

Figure 4a. Male Drivers Killed in Fatal Traffic Crashes and Given a BAC Test, According to Age: 1977 and 1987



[5] These states are: Kansas, Louisiana, Mississippi, Missouri, New Hampshire, New York, North Dakota, Pennsylvania, South Carolina, and Utah.

Figure 4b. Female Drivers Killed in Fatal Traffic Crashes and Given a BAC Test, According to Age: 1977 and 1987

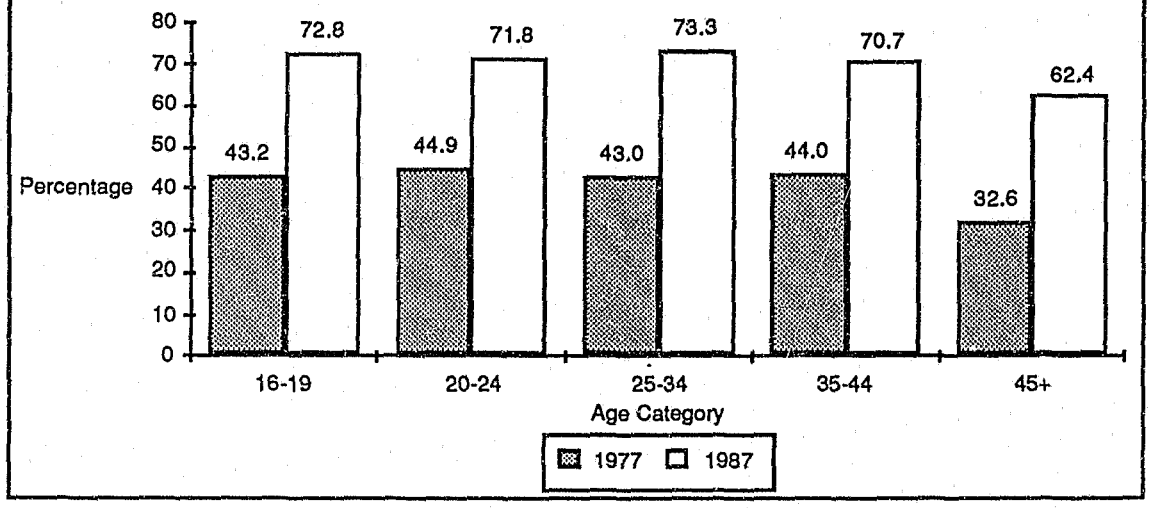
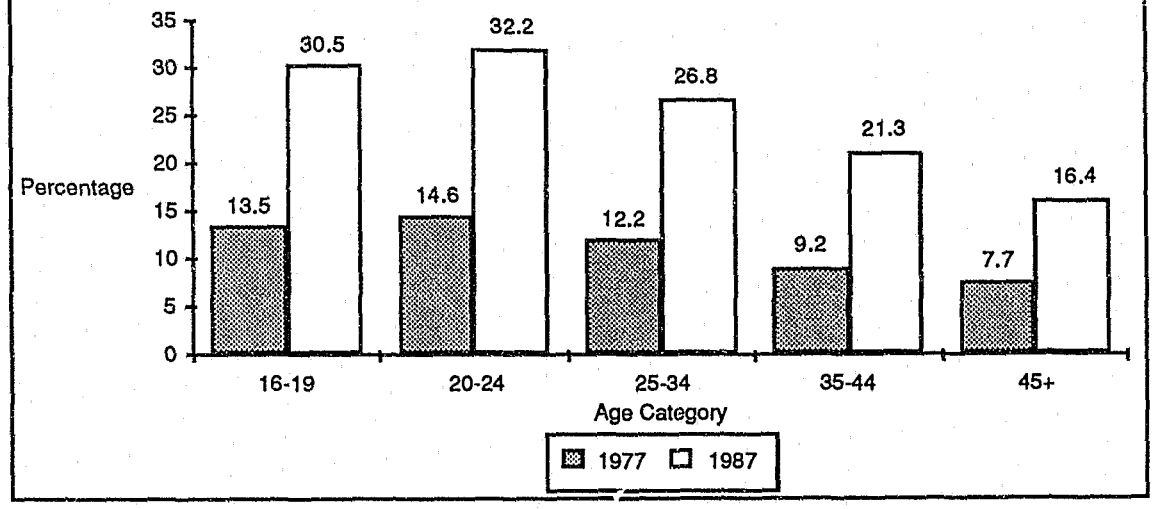
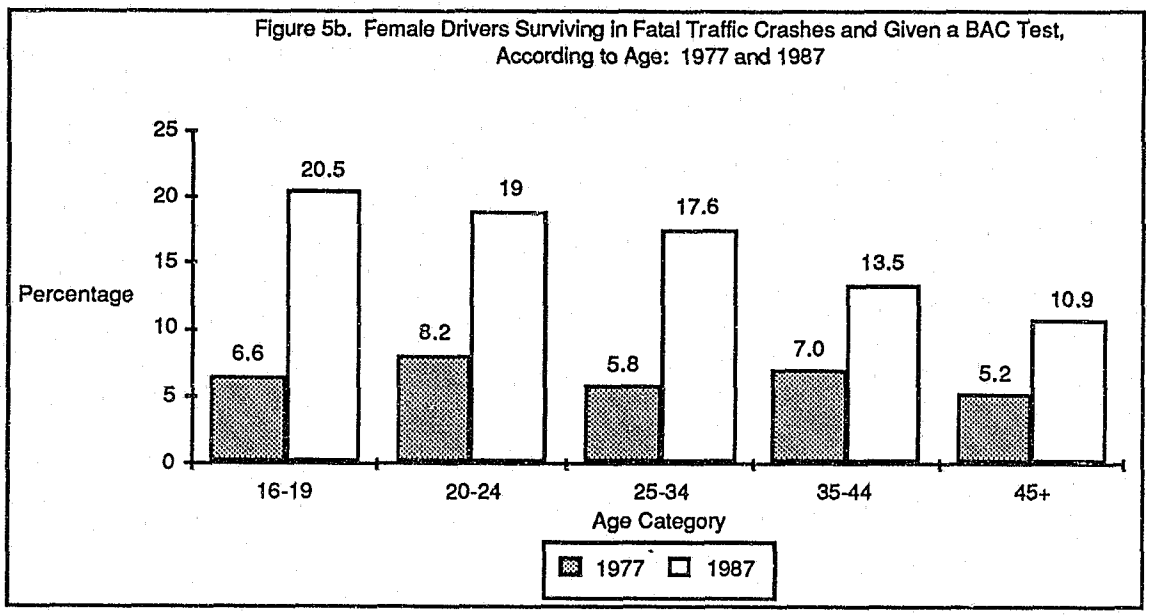


