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NIAAA

National Institute on Alcohol Abuse and Alcoholism

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

SURVEILLANCE REPORT #30

**TRENDS IN ALCOHOL-RELATED FATAL
TRAFFIC CRASHES, UNITED STATES, 1979-92**

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HIGHLIGHTS

This is the ninth annual surveillance report from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) on trends in alcohol-related fatal traffic crashes. Data in this report were compiled from sources provided by the National Highway Traffic Safety Administration (NHTSA), the Federal Highway Administration, and the U.S. Bureau of the Census. The following are highlights of trends in alcohol-related fatal traffic crashes for the 14-year period from 1979 through 1992:

General Trends and Fatality Rates

- In 1992 the proportion of alcohol-related traffic crash deaths reached a 14-year low of 37.4 percent.
- Between 1979 and 1992 alcohol-related traffic crash fatalities per 100 million vehicle miles traveled (VMT), 100,000 population, 100,000 registered vehicles, and 100,000 licensed drivers decreased 50, 37, 40, and 40 percent, respectively.
- The number of years of potential life lost (YPLL) attributable to alcohol-related traffic crashes declined 34 percent for males and 28 percent for females over the 14-year period.
- Between 1979 and 1992 the number of male drivers involved in alcohol-related fatal crashes decreased 30 percent; for females there was a 4-percent increase.

Blood Alcohol Concentration (BAC) Testing and Results

- In 1992 the national rate of BAC testing of drivers killed in traffic crashes remained stable at 73 percent.
- The mean BAC score for drivers involved in fatal crashes remained fairly constant across the 14-year period (0.16 or 0.17 grams per deciliter (g/dl) percent).

Young Drinking Drivers

- Between 1991 and 1992 deaths associated with young drinking drivers (i.e., ages 16 to 24) decreased 16 percent. This represents a 51-percent decrease from the 14-year high of 9,918 deaths in 1980.
- In 1992 a total of 4,463 young people were killed in alcohol-related traffic crashes, down 17 and 48 percent from the 1991 and 1979 totals, respectively.
- In 1992, 28 percent of drinking driver fatalities were among persons ages 16 to 24. This percentage represents a drop of 10 percent from 1991 and 33 percent from 1979.
- Drivers 16 to 19 years of age had a peak BAC level of 0.12 g/dl percent compared with 0.17 g/dl percent for drivers 20 to 44 years of age and 0.22 g/dl percent for drivers 45 years of age and older.

INTRODUCTION

This surveillance report on alcohol-related¹ fatal traffic crashes is one in a series of surveillance reports, the purpose of which is to provide useful data to researchers, planners, policymakers, and other professionals interested in alcohol abuse and its associated illnesses and mortality. It is hoped that these documents, prepared by NIAAA'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. This ninth annual surveillance report on alcohol-related traffic fatalities updates previous surveillance reports.

Fatal traffic crashes are the leading cause of death for persons under 40 years of age (National Center for Health Statistics 1993). Between 1979 and 1992, inclusive, an average of approximately 45,000 people per year died

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

in traffic crashes. Alcohol is estimated to be involved in as many as 45 percent of these deaths (National Highway Traffic Safety Administration 1994).

The 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 Nation's drinking and driving problem. During the past 11 years, AEDS has reported periodically on various aspects of alcohol-related traffic fatalities (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 1986; Zobeck et al. 1986, 1990, 1992, 1993, 1994).

Sources and Limitations of Data

The major data source for this report is the Department of Transportation's Fatal Accident Reporting System (FARS). FARS contains data on all traffic crashes within the United States that involve a motor vehicle traveling on a trafficway customarily open to the public and that result in the death of a vehicle occupant or nonmotorist within 30 days of the crash. The system is operated by NHTSA in cooperation with the States. FARS collects detailed data on the conditions of the crash, the vehicles involved, and the driver(s) and other person(s) involved. These data are obtained from each State's existing documents (e.g., police accident reports, death certificates, and hospital medical records).

FARS records alcohol involvement using the following variables:

- *Officer's judgment.*—The judgment of the investigating officer as to whether alcohol was present. This variable was added in 1977.
- *BAC test.*—A finding from any one of several chemical tests that measure the amount of alcohol in the blood. This variable was also added in 1977; starting in 1978, coders were instructed to mark the officer's judgment variable "yes" if the BAC test is positive.
- *Citation for driving under the influence (DUI).*—If a driver is cited, coders are

instructed to mark the officer's judgment variable "yes." This variable was added in 1982.

For this report, a traffic crash is considered to be alcohol related if either the officer's judgment variable or the DUI variable is coded "yes" or the BAC test is positive for at least one driver involved in the crash. A fatality is considered to be alcohol related if the death occurs as the result of an alcohol-related crash; thus, whether the victim was drinking is irrelevant unless he or she was the driver.

In contrast to the definition used in this report, NHTSA defines a traffic crash as alcohol-related if either a driver or a nonmotorist has a measurable or estimated BAC of 0.01 g/dl percent or above. NHTSA uses a statistical procedure to estimate unknown BAC values based on data for drivers with known BAC values (Klein 1986a, b). Thus, the methodology in this report for determining alcohol involvement in fatal crashes differs from that used by NHTSA in three respects: (1) All three alcohol involvement variables are used to define a crash as alcohol-related; (2) BAC test results from drivers only are used to flag alcohol involvement; and (3) no estimation procedures are used for unknown BAC values. Recent estimates produced by NHTSA indicate that alcohol involvement in fatal traffic crashes has decreased from 48 percent in 1991 to 45 percent in 1992 (NHTSA 1994).

Although FARS began in 1975, it included no alcohol information before the 1977 introduction of the officer's judgment and BAC test variables. This report excludes data from 1977 and 1978 because the alcohol variables were new and may have been under-reported.

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 more than 90 percent of the time [Mercer 1985]);

- BAC tests are not administered consistently and routinely across jurisdictions; and
- Citations for DUI are rarely given. (Only about 5 percent of all drivers involved in fatal crashes each year are charged with DUI and are reported to FARS.)

The first section of this report presents several rates. Denominator data for the rates are taken from the following sources:

- Population estimates.—Bureau of the Census estimates of the U.S. population as of July 1 of each year (Bureau of the Census 1979–1992).
- Registered vehicles, licensed drivers, and vehicle miles traveled.—Federal Highway Administration, for each year (Federal Highway Administration 1980–1992).

Organization and Methodology

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

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

Data in this report are organized under the above topic headings. Fatality rates, frequencies, and percentages are presented in graphic and tabular form. Graphics are incorporated into the text, while all tables are collected into an appendix. It is not within the scope of this report to interpret exhaustively every aspect of the data presented; rather, results are highlighted. The reader is encouraged to further analyze the data to identify observations or trends not discussed in this report.

GENERAL TRENDS AND FATALITY RATES

This section first presents trends in numbers of traffic crashes, fatalities, and alcohol-related fatalities in order to indicate the magnitude of the problem of drinking and driving. Second, trends in four rates—traffic deaths per 100 million VMT, per 100,000 population, per 100,000 registered vehicles, and per 100,000 licensed drivers—are presented to put the raw

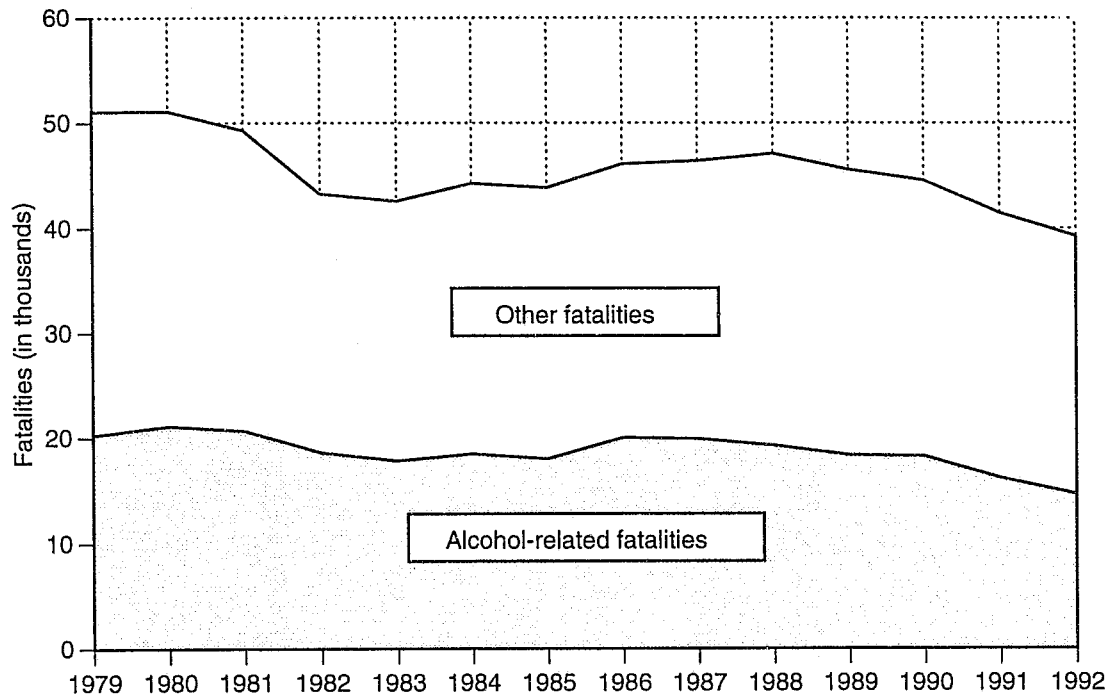
frequencies into perspective. Third, data on YPLL due to alcohol-related traffic crashes are presented. Fourth, the decedent's role in the crash (i.e., driver, passenger, or nonoccupant) is examined. Finally, the role of the driver is examined in more detail to determine the association of age and sex with involvement in traffic crashes.