Figure 5a. Male Drivers Surviving in Fatal Traffic Crashes and Given a BAC Test, According to Age: 1977 and 1987





Test Results

In most states a BAC test result of 0.10 gm/100 ml percent or more is considered evidence of intoxication. Data on drivers who have tested positive on BAC tests suggest the majority (as many as 80 percent) of these drivers, regardless of sex and age, are legally intoxicated at the time of their crash (see Table 8 in the appendix). Except for females in three of the four age groups, the percentages have remained relatively stable over the 11 years studied.

Another indication of the level of intoxication among drinking drivers is provided by an examination of their mean BAC scores (see Table 9 in the appendix). The mean BAC score for drivers has remained at 0.16 or 0.17 gm/100 ml percent over the 11-year period. Even higher than the driver mean is the mean BAC score for pedestrians, which has held steady at 0.19 to 0.20 gm/100 ml percent.

Young Drinking Drivers

The problem of the young drinking driver has been of increased interest in recent years. Several AEDS analyses have reflected this interest (Aitken and Zobeck 1985; Lowman et al 1983; Malin et al 1982; Malin et al 1985a; Malin et al 1985b; Verdugo et al 1983; Zobeck et al 1984). In this section, several of the issues and trends discussed in these analyses are reexamined and updated.

In 1987, there were 7,827 deaths associated with young drinking drivers (see Table 10 in the appendix). This total is down 7 percent from the 1986 total of 8,483, in contrast to the 14 percent increase from 1985 to 1986 reported last year (see Zobeck et al 1988). However, it is a 21 percent decrease from the 10-year high of 9,918 deaths in 1980.

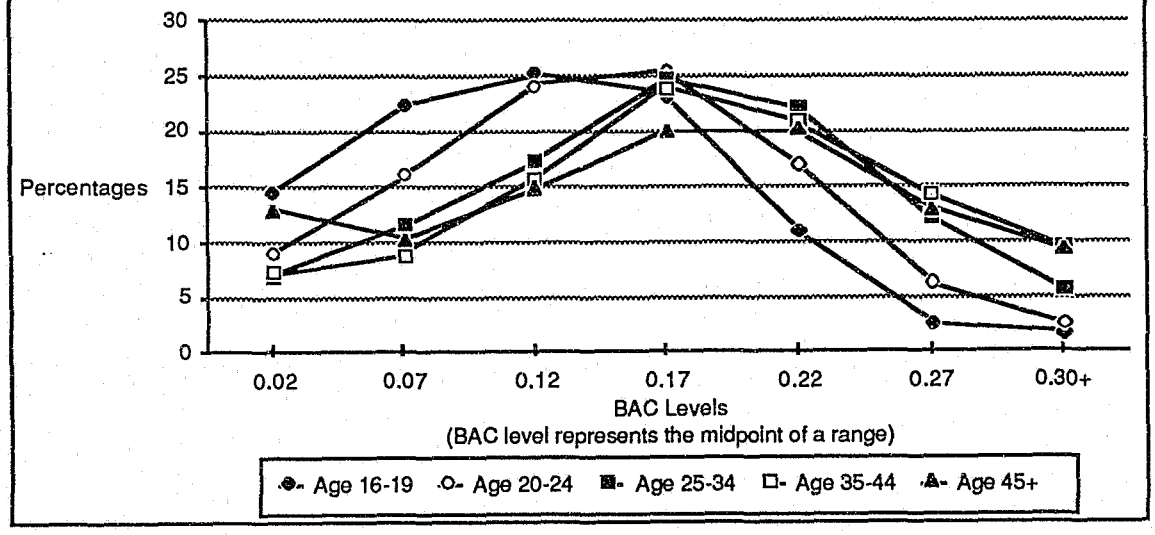
While Table 10 shows the number of people killed in crashes involving young drinking drivers, Table 11 (see appendix) presents data on the number of young people themselves that died in alcohol-related traffic crashes each year. Alcohol-related deaths of all ages have increased 14

percent from the 1977 total of 17,414 to the 1987 total of 19,918. In 1987, a total of 7,027 young persons aged 16-to-24 years died as a result of alcohol-related traffic crashes. This total is down 6 percent from the 1977 total of 7,528 , and down 21 percent from the 10-year high of 8,941 in 1980. Comparatively, alcohol-related traffic deaths of persons aged 25 to 44 years have increased 55 percent over the 11 years studied (from 5,642 in 1977 to 8,766 in 1987).

Data in Table 12 (see appendix) indicate deaths among drivers of all ages have increased 2 percent since 1977, while deaths among young drivers have dropped 16 percent. In contrast, deaths of drinking drivers of all ages have risen 25 percent since 1977, while deaths of young drinking drivers have returned to 1977 levels (after having risen 10 percent in 1986). All four classes of fatality are down from their peaks over the 11 years studied. Driver deaths and drinking driver deaths for all ages are down 7 and 1 percent, respectively, from their 11-year highs, while deaths in the corresponding categories for 16-to-24 year-olds are down 22 and 18 percent, respectively, from their 11-year highs. Data in Table 12 also indicate young drivers continue to be overrepresented in drinking driver deaths (see Aitken and Zobeck 1985). In 1987, 16-to-24 year-olds accounted for 34 percent of all such deaths while constituting only 17 percent of the U.S. licensed driver population.

In past years, AEDS analyses (Aitken and Zobeck 1985; Malin et al 1982; Malin and Verdugo 1984; Zobeck 1986) have tracked the BAC percentages of drivers by age group to determine at what BAC value the greatest proportion of drivers in an age group become involved in fatal crashes. Figure 6 updates previous analyses by presenting data for 1987 (Table 13, in the appendix, presents data for this subject for all 11 years). The current results continue to support the previous evidence that the youngest drivers (16-to-19 year-olds) have a peak BAC level of 0.12 gm/100 ml percent, while older drivers peak at 0.17 or 0.22 gm/100 ml percent. These results suggest young drivers perhaps become involved in alcohol-related crashes at lower levels of blood alcohol concentration than do older drivers because of their limited experience with driving and with drinking.

Figure 6. Peak Blood Alcohol Concentration Percentages, According to Age Group: 1987



CONCLUSIONS

The rate of alcohol involvement in traffic crash fatalities dropped only 1 percentage point in 1987 after having reached an 11-year high of 44 percent in 1986. The actual number of alcohol-involved deaths showed a 1 percent decrease from the 1986 total (which was a sharp 11 percent increase over 1985) . Although there continues to be decreases in 3 of the 4 fatality rates, the reductions, as in 1986, were not of the same magnitude as in previous reports, while the fourth rate (fatalities per 100,000 population) showed a 2 percent increase over the 11 years studied (this was a 3 percent increase in 1986). Also, in 1987, the number of states testing their dead drivers 80 percent or more of the time dropped from 29 to 26, the first such decline in this figure in the four years that this surveillance report has been produced (however, the national rate of testing increased from 71 percent in 1986 to 73 percent in 1987). Finally, in 1987, deaths associated with young drinking drivers declined 7 percent from 1986; however, in 1986, these deaths had risen sharply (14 percent) over 1985.

A few measures have continued to show a steady worsening pattern. While the number of deaths of persons 16-24 years of age have decreased over the 11 years studied, the number of deaths in 1987 of persons 25-44 years of age rose 5 percent since 1986, and 55 percent since 1977. Also, the number of YPLL due to alcohol-related traffic crashes has increased 10 and 16 percent, respectively, for males and females over the 11 years studied. Additionally, the percentage of YPLL due to traffic crashes that is alcohol related also has shown a steady increase since 1977 for males and females (from 42 to 51 percent for males and from 33 to 40 percent for females).

Although several measures have worsened or not improved substantially in the past two years, most are still below their 11- year highs. For example, deaths associated with young drinking drivers are 21 percent below the 1980 total of 9,918 deaths. Additionally, driver deaths and drinking driver deaths among drivers of all ages and young drinking drivers are as much as 23 percent below their 11-year highs. Interpretation of these data depends upon whether the focus of comparison is on the base year (1977), the particular 11-year high, or the preceding year.

The present report is descriptive; therefore, no attempt has been made to analyze all possible causative factors to explain the observed trends. However, some suggestions can be made.

First, the continuing attention to the drinking and driving problem may be increasing enforcement of drunk driving laws and BAC testing, both of which may have led to increased alcohol involvement rates in 1987.

Second, in response to Federal initiatives, the States increased their minimum drinking age to 21 years (as of July 1, 1988 all 50 states and the District of Columbia have in effect a minimum drinking age of 21 years).

Third, beginning in 1986, some states raised the speed limit to 65 miles per hour on portions of their interstate highway systems. It has long been acknowledged that high speeds are a major factor in the severity of alcohol- and nonalcohol-involved traffic crashes. In future years the changes in speed limits will possibly have profound effects on the continuing trends in alcohol-related fatal traffic crashes.

The effect that these factors, either singly or in combination, may have had on the present data is unknown. More sophisticated analyses of causal factors are warranted. Continued surveillance of these data will assist in resolving issues about the strength and direction of the observed trends.

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APPENDIX

List of Tables

Table 1. Traffic Crashes, Traffic Crash Fatalities, and Alcohol-Related Traffic Crash Fatalities: 1977-1987

Year	Event			
	Traffic Crashes	Traffic Crash Fatalities (a)	Alcohol-Related Traffic Crash Fatalities (b)	Percent of All Traffic Crash Fatalities (b/a)
1987	41,435	46,386	19,918	42.9
1986	41,090	46,082	20,038	43.5
1985	39,196	43,825	18,040	41.2
1984	39,622	44,241	18,523	41.9
1983	37,971	42,584	17,847	41.9
1982	38,899	43,721	18,622	42.6
1981	43,979	49,268	20,662	41.9
1980	45,271	51,077	21,114	41.3
1979	45,212	51,084	20,245	39.6
1978	44,433	50,327	18,362	36.5
1977	42,064	47,715	17,414	36.5

Table 2. Total and Alcohol-Related Traffic Fatality Rates per 100 Million VMT[1] and 100,000 Population, Registered Vehicles, and Licensed Drivers: 1977-1987

Year	Rate			
	100 Million VMT[1]	100,000 Population	100,000 Registered Vehicles[2]	100,000 Licensed Drivers
All Fatalities				
1987	2.41	19.06	25.17	28.67
1986	2.51	19.08	25.40	28.90
1985	2.47	18.35	24.75	27.94
1984	2.58	18.70	25.72	28.47
1983	2.58	18.20	25.13	27.61
1982	2.75	18.86	26.45	29.09
1981	3.16	21.48	29.99	34.06
1980	3.34	22.49	31.62	35.16
1979	3.34	22.75	32.48	35.66
1978	3.26	22.66	32.76	35.74
1977	3.25	21.72	32.40	34.54
Percent Change 1977-1987	-25.85	-12.25	-22.31	-16.99
Alcohol-Related Fatalities				
1987	1.04	8.18	10.80	12.31
1986	1.09	8.30	11.05	12.57
1985	1.02	7.55	10.19	11.50
1984	1.08	7.83	10.77	11.92
1983	1.08	7.63	10.53	11.57
1982	1.17	8.04	11.27	12.39
1981	1.33	9.01	12.46	13.96
1980	1.40	9.52	12.81	14.46
1979	1.33	9.20	12.70	14.15
1978	1.30	8.41	11.93	13.66
1977	1.31	8.05	11.71	13.41
Percent Change 1977-1987	-20.61	1.61	-7.77	-8.20

1 Vehicle miles traveled.
2 Includes all private, commercial and public owned motor vehicles and motorcycles.

Table 3. Years of Potential Life Lost (YPLL) from Alcohol-Related Traffic Crashes: 1977-1987