Trends in the Number of Traffic Crash Deaths

In 1992, 37.4 percent of traffic crash deaths were alcohol related, a drop of 4.3 percent and 5.6 percent from the 1991 and 1979 proportions, respectively (see table 1 in the Appendix). This proportion had reached a 14-year high of 43.5 percent in 1986. While the proportion of deaths in 1992 that were alcohol related is similar to the proportion in 1979, there were 11,834 (23 percent) fewer traffic crash deaths and 5,561 (27 percent) fewer alcohol-related traffic crash deaths in 1992 than in 1979.

Figure 1 presents trends in both alcohol-related and other traffic crash fatalities. From 1979 to 1983, nonalcohol-related traffic crash fatalities declined slightly; this trend was parallel to the trend in alcohol-related traffic crash fatalities, except for a small increase of 4 percent from 1979 to 1980. In 1984 traffic crash fatalities increased for both classes, followed in 1985 by a slight decrease in alcohol-related traffic crash fatalities. 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. The year 1987 showed only slight changes from 1986: nonalcohol-related deaths increased 2 percent, while alcohol-related deaths decreased 1 percent. Again in 1988, the number of nonalcohol-related traffic crash fatalities increased while the number of alcohol-related fatalities decreased. Over the 3 years from 1988 to 1990, both totals decreased gradually (6 percent for nonalcohol-related deaths and 5 percent for alcohol-related deaths). In 1991 there was a larger 1-year drop for both nonalcohol-related (4 percent) and alcohol-related (11 percent) deaths than over the prior

Figure 1. Alcohol-related and other traffic crash fatalities, United States, 1979-92.



3 years. In 1992 alcohol-related and nonalcohol-related traffic crash fatalities dropped 10 and 3 percent, respectively.

Trends in the Rates of Traffic Crash Deaths

The probability of having or being involved in a traffic accident depends on several factors (e.g., the amount of time or the number of miles a person spends on the road, vehicle speed, or type of vehicle driven). Four associated "risk factors"—VMT, the number of people in the population, the number of registered vehicles, and the number of licensed drivers—are frequently used to express traffic crash fatalities as rates per these denominators, which places the raw frequencies within a context of associated risk factors, each of which is subject to change over the years. Figures 2a-2c present the various rates for all fatalities and alcohol-related fatalities, and table 2 in the Appendix presents the data for the four rates for both kinds of fatality.

Table 2 shows that, between 1979 and 1992, total traffic crash fatality rates decreased 48, 32, 38, and 36 percent per 100 million

VMT, per 100,000 population, per 100,000 registered vehicles, and per 100,000 licensed drivers, respectively. Corresponding decreases in these rates for alcohol-related fatalities (50, 37, 40, and 40 percent per 100 million VMT, per 100,000 population, per 100,000 registered vehicles, and per 100,000 licensed drivers, respectively) likewise show a decrease over the 14-year period. The decreases indicated by the raw frequencies for total traffic crash fatalities (23 percent) and alcohol-related traffic crash fatalities (27 percent) tend to obscure the fact that traffic crash fatalities are decreasing even as highways are becoming more crowded. However, the rates do mask the absolute number of traffic deaths.

Trends in Years of Potential Life Lost

YPLL is a measure used for assessing the human cost of a particular cause of death. It is calculated by subtracting the age at death from age 65 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

Figure 2a. Total and alcohol-related traffic fatality rates per 100 million vehicle miles traveled (VMT), United States, 1979-92.

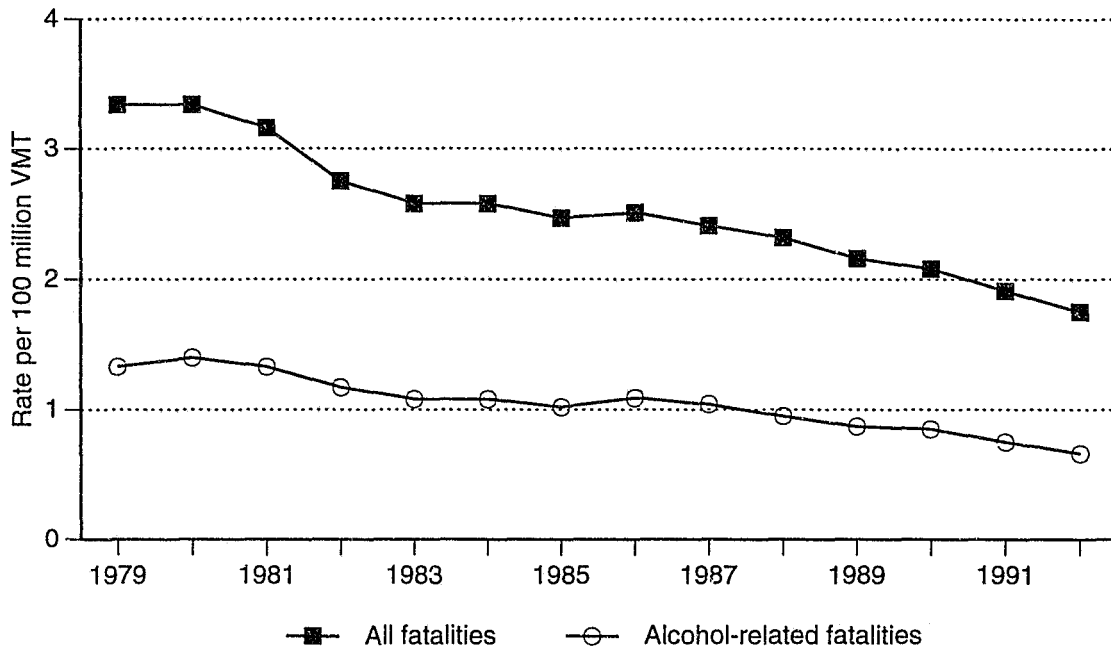


Figure 2b. Traffic fatality rates per 100,000 population, registered vehicles, and licensed drivers, United States, 1979-92.