Year/Sex	YPLL						
	All Deaths			Alcohol-Related Deaths			Percent Alcohol Related[2]
	Years	Mean	Rate[1]	Years	Mean	Rate[1]	
1987							
Male	1,027,956	35.4	966	519,312	35.5	488	50.5
Female	388,780	35.1	363	156,042	36.1	146	40.1
1986							
Male	1,050,186	35.8	995	541,247	36.1	508	51.5
Female	375,095	35.4	353	150,375	36.8	141	40.0
1985							
Male	979,059	35.4	936	478,682	35.8	458	48.8
Female	363,186	35.0	344	135,518	36.0	128	37.3
1984							
Male	1,003,065	35.6	967	494,881	36.0	477	49.3
Female	362,792	35.0	346	143,108	36.4	137	39.4
1983							
Male	978,208	35.7	951	482,922	36.1	470	49.3
Female	350,309	35.2	337	135,134	36.4	130	38.5
1982							
Male	1,025,107	35.8	1,005	506,355	36.2	497	49.3
Female	354,195	35.8	343	140,526	37.0	136	39.6
1981							
Male	1,159,566	35.8	1,148	557,533	35.9	552	48.0
Female	391,625	35.7	383	153,345	36.5	150	39.1
1980							
Male	1,227,993	36.2	1,227	573,546	36.3	573	46.7
Female	415,668	36.1	410	163,612	36.9	161	39.3
1979							
Male	1,238,294	36.4	1,277	555,113	36.5	572	44.8
Female	414,511	36.4	421	152,996	37.1	155	36.9
1978							
Male	1,208,669	36.5	1,255	502,380	36.4	521	41.5
Female	420,690	36.7	430	139,372	37.4	142	33.1
1977							
Male	1,129,628	36.4	1,181	471,103	36.3	492	41.7
Female	404,133	36.6	416	134,712	37.0	139	33.3

1 Number of YPLL per 100,000 population.
2 Number of alcohol-related YPLL expressed as a percent of all YPLL.

Table 4. Decedent's Role in Alcohol-Related Traffic Crash Fatalities: 1977-1987

	Person's Role									
	Driver		Passenger		Nonoccupant		Unknown		All	
Year	N	Percent[1]	N	Percent[1]	N	Percent[1]	N	Percent[1]	N	Percent[1]
1987	13,447	50.1	5,257	45.2	1,209	15.4	5	8.9	19,918	42.9
1986	13,501	50.7	5,294	46.1	1,237	15.8	6	5.6	20,038	43.5
1985	12,208	48.2	4,655	43.8	1,177	15.1	0	0.0	18,040	41.2
1984	12,484	48.8	4,780	45.2	1,252	15.7	7	6.4	18,523	41.9
1983	11,776	48.8	4,784	45.2	1,285	16.6	2	1.8	17,847	41.9
1982	12,143	49.3	5,023	46.5	1,450	17.7	6	6.7	18,622	42.6
1981	13,723	48.7	5,455	45.3	1,477	16.6	7	4.1	20,662	41.9
1980	13,851	48.1	5,746	44.3	1,509	16.5	8	5.8	21,114	41.3
1979	13,098	45.4	5,695	43.9	1,450	15.8	2	2.0	20,245	39.6
1978	11,773	41.6	5,273	40.2	1,316	15.0	0	0.0	18,362	36.5
1977	11,064	42.4	5,076	39.6	1,271	14.6	3	2.8	17,414	36.5

1 Indicates the percentage of alcohol-involvement among decedents in the role-category.

Table 5. Drivers Involved in Fatal Traffic Crashes, According to Sex and Alcohol Involvement: 1977-1987

Year/ Driver Type	Sex							
	Male		Female		Unknown		Both Sexes	
	N	Percent	N	Percent	N	Percent	N	Percent
1987								
All Drivers	46,882	100.0	13,604	100.0	940	100.0	61,434	100.0
Alcohol-Involved Drivers	15,926	34.0	2,590	19.0	8	0.8	18,524	30.2
1986								
All Drivers	46,648	100.0	12,744	100.0	939	100.0	60,331	100.0
Alcohol-Involved Drivers	16,193	34.7	2,315	18.2	9	1.0	18,517	30.7
1985								
All Drivers	44,846	100.0	12,142	100.0	895	100.0	57,883	100.0
Alcohol-Involved Drivers	14,496	32.3	2,223	18.3	6	0.7	16,725	28.9
1984								
All Drivers	44,704	100.0	11,901	100.0	893	100.0	57,498	100.0
Alcohol-Involved Drivers	14,946	33.4	2,273	19.1	6	0.7	17,225	30.0
1983								
All Drivers	42,807	100.0	10,957	100.0	885	100.0	54,649	100.0
Alcohol-Involved Drivers	14,440	33.8	2,040	18.6	3	0.0	16,483	30.2
1982								
All Drivers	44,165	100.0	10,628	100.0	976	100.0	55,769	100.0
Alcohol-Involved Drivers	15,090	34.2	2,042	19.2	5	0.5	17,137	30.7
1981								
All Drivers	50,272	100.0	11,488	100.0	360	100.0	62,120	100.0
Alcohol-Involved Drivers	16,947	33.7	2,297	20.0	2	0.6	19,246	31.0
1980								
All Drivers	51,451	100.0	11,460	100.0	28	100.0	62,939	100.0
Alcohol-Involved Drivers	17,141	33.3	2,236	19.5	3	10.7	19,380	30.8
1979								
All Drivers	52,780	100.0	11,407	100.0	39	100.0	64,226	100.0
Alcohol-Involved Drivers	16,540	31.3	1,908	16.7	2	5.1	18,450	28.7
1978								
All Drivers	52,235	100.0	11,337	100.0	26	100.0	63,598	100.0
Alcohol-Involved Drivers	15,019	28.8	1,694	14.9	1	3.9	16,714	26.3
1977								
All Drivers	48,951	100.0	10,858	100.0	23	100.0	59,832	100.0
Alcohol-Involved Drivers	14,199	29.0	1,628	15.0	0	0.0	15,827	26.5