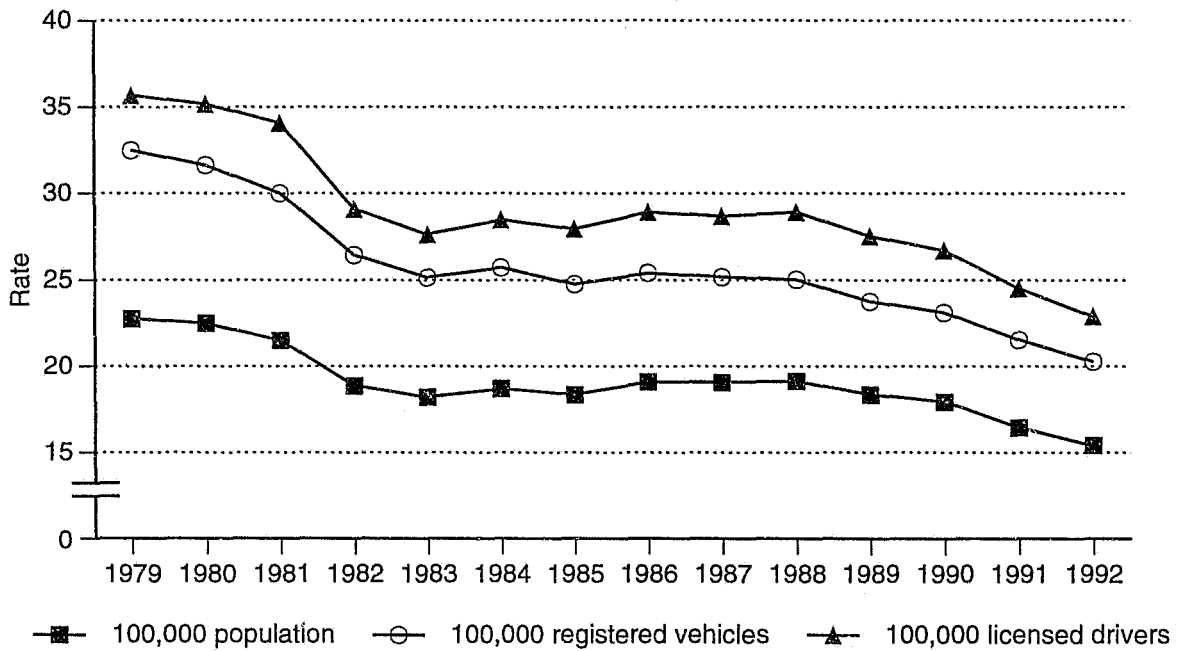
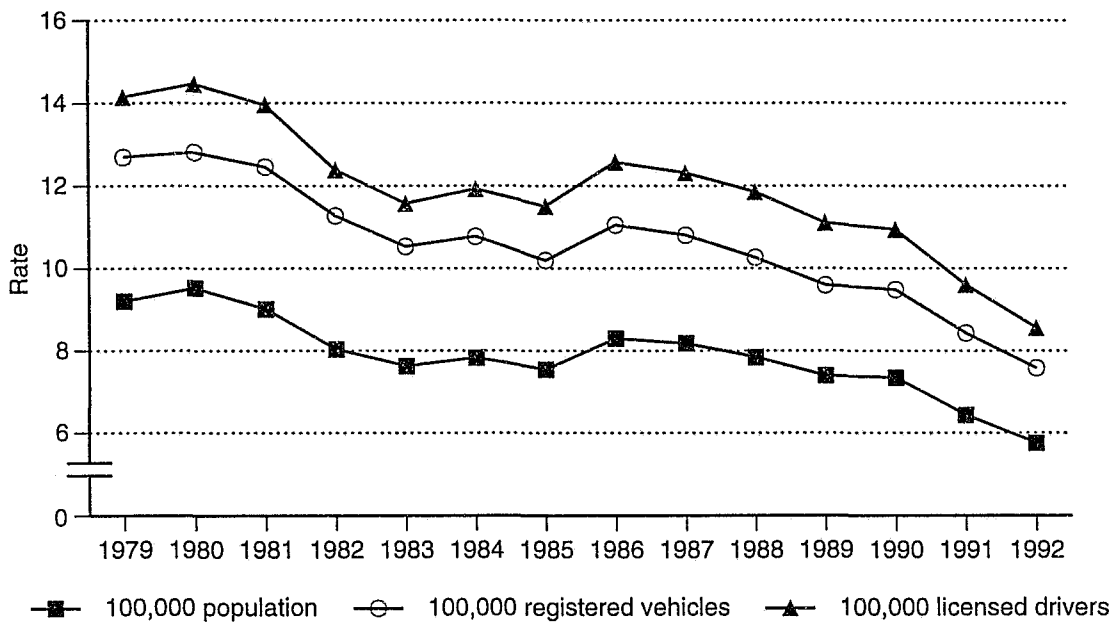


Figure 2c. Alcohol-related traffic fatality rates per 100,000 population, registered vehicles, and licensed drivers, United States, 1979-92.



affect youth, such as alcohol-related traffic crashes (e.g., Bertolucci et al. 1985; Centers for Disease Control 1988a, b; McDonnell and Maynard 1985; Romeder and McWhinni. 1977). Data for YPLL are presented in this report for the total number, mean, and rate per 100,000 population under age 65 for all traffic crash deaths and for alcohol-related traffic crash deaths (see table 3 in the Appendix).

In 1992 YPLL due to all traffic crashes totaled 1,114,696, representing 788,396 years among males and 326,300 years among females. The figures for men and women represent a 36- and 21-percent decrease, respectively, in YPLL due to traffic crashes from the 1979 totals and an 8- and 6-percent decrease, respectively, from the 1991 totals. In 1992, 46 percent of the YPLL among males and 34 percent among females was attributable to alcohol-related crashes. (These 1992 totals represent a 34- and 28-percent decrease, respectively, from 1979 totals.) The proportion of YPLL that is alcohol-related has increased 1.5 percentage points and decreased

3 percentage points for males and females, respectively, between 1979 and 1992.

As in 1991, the difference in trends among males for YPLL between all traffic crash deaths and alcohol-related traffic crash deaths was apparent in the rate of YPLL per 100,000 population under age 65. In 1992 this rate for all deaths declined 45 percent among males since 1979, while for alcohol-related deaths it declined 43 percent. Thus, there was, for men, a greater decline in YPLL for all traffic crash deaths than for alcohol-related traffic crash deaths. The opposite was true for women, whose rates for all traffic crash deaths and for alcohol-related traffic crash deaths declined 30 and 36 percent, respectively, since 1979.

Despite fluctuations in the number and rate of alcohol-related YPLL, the mean YPLL remained relatively constant for both sexes over the 14 years studied, with the average YPLL for each death slightly higher for alcohol-related traffic crash deaths.

Decedent'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 nonoccupant²) in the crash (see table 4 in the Appendix). In 1992, 44 percent of all driver deaths, 38 percent of all passenger deaths, and 13 percent of all nonoccupant deaths were alcohol related.

Further analysis of decedents' roles in crashes indicates that drivers were more likely to die in either alcohol- or nonalcohol-related crashes than those in other roles, but drivers constituted a larger proportion of fatalities in alcohol-related crashes than they did in nonalcohol-related crashes (see figures 3a and 3b). Passenger deaths were almost as likely to occur in nonalcohol-related traffic crashes as in alcohol-related crashes; conversely, nonoccupant deaths were much more likely to occur in nonalcohol-related traffic crashes.

More detailed data on drivers show that male drivers involved in fatal crashes were more likely to have been drinking than female drivers and that male drivers were far more likely to be involved in alcohol-related fatal crashes than female drivers (see table 5 in the Appendix). Data in table 5 also show that the number of drivers involved in all fatal crashes and in alcohol-related crashes decreased 19 and 27 percent, respectively, from 1979 to 1992. During this period, the number of alcohol-involved male drivers also decreased 30 percent (from 16,540 to 11,533), while the number of alcohol-involved female drivers increased 4 percent (from 1,908 to 1,982). In comparison, the number of alcohol-involved female drivers in 1991 increased 9 percent from 1979.

² The nonoccupant category includes the more detailed categories of pedestrian, pedalcyclist, 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

This section presents the rates of BAC testing across State jurisdictions and by driver age and sex. BAC test results focusing on drivers with BAC scores of 0.10 g/dl percent³ or more are examined, and mean BAC test scores according to role (i.e., driver, pedestrian, or pedalcyclist) are shown.

Rates of BAC Testing

As indicated in table 6 (see Appendix), BAC tests were not administered consistently across States. In 1979 only 11 States tested their dead drivers 80 percent or more of the time, with a nationwide rate of 44 percent. Furthermore, rates of testing among States varied widely, from 0 percent for West Virginia to 88 percent for the District of Columbia and Oregon. In 1992, 23 States tested their dead drivers 80 percent or more of the time, with a nationwide rate of 73 percent. As in 1979, there was a wide range in testing rates among States, with Alabama having the lowest rate (33 percent) and Rhode Island the highest (96 percent). The testing rates have improved only marginally since 1991, when the lowest rate of testing dead drivers was 31 percent (Kansas) and the highest rate was 94 percent (Oregon). The national rate of testing, however, has remained unchanged since 1991.

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 of intoxication in some jurisdictions). In 1979 no State tested more than 80 percent of its surviving drivers. The rate ranged from 0 percent in North Carolina, North Dakota, and West Virginia to 70 percent in Delaware, with a nationwide rate of 12 percent. In 1992 the national rate of BAC testing of surviving drivers increased to 24 percent, up substantially from the national

³ BAC is expressed as the weight of the amount of alcohol in a specified volume of blood (e.g., 0.10 grams of ethanol per deciliter of blood).

Figure 3a. Decedent's role in non-alcohol-related traffic fatalities, United States, 1992.

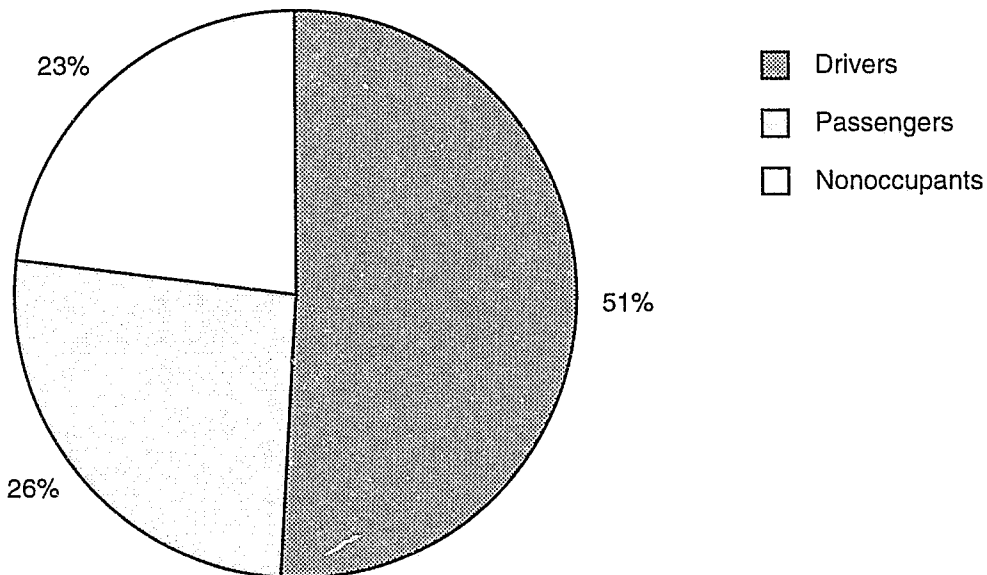
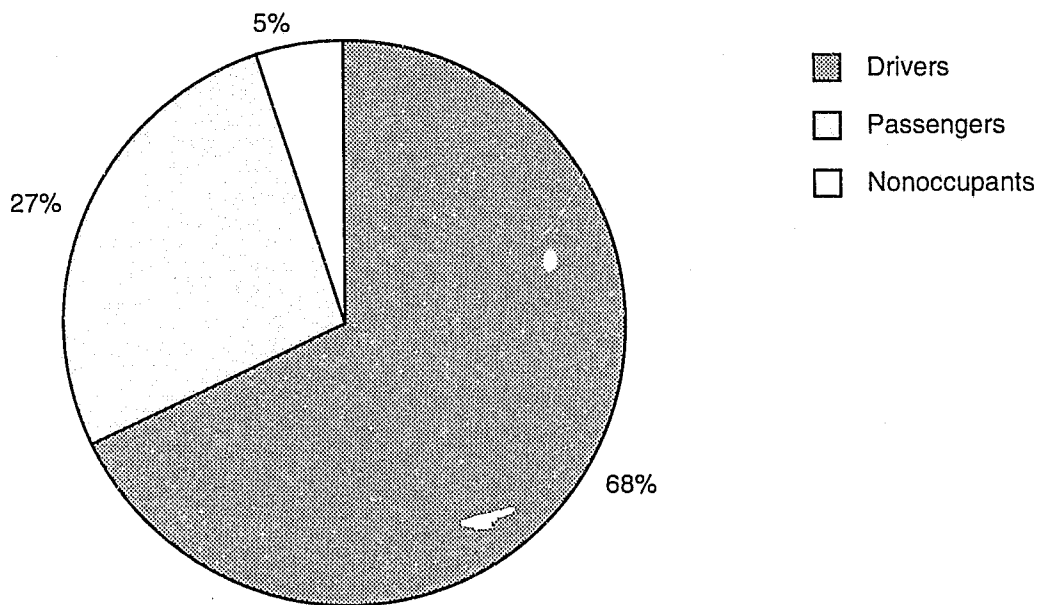


Figure 3b. Decedent's role in alcohol-related traffic fatalities, United States, 1992.



rate in 1979, but virtually unchanged from 1991. The rates of testing surviving drivers also varied considerably, from 0 percent in North Carolina to 73 percent in Nebraska.

As of January 1, 1992, 32 States had enacted legislation requiring BAC chemical testing of all drivers killed in traffic crashes (Department of Transportation 1992). In 1992, 13 of these States⁴ tested fewer than 80 percent of these drivers. Interestingly, the two States with the highest rates of BAC testing of their dead drivers (Rhode Island and Maine) do not have laws requiring these tests.

The increase in the administration of BAC tests also is shown in table 7, which illustrates the number and rates of testing according to sex, age, and injury severity. Testing of deceased male and female drivers shows an increase since 1979 of approximately 30 percent across all age groups (see figures 4a and 4b), with fairly consistent rates across all age groups, except the age 45 and older group, which has the lowest rate of testing (68 and 61 percent for males and females, respectively).

Since 1979 the increase in the rates of BAC testing of surviving drivers is seen across all age groups (see figures 5a and 5b), but the increase is less substantial and uniform than for dead drivers. Rates of testing both dead and surviving drivers in 1992 have changed little since 1991.

Test Results

In most States a BAC test result of 0.10 g/dl percent or more is considered evidence of intoxication. In 1992 approximately 79 percent of drivers with positive BAC results were legally intoxicated at the time of the crash (see table 8). The percentages varied across age groups (as much as 17 and 23 percentage points for males and females, respectively), with those 25 to 44 years of age more likely to have BAC results of 0.10 percent or higher. Generally,

⁴ These States are Kansas, Louisiana, Michigan, Mississippi, Missouri, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, and South Carolina.

male drivers were more likely than female drivers to be legally intoxicated at the time of the crash, except for those in the 35- to 44-year-old age group. Percentages for males within all age groups have remained fairly stable over the 14-year study period, but percentages for females within certain age groups (e.g., the 35- to 44-year-old age group) have varied considerably.

Another indication of the level of intoxication among drinking drivers is provided by an examination of their mean BAC scores (see table 9). The mean BAC score for drivers remained at 0.16 or 0.17 g/dl percent over the 14-year period. Even higher than the driver mean is the mean BAC score for pedestrians, which held steady at 0.19 to 0.20 g/dl percent.

YOUNG DRINKING DRIVERS

The problem of young drinking drivers continues to be of interest to AEDS (Aitken and Zobeck 1985; Lowman et al. 1983; Malin et al. 1982; Malin et al. 1985a, b; Verdugo et al. 1983). This section reexamines and updates several issues and trends discussed in prior AEDS analyses.

Table 10 in the Appendix indicates that there were 4,878 deaths associated with young (i.e., ages 16 to 24) drinking drivers in 1992. This total is down 16 percent from the 1991 total of 5,788 and is the sixth annual decline in a row since 1986. The 1992 total also is a decrease of 51 percent from the 14-year high of 9,918 in 1980.

While table 10 presents the number of people killed in crashes involving young drinking drivers, table 11 presents data on the number of young people that died in alcohol-related traffic crashes each year. In 1992 alcohol-related deaths of all ages (14,684) decreased 27 percent from the 1979 total of 20,241. Of these 14,684 alcohol-related traffic crash fatalities, 4,463 involved young persons ages 16 to 24. This total is down 48 percent from the 1979 total of 8,624 and down 17 percent from the 1991 total of 5,363. Comparatively, alcohol-related traffic deaths

Figure 4a. Percentage of male drivers killed in fatal traffic crashes and given a BAC test, according to age, United States, 1979 and 1992.

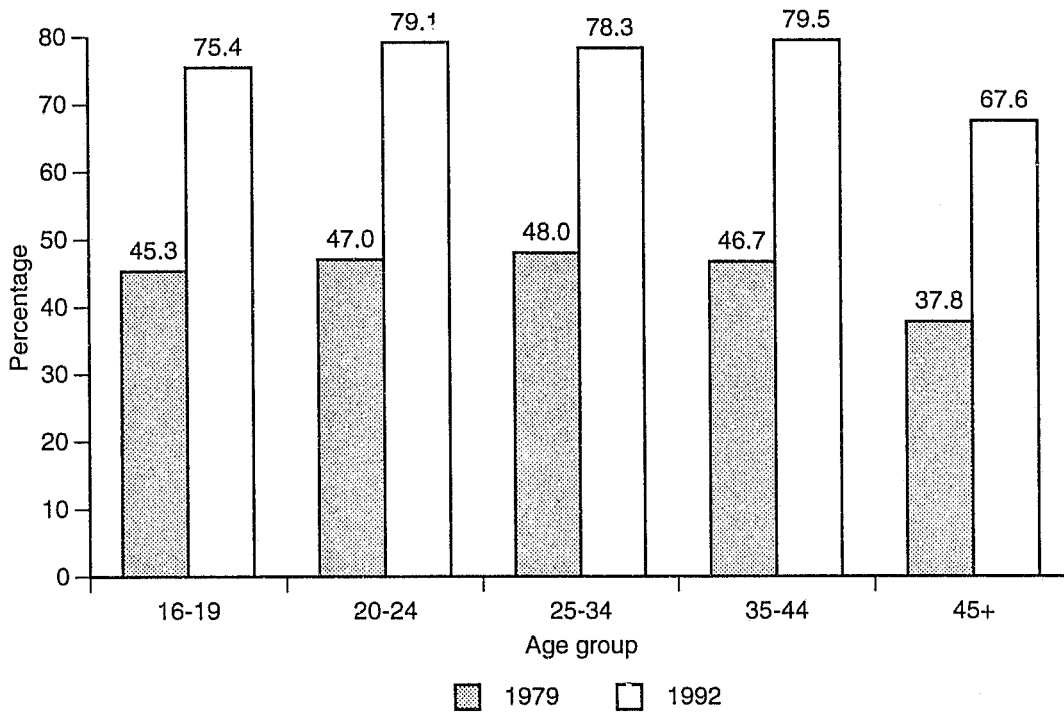


Figure 4b. Percentage of female drivers killed in fatal traffic crashes and given a BAC test, according to age, United States, 1979 and 1992.