Table 6. Drivers Involved in Fatal Traffic Crashes and Given BAC Tests, According to State and Injury Severity: 1977 and 1987

State	Drivers Given BAC Tests											
	1977						1987					
	Dead		Alive		Combined		Dead		Alive		Combined	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Total	10,891	41.8	3,567	10.6	14,458	24.2	19,563	72.9	7,672	22.2	27,235	44.3
Alabama	7	1.1	6	0.8	13	0.9	494	67.9	138	20.6	632	45.2
Alaska	49	69.0	37	35.6	86	49.1	28	75.7	35	55.6	63	63.0
Arizona	164	39.9	97	15.0	261	24.7	309	64.1	103	15.0	412	35.2
Arkansas	34	10.5	17	4.5	51	7.3	158	39.2	85	21.4	243	30.3
California	2,286	86.7	681	19.2	2,967	47.9	2,753	89.4	956	22.4	3,709	50.4
Colorado	344	88.2	252	58.2	596	72.4	278	87.7	203	47.9	481	64.9
Connecticut	155	63.8	50	14.3	205	34.5	247	88.2	83	25.6	330	54.6
Delaware	44	75.9	66	68.0	110	71.0	87	95.6	78	67.2	165	79.7
District of Columbia	13	72.2	14	24.1	27	35.5	4	25.0	29	54.7	33	47.8
Florida	441	44.4	263	16.8	704	27.5	899	61.5	452	18.0	1,351	33.9
Georgia	192	24.2	110	12.0	302	17.6	722	74.0	411	34.8	1,133	52.6
Hawaii	69	88.5	5	4.4	74	38.7	58	92.1	33	29.7	91	52.3
Idaho	96	56.1	34	19.3	130	37.5	154	89.5	21	14.1	175	54.5
Illinois	689	58.1	35	2.2	724	26.1	780	84.9	140	10.7	920	41.2
Indiana	5	0.7	10	1.2	15	0.9	627	92.2	429	54.9	1,056	72.3
Iowa	142	35.5	31	8.1	173	22.1	245	74.7	101	30.4	346	52.4
Kansas	68	20.2	36	10.0	104	14.9	195	60.2	100	33.9	295	47.7
Kentucky	297	56.7	98	15.8	395	34.6	395	77.0	174	30.0	569	52.1
Louisiana	193	35.9	207	29.0	400	32.0	193	41.5	241	39.1	434	40.2
Maine	69	59.0	15	11.0	84	33.2	118	86.8	61	34.7	179	57.4
Maryland	160	48.2	7	1.5	167	21.1	390	87.1	51	7.6	441	39.5
Massachusetts	93	27.1	17	3.1	110	12.4	332	86.9	19	3.9	351	40.1
Michigan	619	58.9	192	12.5	811	31.3	558	60.3	285	22.6	843	38.5
Minnesota	232	50.2	51	8.9	283	27.3	264	88.9	181	46.3	445	64.7
Mississippi	4	1.1	11	2.7	15	1.9	45	9.3	20	4.1	65	6.7
Missouri	155	22.7	26	3.3	181	12.3	411	63.1	26	3.5	437	31.3
Montana	102	59.7	6	3.7	108	32.3	111	86.1	75	56.8	186	71.3
Nebraska	140	67.6	116	50.2	256	58.5	157	84.0	149	75.3	306	79.5
Nevada	115	81.6	51	35.7	166	58.5	131	91.6	79	42.3	210	63.6
New Hampshire	76	88.4	27	25.7	103	53.9	85	71.4	34	27.6	119	49.2
New Jersey	427	79.7	143	16.7	570	41.0	468	87.6	280	31.6	748	52.7
New Mexico	0	0.0	0	0.0	0	0.0	247	86.1	99	25.7	346	51.5
New York	143	13.4	4	0.2	147	5.1	860	72.9	63	3.4	923	30.4
North Carolina	3	0.4	6	0.6	9	0.5	786	84.9	3	0.3	789	36.9
North Dakota	0	0.0	0	0.0	0	0.0	52	74.3	8	15.4	60	49.2
Ohio	302	29.4	102	7.6	404	17.0	547	51.4	189	14.4	736	31.0
Oklahoma	329	61.2	45	8.1	374	34.1	235	64.9	53	11.4	288	34.8
Oregon	322	91.0	130	28.0	452	55.3	329	90.6	141	29.9	470	56.3
Pennsylvania	518	46.6	69	4.5	587	22.2	965	79.0	317	20.3	1,282	46.1
Rhode Island	58	90.6	6	7.1	64	43.2	22	30.6	6	6.7	28	17.3

Table 6. Drivers Involved in Fatal Traffic Crashes and Given BAC Tests, According to State and Injury Severity: 1977 and 1987 (continued)

State	Drivers Given BAC Tests											
	1977						1987					
	Dead		Alive		Combined		Dead		Alive		Combined	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Total	10,891	41.8	3,567	10.6	14,458	24.2	19,563	72.9	7,672	22.2	27,235	44.3
South Carolina	87	17.9	12	2.0	99	9.0	301	43.9	115	16.0	416	29.6
South Dakota	82	70.1	24	19.7	106	44.4	71	89.9	35	48.0	106	69.7
Tennessee	234	33.5	165	19.0	399	25.5	623	77.6	403	48.8	1,026	63.0
Texas	5	0.3	28	1.2	33	0.7	986	55.5	604	24.6	1,590	37.6
Utah	58	34.1	48	20.3	106	26.0	105	73.9	141	62.4	246	66.9
Vermont	24	35.8	16	22.9	40	29.2	76	95.0	40	63.5	116	81.1
Virginia	309	52.1	9	1.2	318	23.2	515	83.9	2	0.3	517	39.4
Washington	420	79.0	165	27.1	585	51.3	396	85.2	203	36.5	599	58.6
West Virginia	8	2.6	4	1.2	12	1.9	253	87.9	60	19.3	313	52.3
Wisconsin	432	84.4	5	0.8	437	38.3	436	85.3	87	15.5	523	48.7
Wyoming	77	55.4	18	12.5	95	33.6	62	87.3	31	46.3	93	67.4