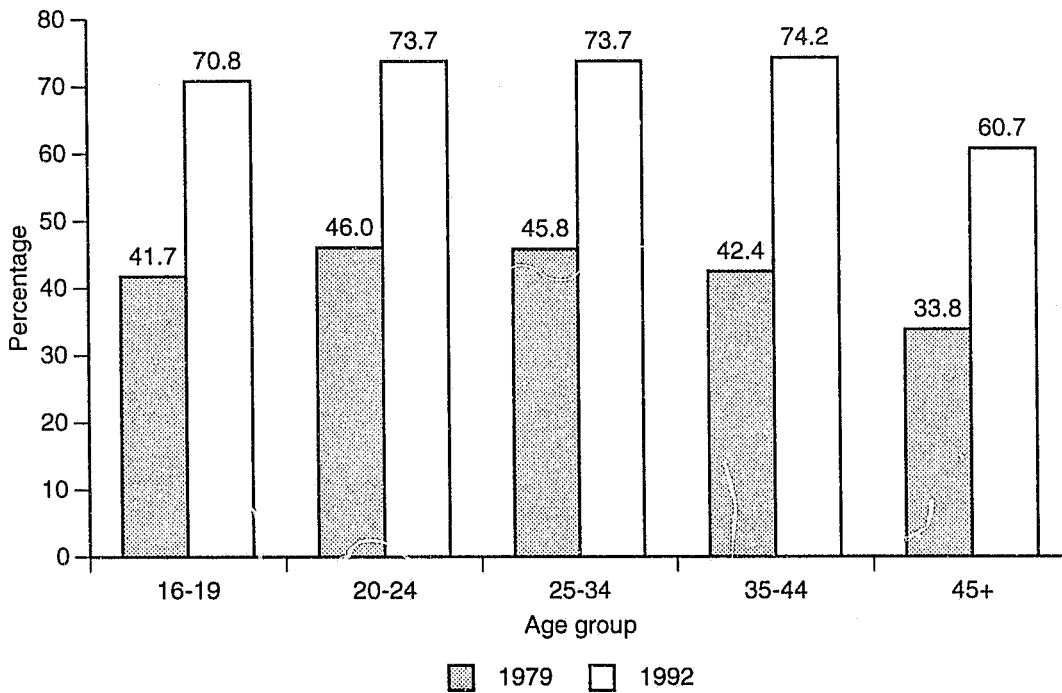


Figure 5a. Percentage of male drivers surviving fatal traffic crashes and given a BAC test, according to age, United States, 1979 and 1992.

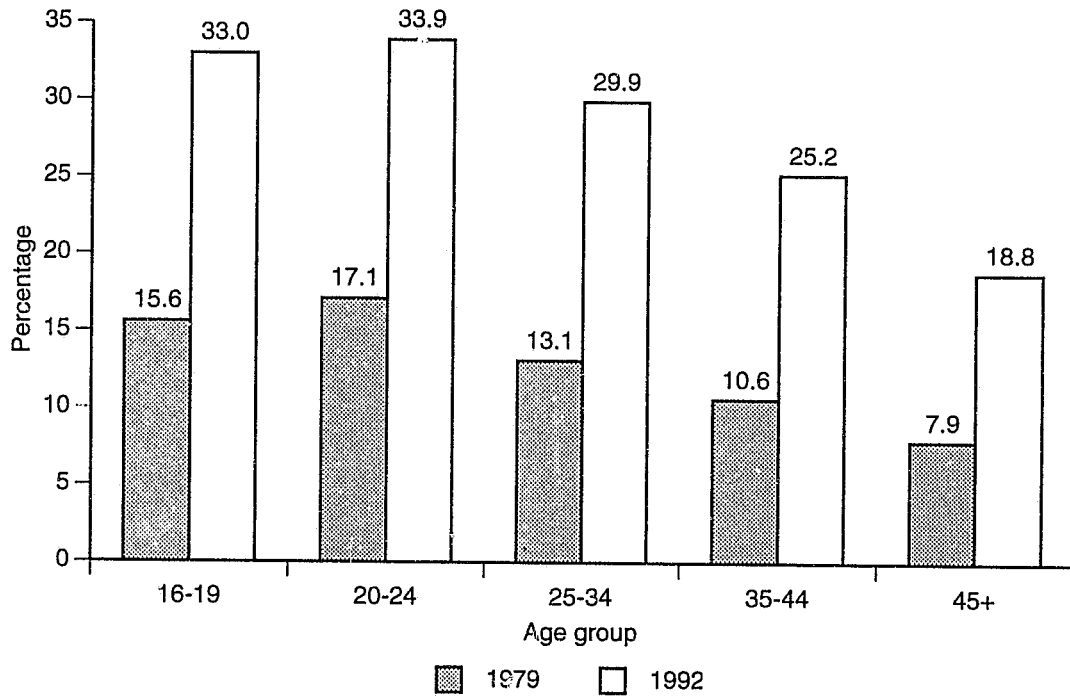
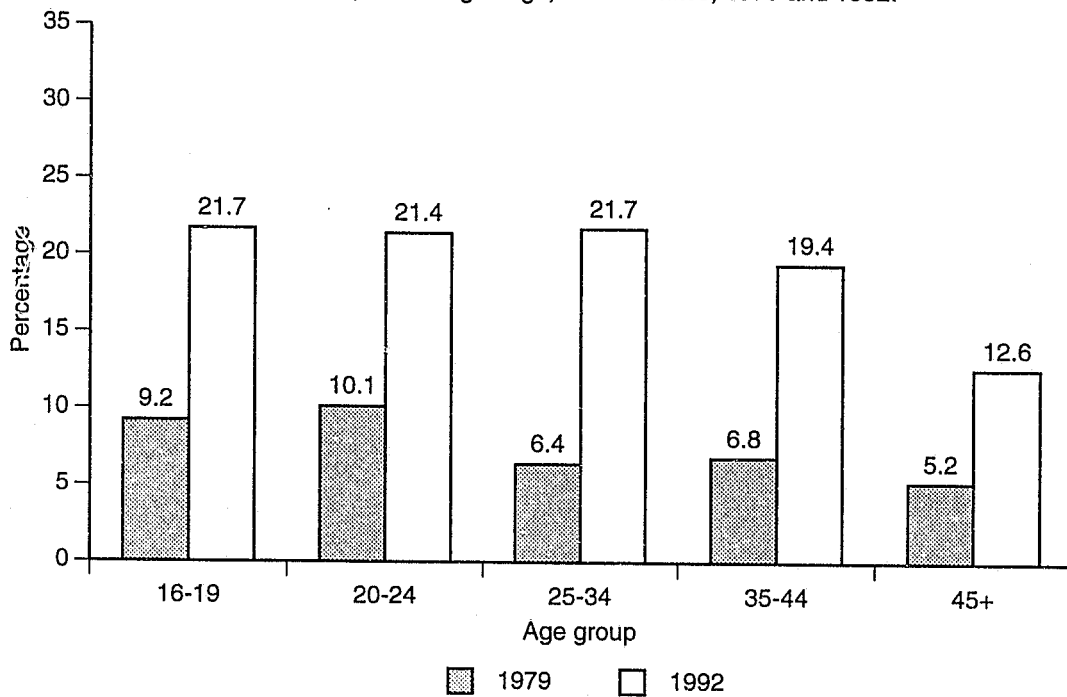


Figure 5b. Percentage of female drivers surviving fatal traffic crashes and given a BAC test, according to age, United States, 1979 and 1992.

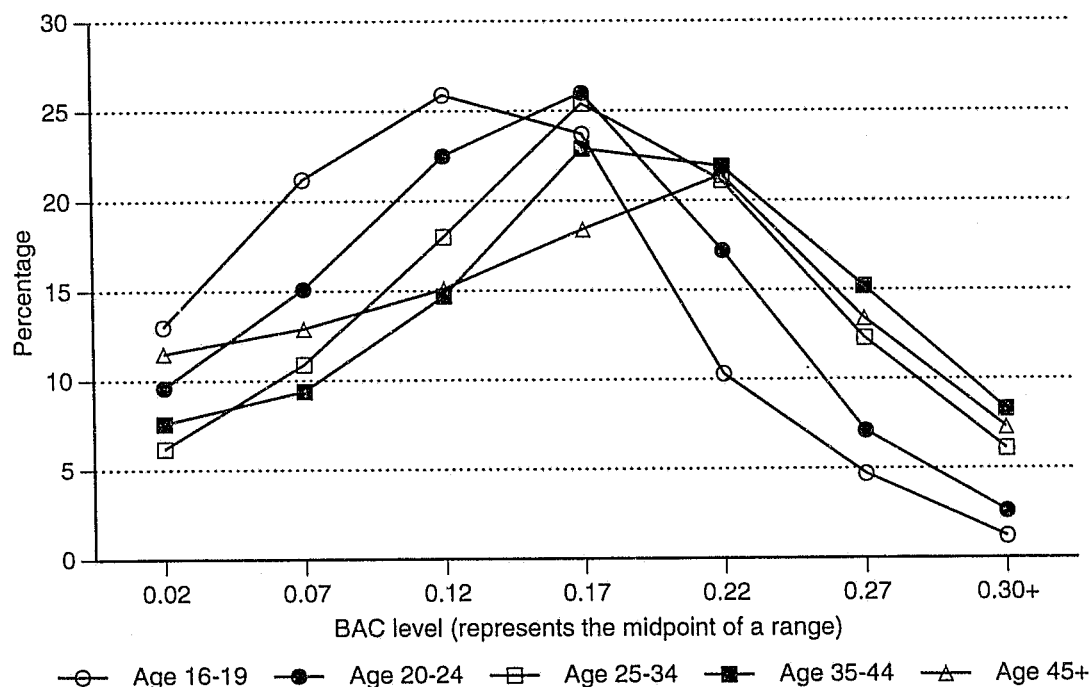


of persons ages 25 to 44 decreased 4 percent over the 14-year study period (from 7,159 in 1979 to 6,854 in 1992) and 8 percent from the 1991 total of 7,474.

In 1992 deaths among drivers of all ages decreased 22 percent since 1979 (28,859 versus 22,584), while deaths among young drivers decreased 46 percent from 10,861 in 1979 to 5,862 in 1992 (see table 12). Furthermore, deaths of drinking drivers of all ages and young drinking drivers decreased 22 and 47 percent, respectively, since 1979. Total fatalities among drinking drivers of all ages and young drinking drivers in 1992 represent a decrease since 1991 of 10 and 18 percent, respectively. As in earlier years, young drivers continue to be overrepresented in drinking driver deaths (see Aitken and Zobeck 1985). For example, in 1992, 16- to 24-year-olds accounted for 28 percent of all such deaths, while constituting only 15 percent of the U.S. licensed driver population (Federal Highway Administration 1992).

In past years AEDS analyses (Aitken and Zobeck 1985; Malin et al. 1982; Malin and Verdugo 1984; Zobeck 1986) 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 1992. Data for all 14 years are presented in table 13 in the Appendix. The current results continue to support previous evidence that the youngest drivers (ages 16 to 19 years) have a peak BAC level of 0.12 g/dl percent, while older drivers peak at 0.17 or 0.22 g/dl percent. These results suggest that young drivers become involved in alcohol-related crashes at lower BAC levels than do older drivers, in part because young drivers have limited experience with driving and also because their tolerance for alcohol is lower than that of older drinking drivers.

Figure 6. Percentage distributions of BAC, according to age, United States, 1992.



CONCLUSIONS

In 1992 the rate of alcohol involvement in traffic crash fatalities dropped 14 percent from its 14-year high of 43.5 percent in 1986. The actual number of alcohol-involved deaths shows a 27-percent decrease from the 1986 total (which was a sharp 11-percent increase over 1985). In 1992 decreases occurred in each of the four fatality rates (among all fatalities and among alcohol-related fatalities). Alcohol-related fatalities per 100 million VMT dropped 50 percent from 1979 to 1992. Likewise, alcohol-related fatalities per 100,000 population, per 100,000 registered vehicles, and per 100,000 licensed drivers were down 37, 40, and 40 percent, respectively. The number of YPLL due to alcohol-related traffic crashes decreased 34 and 28 percent for males and females, respectively, over the 14 years studied. In 1992 drivers, as opposed to other roles (e.g., passenger or nonoccupant), were more likely to die in traffic crashes, be it alcohol-related or not; on the other hand, nonoccupants were much more likely to die in nonalcohol-related traffic crashes than in alcohol-related traffic crashes. In 1992 the number of deaths associated with young drinking drivers ages 16 to 24 declined 50 and 16 percent from the 1979 and 1991 totals, respectively, while alcohol-related traffic crash fatalities among young people declined 48 percent from 1979 and 17 percent from 1991.

Although both total and alcohol-related traffic crash fatalities decreased again in 1992, some serious problems still exist, as indicated by the following measures. First, almost 80 percent of drivers who had positive BAC scores were legally intoxicated, with a BAC of 0.17 g/dl percent on average. Second, the national rate of dead driver BAC testing was 73 percent in 1992, while the national rate of testing surviving drivers was only 24 percent. Third, 4,878 alcohol-related traffic crash fatalities were associated with young drinking drivers. Finally, 8,932 drinking drivers died in 1992, 28 percent of whom were ages 16 to 24.

This report is descriptive and, therefore, no attempt has been made to analyze all possible factors that might explain the observed trends. However, some comments can be made about factors affecting the trends.

First, continuing attention to the drinking and driving problem may be leading to increased enforcement of drunk driving laws, which may in turn relate to the 14-year low alcohol involvement rate of 37.4 percent in 1992. However, the fact that in 1992 only 23 States administered BAC tests to their dead drivers at least 80 percent of the time is notable, especially in light of the fact that 32 States had laws requiring this type of testing. Some States limited tests to drivers only, placed an age limit on pedestrians to be tested, or imposed time constraints on such tests.

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

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 both alcohol- and nonalcohol-related traffic crashes. However, in 1992 only 10.7 percent of fatal traffic crashes occurred on interstate highways, while another 27.5 percent occurred on other principal arterial highways.

Any effects that these factors, either singly or in combination, may have had on the present data are unknown. However, 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

	Page
Table 1	Traffic crashes, traffic crash fatalities, and alcohol-related traffic crash fatalities, United States, 1979-92 17
Table 2	Total and alcohol-related traffic fatality rates per 100 million VMT and 100,000 population, registered vehicles, and licensed drivers, United States, 1979-92 18
Table 3	Years of potential life lost (YPLL) from total and alcohol-related traffic crashes, United States, 1979-92 19
Table 4	Decedent's role in alcohol-related traffic crash fatalities, United States, 1979-92 20
Table 5	Drivers involved in fatal traffic crashes, according to sex and alcohol involvement, United States, 1979-92 21
Table 6	Drivers involved in fatal traffic crashes and given BAC tests, according to State and injury severity, United States, 1979 and 1992 22
Table 7	Drivers involved in fatal traffic crashes and given BAC tests, according to sex, age, and injury severity, United States, 1979 and 1992 24
Table 8	Drivers with positive BAC results of 0.10 percent or more, according to sex and age, United States, 1979-92 25
Table 9	Mean BAC of drivers, pedestrians, and pedalcyclists involved in fatal traffic crashes with positive blood alcohol test results, United States, 1979-92 26
Table 10	Alcohol-related traffic crash fatalities associated with drivers ages 16 to 24, according to decedent's role, United States, 1979-92 27
Table 11	Alcohol-related traffic crash fatalities, according to age, United States, 1979-92 28
Table 12	Traffic crash fatalities among young drivers and young drinking drivers, United States, 1979-92 29
Table 13	Percentage distribution of BAC, according to age group, United States, 1979-92 30

Table 1. Traffic crashes, traffic crash fatalities, and alcohol-related traffic crash fatalities, United States, 1979–92.

Year	Event			
	Traffic crashes	Traffic crash fatalities (a)	Alcohol-related traffic crash fatalities (b)	Percent of all traffic crash fatalities (b/a)
1992	34,942	39,250	14,684	37.4
1991	36,895	41,462	16,231	39.1
1990	39,779	44,529	18,279	41.0
1989	40,718	45,555	18,381	40.3
1988	42,130	47,087	19,303	41.0
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

Table 2. Total and alcohol-related traffic fatality rates per 100 million VMT¹ and 100,000 population, registered vehicles, and licensed drivers, United States, 1979-92.

Year	Rate			
	100 million VMT ¹	100,000 population	100,000 registered vehicles ²	100,000 licensed drivers
All fatalities				
1992	1.75	15.39	20.26	22.89
1991	1.91	16.44	21.53	24.53
1990	2.08	17.93	23.12	26.70
1989	2.16	18.35	23.76	27.52
1988	2.32	19.12	25.02	28.91
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
Percent change				
1979-1992	-47.60	-32.35	-37.62	-35.81
Alcohol-related fatalities				
1992	0.66	5.76	7.58	8.56
1991	0.75	6.44	8.43	9.60
1990	0.85	7.35	9.48	10.94
1989	0.87	7.40	9.59	11.10
1988	0.95	7.85	10.26	11.85
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
Percent change				
1979-1992	-50.38	-37.39	-40.31	-39.51

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 total and alcohol-related traffic crashes, United States, 1979-92.