Table 7. Drivers Involved in Fatal Traffic Crashes and Given BAC Tests, According to Sex, Age and Injury Severity: 1977 and 1987

	Drivers Given BAC Tests											
	1977						1987					
	Dead		Alive		Combined		Dead		Alive		Combined	
State	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Male												
16-19	1,507	42.5	649	13.5	2,156	25.9	1,903	73.5	999	30.5	2,902	49.5
20-24	2,229	45.3	842	14.6	3,071	28.7	3,034	76.4	1,522	32.2	4,556	52.4
25-34	2,301	46.0	847	12.2	3,148	26.4	4,494	78.8	2,004	26.8	6,498	49.3
35-44	1,043	44.8	352	9.2	1,395	22.6	2,322	77.4	969	21.3	3,291	43.6
45+	1,894	35.4	454	7.7	2,348	20.9	3,445	66.4	962	16.4	4,407	39.9
Total	8,974	42.5	3,144	11.6	12,118	25.1	15,198	74.3	6,456	24.9	21,654	46.7
Female												
16-19	306	43.2	75	6.6	381	20.7	623	72.8	215	20.5	838	43.9
20-24	398	44.9	97	8.2	495	23.9	682	71.8	247	19.0	929	41.3
25-34	399	43.0	86	5.8	485	20.2	1,014	73.3	350	17.6	1,364	40.4
35-44	248	44.0	63	7.0	311	21.3	649	70.7	177	13.5	826	37.1
45+	480	32.6	77	5.2	557	18.8	1,236	62.4	190	10.9	1,426	38.3
Total	1,831	40.2	398	6.4	2,229	20.8	4,204	69.1	1,179	16.0	5,383	39.9
Both Sexes												
16-19	1,813	42.6	724	12.2	2,537	24.9	2,526	73.3	1,214	28.1	3,740	48.1
20-24	2,627	45.3	939	13.5	3,566	27.9	3,716	75.5	1,769	29.4	5,485	50.1
25-34	2,700	45.5	933	11.1	3,633	25.3	5,508	77.8	2,354	24.9	7,862	47.5
35-44	1,291	44.6	415	8.8	1,706	22.4	2,971	75.8	1,146	19.6	4,117	42.1
45+	2,374	34.8	531	7.2	2,905	20.5	4,681	65.3	1,152	15.2	5,833	39.5
Total	10,805	42.0	3,542	10.6	14,347	24.3	19,402	73.1	7,635	22.9	27,037	45.2

Table 8. Drivers with Positive BAC Results with Scores of 0.10 Percent or More, According to Sex and Age: 1977-1987

Sex/Year	Age											
	16-19		20-24		25-34		35-44		Over 45		Total	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Male												
1987	927	63.6	2,304	75.0	3,629	82.0	1,629	84.9	1,180	78.0	9,669	78.1
1986	1,068	66.1	2,577	76.3	3,570	82.2	1,503	83.8	1,156	74.9	9,874	77.9
1985	887	66.2	2,369	77.9	3,086	82.9	1,338	83.8	1,082	78.1	8,752	79.1
1984	962	67.1	2,350	76.6	2,926	82.3	1,272	84.2	1,087	78.3	8,597	78.5
1983	921	70.7	2,147	78.9	2,679	83.3	1,188	85.7	999	79.7	7,934	80.3
1982	1,059	72.6	2,212	79.3	2,679	83.8	1,095	84.3	1,049	79.7	8,094	80.4
1981	1,107	71.7	2,317	78.7	2,829	83.5	1,180	85.9	1,170	80.8	8,603	80.4
1980	1,255	70.4	2,288	76.8	2,773	83.6	1,101	85.4	1,212	82.2	8,629	79.6
1979	1,144	67.3	2,162	79.1	2,484	84.1	1,024	84.4	1,132	83.2	7,946	79.8
1978	994	67.0	1,871	77.3	2,160	83.9	952	84.1	1,045	81.8	7,022	79.0
1977	928	68.3	1,724	76.9	1,890	83.2	800	86.3	1,013	83.2	6,355	79.3
Female												
1987	154	61.1	338	76.6	530	79.5	251	78.7	160	70.2	1,433	75.1
1986	169	58.9	355	76.3	457	79.2	191	78.3	150	67.6	1,322	73.7
1985	137	62.6	330	75.5	382	75.2	209	79.2	149	67.7	1,207	73.2
1984	142	58.2	353	75.9	398	79.6	204	81.3	153	73.9	1,250	75.0
1983	155	69.8	275	78.1	337	83.6	183	85.5	131	78.4	1,081	79.6
1982	157	68.9	275	77.9	316	81.2	174	78.4	136	71.2	1,058	76.5
1981	195	69.9	291	77.8	327	80.0	180	83.3	125	69.8	1,118	76.7
1980	169	70.4	288	77.0	316	81.0	172	88.7	183	85.5	1,128	79.9
1979	147	61.5	253	78.3	255	80.4	134	82.2	131	81.4	920	76.5
1978	123	65.8	207	77.8	210	78.4	109	81.3	127	77.4	776	76.2
1977	121	65.1	194	73.8	199	81.9	110	71.9	131	76.2	755	74.2
Both Sexes												
1987	1,081	63.3	2,642	75.2	4,159	81.7	1,880	84.0	1,340	77.0	11,102	77.7
1986	1,237	65.0	2,932	76.3	4,027	81.8	1,694	83.1	1,306	74.0	11,196	77.4
1985	1,024	65.7	2,699	77.6	3,468	82.0	1,547	83.1	1,231	76.7	9,959	78.3
1984	1,104	65.8	2,703	76.5	3,324	81.9	1,476	83.8	1,240	77.7	9,847	78.0
1983	1,076	70.6	2,422	78.8	3,016	83.3	1,371	85.6	1,130	79.5	9,015	80.2
1982	1,216	72.1	2,487	79.1	2,995	83.5	1,269	83.4	1,185	78.6	9,152	80.0
1981	1,302	71.4	2,608	78.6	3,156	83.1	1,360	85.6	1,295	79.5	9,721	80.0
1980	1,424	70.4	2,576	76.8	3,089	83.4	1,273	85.8	1,395	82.6	9,757	79.6
1979	1,291	66.5	2,415	79.0	2,739	83.8	1,158	84.2	1,263	83.0	8,866	79.4
1978	1,117	66.9	2,078	77.4	2,370	83.4	1,061	83.8	1,172	81.3	7,798	78.7
1977	1,049	67.9	1,918	76.6	2,089	83.1	910	84.3	1,144	82.3	7,110	78.7