Year and sex	YPLL						Percent alcohol-related ²
	All traffic crash deaths			Alcohol-related traffic crash deaths			
	Years	Mean	Rate ¹	Years	Mean	Rate ¹	
1992							
Male.....	788,396	34.1	707	365,028	34.2	328	46.3
Female	326,300	33.9	293	110,685	34.9	99	33.9
1991							
Male.....	858,689	34.5	779	418,068	34.8	379	48.7
Female	348,423	34.5	316	119,760	35.4	109	34.4
1990							
Male.....	942,683	34.6	867	474,137	34.8	436	50.3
Female	368,300	34.1	338	134,199	35.3	123	36.4
1989							
Male.....	954,983	34.7	881	470,095	34.8	434	49.2
Female	391,727	34.7	360	139,960	35.6	129	35.7
1988							
Male.....	1,025,654	35.3	955	508,336	35.6	473	49.6
Female	395,517	35.0	366	147,453	35.9	136	37.3
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

¹ Number of YPLL per 100,000 population under age 65.

² Number of alcohol-related YPLL expressed as a percent of all YPLL.

Table 4. Decedent's role in alcohol-related traffic crash fatalities, United States, 1979-92.

Year	Decedent's role									
	Driver		Passenger		Nonoccupant		Unknown		All	
	Number	Pct. ¹	Number	Pct. ¹	Number	Pct. ¹	Number	Pct. ¹	Number	Pct. ¹
1992.....	9,986	44.2	3,901	38.2	796	12.5	1	1.2	14,684	37.4
1991.....	11,024	46.1	4,283	40.1	922	13.6	2	1.6	16,231	39.1
1990.....	12,425	48.3	4,775	42.3	1,076	14.4	3	2.8	18,279	41.0
1989.....	12,662	48.0	4,668	40.2	1,043	13.9	8	10.7	18,381	40.3
1988.....	13,156	48.3	5,041	42.7	1,096	14.0	10	5.3	19,303	41.0
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

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, United States, 1979-92.

Year and driver type	Sex							
	Male		Female		Unknown		Both sexes	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
1992								
All drivers.....	38,598	100.0	12,596	100.0	707	100.0	51,901	100.0
Alcohol-involved drivers	11,533	29.9	1,982	15.7	12	1.7	13,527	26.1
1991								
All drivers.....	40,680	100.0	12,806	100.0	837	100.0	54,323	100.0
Alcohol-involved drivers	12,845	31.6	2,077	16.2	9	1.1	14,931	27.5
1990								
All drivers.....	44,281	100.0	13,726	100.0	886	100.0	58,893	100.0
Alcohol-involved drivers	14,618	33.0	2,309	16.8	9	1.0	16,936	28.8
1989								
All drivers.....	45,420	100.0	14,044	100.0	925	100.0	60,398	100.0
Alcohol-involved drivers	14,555	32.1	2,401	17.1	9	1.0	16,965	28.1
1988								
All drivers.....	47,402	100.0	13,951	100.0	900	100.0	62,253	100.0
Alcohol-involved drivers	15,529	32.8	2,384	17.1	7	0.8	17,920	28.8
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

Table 6. Drivers involved in fatal traffic crashes and given BAC tests, according to State and injury severity, United States, 1979 and 1992.

State	Drivers given BAC tests											
	1979						1992					
	Dead		Alive		Combined		Dead		Alive		Combined	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total.....	12,663	43.9	4,210	11.9	16,873	26.3	16,529	73.2	7,121	24.3	23,650	45.6
Alabama.....	4	0.7	8	1.2	12	0.9	231	33.2	83	12.5	314	23.1
Alaska.....	14	29.8	18	30.0	32	29.9	36	64.3	32	47.8	68	55.3
Arizona.....	314	56.8	101	14.7	415	33.4	211	52.8	62	9.6	273	26.1
Arkansas.....	34	10.5	20	5.5	54	7.8	210	60.5	121	28.5	331	42.9
California.....	2,628	84.3	704	17.8	3,332	47.1	1,961	90.4	745	21.7	2,706	48.3
Colorado.....	336	81.0	202	44.8	538	62.1	271	89.7	162	42.0	433	62.9
Connecticut.....	189	54.9	72	19.6	261	36.7	160	88.9	50	22.5	210	52.2
Delaware.....	50	82.0	69	70.4	119	74.8	81	90.0	71	68.3	152	78.4
District of Columbia.....	15	88.2	8	20.5	23	41.1	8	34.8	8	18.2	16	23.9
Florida.....	356	27.6	239	12.2	595	18.3	855	70.0	470	21.8	1,325	39.2
Georgia.....	183	20.8	170	16.6	353	18.5	507	64.8	517	50.9	1,024	57.0
Hawaii.....	81	75.0	16	11.4	97	39.1	57	91.9	39	36.8	96	57.1
Idaho.....	124	63.3	33	17.5	157	40.8	117	81.3	36	23.5	153	51.5
Illinois.....	692	60.2	31	2.1	723	27.4	740	88.8	167	15.9	907	48.2
Indiana.....	21	2.6	24	2.7	45	2.7	454	79.1	390	58.5	844	68.0
Iowa.....	175	41.8	62	14.3	237	27.8	210	74.5	129	40.3	339	56.3
Kansas.....	80	24.9	32	9.6	112	17.1	170	65.9	83	32.1	253	48.9
Kentucky.....	211	44.0	109	16.5	320	28.0	359	70.3	178	31.8	537	50.2
Louisiana.....	384	57.7	317	38.6	701	47.1	264	52.8	307	50.0	571	51.3
Maine.....	68	50.8	15	11.4	83	31.2	118	93.7	92	68.2	210	80.5
Maryland.....	219	59.8	23	4.8	242	28.7	291	76.0	21	4.2	312	35.2
Massachusetts.....	127	24.5	29	4.6	156	13.5	230	84.6	1	0.3	231	34.6
Michigan.....	589	57.6	210	15.0	799	33.0	550	72.9	255	23.9	805	44.2
Minnesota.....	293	57.0	80	12.8	373	32.8	293	85.2	79	19.6	372	49.7
Mississippi.....	46	10.7	5	1.1	51	5.7	331	67.6	161	37.9	492	53.8

Table 6. Drivers involved in fatal traffic crashes and given BAC tests, according to State and injury severity, United States, 1979 and 1992. (Continued)

State	Drivers given BAC tests											
	1979						1992					
	Dead		Alive		Combined		Dead		Alive		Combined	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Missouri	169	25.1	17	2.2	186	13.0	505	77.9	73	10.6	578	43.3
Montana	107	54.9	7	3.9	114	30.6	104	91.2	65	61.3	169	76.8
Nebraska	137	64.3	131	60.7	268	62.5	138	86.3	123	72.8	261	79.3
Nevada	150	72.8	52	25.0	202	48.8	102	77.9	71	38.0	173	54.4
New Hampshire	86	85.2	32	27.6	118	54.4	37	52.1	24	27.0	61	38.1
New Jersey	450	81.4	245	27.1	695	47.7	322	78.4	186	30.2	508	49.5
New Mexico	24	7.1	4	1.1	28	3.9	201	88.2	66	20.8	267	48.9
New York	111	9.3	14	0.8	125	4.1	621	70.8	43	2.9	664	27.8
North Carolina	312	37.1	5	0.0	317	16.5	647	88.4	0	0.0	647	38.5
North Dakota	4	4.9	1	0.0	5	3.1	47	79.7	12	25.0	59	55.1
Ohio	418	30.9	137	9.2	555	19.6	352	39.1	137	13.0	489	25.0
Oklahoma	338	65.1	54	9.6	392	36.2	286	77.9	55	13.6	341	44.2
Oregon	351	88.0	133	31.0	484	58.5	253	92.3	98	31.1	351	59.6
Pennsylvania	310	25.2	137	9.0	447	16.3	734	79.4	268	23.8	1,002	48.9
Rhode Island	52	82.5	4	4.9	56	38.6	48	96.0	4	7.3	52	49.5
South Carolina	293	60.9	11	1.7	304	27.3	246	48.7	78	14.1	324	30.6
South Dakota	76	63.3	29	22.3	105	42.0	84	84.9	60	62.5	144	73.9
Tennessee	424	60.0	218	25.9	642	41.4	607	80.6	348	45.3	955	62.8
Texas	17	0.7	44	1.6	61	1.2	969	58.7	605	26.4	1,574	39.9
Utah	91	58.3	82	35.3	173	44.6	105	80.2	135	67.8	240	72.7
Vermont	62	79.5	51	52.0	113	64.2	43	69.4	13	24.5	56	48.7
Virginia	371	65.0	10	1.4	381	30.1	362	71.8	1	0.2	363	32.0
Washington	484	79.9	163	24.1	647	50.5	345	90.1	138	28.4	483	55.6
West Virginia	0	0.0	0	0.0	0	0.0	220	85.6	66	25.1	286	55.0
Wisconsin	510	83.2	8	1.2	518	40.0	375	89.5	172	36.1	547	61.1
Wyoming	83	58.0	24	19.5	107	40.2	61	81.3	21	42.9	82	66.1

Table 7. Drivers involved in fatal traffic crashes and given BAC tests, according to sex, age, and injury severity, United States, 1979 and 1992.