Table 9. Mean Blood Alcohol Content of Drivers, Pedestrians, and Pedacyclists Involved in Fatal Traffic Crashes with Positive Blood Alcohol Test Results: 1977-1987

Year/Person's Role	Blood Alcohol Content		
	N	Mean	Standard Deviation
1987			
Driver	14,344	0.16	0.08
Pedestrian	1,958	0.20	0.10
Pedacyclist	117	0.14	0.10
Total	16,419	0.17	0.09
1986			
Driver	14,530	0.16	0.08
Pedestrian	2,013	0.19	0.10
Pedacyclist	87	0.13	0.09
Total	16,630	0.16	0.08
1985			
Driver	12,771	0.16	0.08
Pedestrian	1,932	0.19	0.10
Pedacyclist	76	0.15	0.09
Total	14,779	0.16	0.08
1984			
Driver	12,578	0.16	0.08
Pedestrian	1,852	0.19	0.10
Pedacyclist	63	0.14	0.10
Total	14,587	0.17	0.08
1983			
Driver	11,273	0.17	0.08
Pedestrian	1,571	0.20	0.10
Pedacyclist	51	0.13	0.09
Total	12,895	0.17	0.08
1982			
Driver	11,479	0.17	0.08
Pedestrian	1,697	0.20	0.10
Pedacyclist	54	0.13	0.08
Total	13,230	0.17	0.08
1981			
Driver	12,191	0.17	0.08
Pedestrian	1,598	0.19	0.10
Pedacyclist	41	0.15	0.12
Total	13 830	0.17	0.08

Table 9. Mean Blood Alcohol Content of Drivers, Pedestrians, and Pedacyclists Involved in Fatal Traffic Crashes with Positive Blood Alcohol Test Results: 1977-1987 (Continued)

Year/Person's Role	Blood Alcohol Content		
	N	Mean	Standard Deviation
1980			
Driver	12,310	0.16	0.08
Pedestrian	1,546	0.19	0.10
Pedacyclist	41	0.16	0.09
Total	13,897	0.17	0.08
1979			
Driver	11,212	0.16	0.08
Pedestrian	1,451	0.19	0.10
Pedacyclist	36	0.13	0.08
Total	12,699	0.17	0.08
1978			
Driver	9,944	0.16	0.08
Pedestrian	1,304	0.19	0.09
Pedacyclist	30	0.11	0.10
Total	11,278	0.16	0.08
1977			
Driver	9,080	0.16	0.08
Pedestrian	1,202	0.19	0.09
Pedacyclist	29	0.12	0.08
Total	10,311	0.17	0.08

Table 10. Alcohol-Related Traffic Crash Fatalities Associated with Drivers Aged 16 to 24 Years, According to Person's Role: 1977-1987

	Person's Role[1]							
	Driver		Passenger		Nonoccupant		All	
Year	N	Percent	N	Percent	N	Percent	N	Percent
1987	4,832	61.7	2,600	33.2	392	5.0	7,827	100.0
1986	5,273	62.2	2,802	33.0	403	4.7	8,483	100.0
1985	4,706	63.1	2,360	31.6	396	5.3	7,462	100.0
1984	5,075	62.4	2,636	32.4	418	5.1	8,132	100.0
1983	4,724	60.7	2,608	33.5	452	5.8	7,784	100.0
1982	5,088	60.5	2,787	33.1	531	6.3	8,409	100.0
1981	5,652	61.1	3,046	32.9	545	5.9	9,246	100.0
1980	6,047	61.0	3,319	33.5	545	5.5	9,918	100.0
1979	5,741	59.3	3,373	34.8	563	5.8	9,683	100.0
1978	5,156	59.2	3,058	35.1	490	5.7	8,704	100.0
1977	4,911	58.4	3,041	36.2	449	5.3	8,403	100.0

[1] There were 2, 6, 7, 3, 3, 3, 5 and 3 cases of unknown person's role for the years 1977, 1979, 1980, 1981, 1982, 1984, 1986 and 1987, respectively.

Table 11. Alcohol-Related Traffic Fatalities, According to Age: 1977-1987

	Age													
	Under 16		16-24		25-44		45-64		Over 64		Unknown		All Ages	
Year	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
1987	829	4.2	7,027	35.3	8,766	44.0	2,313	11.6	940	4.7	43	0.2	19,918	100.0
1986	842	4.2	7,685	38.4	8,372	41.8	2,202	11.0	864	4.3	73	0.4	20,038	100.0
1985	742	4.1	6,823	37.8	7,431	41.2	2,141	11.9	824	4.6	79	0.4	18,040	100.0
1984	727	3.9	7,359	39.6	7,427	40.0	2,176	11.7	831	4.5	64	0.3	18,584	100.0
1983	731	4.1	7,064	39.6	7,139	40.0	2,138	12.0	751	4.2	38	0.2	17,861	100.0
1982	794	4.3	7,629	41.0	7,123	38.3	2,244	12.1	768	4.1	64	0.3	18,622	100.0
1981	844	4.1	8,294	40.1	7,923	38.4	2,667	12.9	880	4.3	54	0.3	20,662	100.0
1980	955	4.5	8,941	42.4	7,637	36.2	2,676	12.7	834	4.0	71	0.3	21,114	100.0
1979	972	4.8	8,624	42.6	7,159	35.4	2,597	12.8	819	4.1	70	0.4	20,241	100.0
1978	926	5.0	7,884	42.9	6,290	34.3	2,416	13.2	773	4.2	73	0.4	18,362	100.0
1977	963	5.5	7,528	43.2	5,642	32.4	2,470	14.2	742	4.3	69	0.4	17,414	100.0

Table 12. Fatalities Among Young[1] Drivers and Young Drinking Drivers: 1977-1987

Year	Fatalities							
	All Drivers				Drinking Drivers			
	All Ages		Young		All Ages		Young	
	N	Percent	N	Percent of All Ages	N	Percent	N	Percent of All Ages
1987	26,831	100.0	8,363	31.2	12,008	100.0	4,125	34.4
1986	26,629	100.0	8,712	32.7	12,018	100.0	4,532	37.7
1985	25,337	100.0	8,321	32.8	10,915	100.0	4,072	37.3
1984	25,582	100.0	8,629	33.7	11,145	100.0	4,345	39.1
1983	24,135	100.0	8,017	33.2	10,393	100.0	3,992	38.4
1982	24,617	100.0	8,512	34.6	10,655	100.0	4,254	39.9
1981	28,182	100.0	9,764	34.6	12,056	100.0	4,702	39.0
1980	28,807	100.0	10,565	36.7	12,130	100.0	5,040	41.5
1979	28,859	100.0	10,861	37.6	11,402	100.0	4,787	42.0
1978	28,283	100.0	10,819	38.3	10,221	100.0	4,262	41.7
1977	26,088	100.0	10,058	38.6	9,572	100.0	4,133	43.2

[1] Persons aged 16 to 24 years.

Table 13. Peak Blood Alcohol Concentration Percentages[1], According to Age Group: 1977-1987

	BAC Level[2]						
Year/Age	0.02	0.07	0.12	0.17	0.22	0.27	0.30+
1987							
16-19	14.4	22.4	25.2	23.3	10.8	2.4	1.6
20-24	8.9	16.0	24.2	25.5	17.0	6.1	2.4
25-34	6.8	11.5	17.3	24.8	22.1	12.0	5.5
35-44	7.2	8.8	15.7	24.0	20.8	14.2	9.3
45+	12.9	10.1	14.7	20.1	20.2	12.9	9.2
1986							
16-19	12.7	22.3	28.1	21.9	10.1	3.6	1.3
20-24	8.8	14.9	22.6	26.5	17.4	7.6	2.3
25-34	6.9	11.2	18.4	25.3	21.5	11.3	5.4
35-44	6.7	10.2	16.6	22.2	22.7	13.1	8.5
45+	14.6	11.4	15.1	18.9	18.8	12.2	9.0
1985							
16-19	14.3	20.0	26.9	22.5	12.0	3.2	1.1
20-24	7.8	14.6	23.5	27.6	16.8	7.0	2.7
25-34	7.0	11.1	19.2	25.1	20.9	11.2	5.6
35-44	7.0	9.9	16.1	22.6	22.4	13.4	8.7
45+	12.8	10.5	15.2	20.8	19.1	12.8	8.8
1984							
16-19	13.3	20.8	25.7	22.8	11.9	4.7	1.0
20-24	8.0	15.5	22.1	26.2	18.3	7.1	2.9
25-34	6.7	11.3	18.3	25.2	22.6	10.3	5.6
35-44	6.7	9.5	17.0	24.4	21.0	14.0	7.4
45+	10.8	11.4	14.1	22.5	19.8	13.1	8.3
1983							
16-19	9.7	19.8	26.8	24.1	14.2	4.4	1.2
20-24	7.8	13.4	22.1	27.6	18.2	8.0	3.0
25-34	6.5	10.1	18.8	25.3	21.8	11.7	5.7
35-44	5.8	8.4	17.7	23.9	21.4	14.6	8.2
45+	10.2	10.3	15.0	19.5	22.2	13.6	9.3
1982							
16-19	9.5	18.4	27.0	23.8	14.3	5.0	2.0
20-24	7.5	13.4	23.1	25.5	18.9	8.1	3.5
25-34	6.7	9.8	18.4	25.4	22.2	12.1	5.3
35-44	7.0	9.6	16.0	22.1	22.7	13.1	9.5
45+	9.8	11.6	14.1	20.0	21.6	13.3	9.8

See footnotes at end of table

Table 13. Peak Blood Alcohol Concentration Percentages[1], According to Age Group: 1977-1987 (continued)

	BAC Level[2]						
Year/Age	0.02	0.07	0.12	0.17	0.22	0.27	0.30+
1981							
16-19	10.4	18.2	28.2	25.2	12.8	4.0	1.3
20-24	7.2	14.2	22.4	26.8	19.1	7.2	3.1
25-34	6.2	10.7	17.3	25.1	22.3	12.1	6.3
35-44	5.5	8.9	14.8	23.5	23.4	13.7	10.3
45+	10.0	10.5	14.0	19.9	23.0	13.6	9.0
1980							
16-19	10.4	19.2	26.2	24.5	13.6	4.1	2.0
20-24	8.6	14.6	23.3	25.3	17.6	7.6	3.0
25-34	6.8	9.8	19.1	25.0	21.8	11.7	5.8
35-44	6.8	7.4	15.4	23.8	23.1	14.1	9.4
45+	7.3	10.1	14.4	21.1	21.4	14.7	11.0
1979							
16-19	11.3	22.1	26.6	22.6	11.9	3.8	1.7
20-24	6.5	14.5	24.0	26.1	18.8	7.2	3.0
25-34	5.7	10.5	20.6	26.7	20.4	11.0	5.1
35-44	7.0	8.9	13.4	22.8	23.6	14.6	9.8
45+	8.3	8.7	14.3	20.7	24.1	14.7	9.3
1978							
16-19	12.9	20.2	27.8	22.1	12.6	3.2	1.3
20-24	8.3	14.3	23.8	25.0	19.1	7.0	2.5
25-34	6.6	10.0	19.7	26.2	20.7	11.1	5.8
35-44	6.5	9.7	14.5	21.1	23.4	15.5	9.4
45+	8.4	10.3	14.2	20.6	21.8	14.4	10.4
1977							
16-19	12.2	19.8	29.5	22.5	10.7	3.6	1.6
20-24	8.1	15.3	22.6	26.2	18.8	6.1	3.0
25-34	6.8	10.1	19.0	23.9	21.5	12.2	6.6
35-44	6.8	9.0	16.7	22.8	21.6	14.6	8.6
45+	9.4	8.3	16.5	20.0	21.4	14.5	10.0

1 Percentage is computed only for those drivers within an age group having positive BAC levels.
2 BAC level represents the midpoint of a range.