Sex and age	Drivers given BAC tests											
	1979						1992					
	Dead		Alive		Combined		Dead		Alive		Combined	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both sexes												
16-19.....	2,063	44.7	856	14.3	2,919	27.6	1,753	74.2	960	29.9	2,713	48.7
20-24.....	2,926	46.8	1,191	16.0	4,117	30.0	2,728	78.0	1,372	30.9	4,100	51.6
25-34.....	3,422	47.7	1,113	11.9	4,535	27.4	4,184	77.3	2,128	27.9	6,312	48.4
35-44.....	1,579	45.9	498	9.9	2,077	24.5	2,409	78.2	1,326	23.8	4,235	45.6
45+.....	2,589	37.0	529	7.3	3,118	22.0	4,856	65.6	1,284	17.3	6,140	41.4
Total.....	12,579	44.2	4,187	12.0	16,766	26.4	16,430	73.3	7,070	25.0	23,500	46.4
Male												
16-19.....	1,736	45.3	749	15.6	2,485	28.8	1,321	75.4	774	33.0	2,095	51.1
20-24.....	2,521	47.0	1,068	17.1	3,589	30.9	2,194	79.1	1,144	33.9	3,338	54.3
25-34.....	2,904	48.0	1,007	13.1	3,911	28.4	3,295	78.3	1,723	29.9	5,018	50.3
35-44.....	1,294	46.7	437	10.6	1,731	25.1	2,223	79.5	1,077	25.2	3,300	46.7
45+.....	2,094	37.8	454	7.9	2,548	22.6	3,560	67.6	1,055	18.8	4,615	42.4
Total.....	10,549	44.8	3,715	13.0	14,264	27.3	12,593	75.0	5,773	27.0	18,366	48.1
Female												
16-19.....	326	41.7	107	9.2	433	22.3	432	70.8	186	21.7	618	42.1
20-24.....	405	46.0	123	10.1	528	25.2	534	73.7	228	21.4	762	42.5
25-34.....	518	45.8	106	6.4	624	22.3	889	73.7	405	21.7	1,294	42.2
35-44.....	285	42.4	61	6.8	346	22.0	686	74.2	249	19.4	935	42.3
45+.....	495	33.8	75	5.2	570	19.6	1,296	60.7	229	12.6	1,525	38.6
Total.....	2,029	41.2	472	7.4	2,501	22.1	3,837	68.5	1,297	18.8	5,134	41.1

Table 8. Drivers with positive BAC results with scores of 0.10 percent or more, according to sex and age, United States, 1979-92.

Sex and year		Age											
		16-19		20-24		25-34		35-44		Over 45		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both sexes	1992	650	65.9	1,796	75.4	3,130	82.9	1,782	83.1	1,246	75.6	8,604	78.7
	1991	810	65.5	2,123	77.2	3,537	83.2	1,834	83.6	1,276	77.1	9,580	79.3
	1990	961	66.4	2,323	77.8	4,027	82.2	2,046	83.4	1,374	76.0	10,731	79.0
	1989	984	64.6	2,399	77.2	3,600	81.6	2,237	84.0	1,478	77.9	10,698	78.6
	1988	1,077	63.7	2,708	76.8	3,746	82.5	2,203	83.7	1,404	77.0	11,138	78.4
	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	76.6	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	
Male	1992	562	66.7	1,580	76.6	2,663	83.5	1,510	82.9	1,093	76.9	7,408	79.3
	1991	703	67.1	1,864	77.8	3,031	83.3	1,593	84.6	1,135	78.2	8,326	79.9
	1990	848	68.2	2,046	78.5	3,843	82.2	1,797	84.2	1,209	77.0	9,383	79.6
	1989	843	65.7	2,117	77.2	3,079	82.0	1,940	84.4	1,296	78.6	9,275	79.1
	1988	921	63.9	2,399	76.7	3,240	82.6	1,926	84.5	1,247	78.5	9,733	78.8
	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	
Female	1992	88	61.1	216	67.5	467	80.1	272	84.2	153	67.7	1,196	74.9
	1991	107	56.6	259	73.4	506	83.2	241	77.5	141	68.8	1,254	75.3
	1990	113	55.4	274	72.7	544	81.9	249	78.1	165	69.9	1,345	74.7
	1989	141	58.5	282	77.1	520	79.2	297	82.0	182	82.0	1,422	75.8
	1988	156	62.6	309	77.3	506	81.7	277	78.5	157	66.8	1,405	75.7
	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	73.2	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	

Table 9. Mean BAC of drivers, pedestrians, and pedalcyclists involved in fatal traffic crashes with positive blood alcohol test results, United States, 1979-92.

Year	Person's role in crash											
	Driver			Pedestrian			Pedalcyclist			Total		
	Number	Mean	S.D. ¹	Number	Mean	S.D. ¹	Number	Mean	S.D. ¹	Number	Mean	S.D. ¹
1992.....	10,978	0.17	0.08	1,637	0.20	0.10	105	0.16	0.10	12,720	0.17	0.09
1991.....	12,129	0.17	0.08	1,678	0.20	0.10	133	0.16	0.10	13,940	0.17	0.09
1990.....	13,639	0.17	0.08	1,919	0.20	0.10	121	0.16	0.09	15,679	0.17	0.09
1989.....	13,644	0.16	0.08	2,006	0.20	0.10	99	0.15	0.09	15,749	0.17	0.09
1988.....	14,257	0.16	0.08	1,985	0.20	0.10	102	0.17	0.10	16,419	0.17	0.09
1987.....	14,344	0.16	0.08	1,958	0.20	0.10	117	0.14	0.10	16,419	0.17	0.09
1986.....	14,530	0.16	0.08	2,013	0.19	0.10	87	0.13	0.09	16,630	0.16	0.08
1985.....	12,771	0.16	0.08	1,932	0.19	0.10	76	0.15	0.09	14,779	0.16	0.08
1984.....	12,578	0.16	0.08	1,852	0.19	0.10	63	0.14	0.10	14,587	0.17	0.08
1983.....	11,273	0.17	0.08	1,571	0.20	0.10	51	0.13	0.09	12,895	0.17	0.08
1982.....	11,479	0.17	0.08	1,697	0.20	0.10	54	0.13	0.08	13,230	0.17	0.08
1981.....	12,191	0.17	0.08	1,598	0.19	0.10	41	0.15	0.12	13,830	0.17	0.08
1980.....	12,310	0.16	0.08	1,546	0.19	0.10	41	0.16	0.09	13,897	0.17	0.08
1979.....	11,212	0.16	0.08	1,451	0.19	0.10	36	0.13	0.08	12,699	0.17	0.08

¹ Standard deviation.

Table 10. Alcohol-related traffic crash fatalities associated with drivers ages 16 to 24, according to decedent's role, United States, 1979-92.

Year	Decedent's role in crash ¹							
	Driver		Passenger		Nonoccupant		All	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
1992.....	2,942	60.4	1,722	35.3	209	4.3	4,878	100.0
1991.....	3,557	61.5	2,010	34.7	219	3.8	5,788	100.0
1990.....	3,934	61.1	2,220	34.5	285	4.4	6,441	100.0
1989.....	4,183	62.2	2,232	33.2	311	4.6	6,726	100.0
1988.....	4,759	62.4	2,556	33.5	314	4.1	7,629	100.0
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	596	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	50.7	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

¹ There were 6, 7, 3, 3, 3, 5, 3, 2, 2, and 2 cases of unknown decedent's role for the years 1979, 1980, 1981, 1982, 1984, 1986, 1987, 1989, 1990, and 1991, respectively. No cases were unknown for 1983, 1985, 1988, and 1992.

Table 11. Alcohol-related traffic fatalities, according to age, United States, 1979-92.

Year	Age													
	Under 16		16-24		25-44		45-64		Over 64		Unknown		All ages	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
1992.....	602	4.1	4,463	30.4	6,854	46.7	1,951	13.3	792	5.4	22	0.2	14,684	100.0
1991.....	595	3.7	5,363	33.0	7,474	46.1	1,951	12.0	813	5.0	35	0.2	16,231	100.0
1990.....	711	3.9	5,897	32.3	8,530	46.7	2,284	12.5	832	4.6	25	0.1	18,279	100.0
1989.....	717	3.9	6,019	32.8	8,360	45.5	2,341	12.7	908	4.9	36	0.2	18,381	100.0
1988.....	789	4.1	6,974	36.1	8,371	43.4	2,274	11.8	865	4.5	30	0.2	19,303	100.0
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	38.8	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

Table 12. Traffic crash fatalities among young¹ drivers and young drinking drivers, United States, 1979-92.

Year	Fatalities					
	All drivers			Drinking drivers		
	Number		Percent who are young	Number		Percent who are young
	All ages	Young		All ages	Young	
1992	22,584	5,862	26.0	8,932	2,531	28.3
1991	23,904	6,598	27.6	9,926	3,103	31.3
1990	25,750	7,220	28.0	11,190	3,402	30.4
1989	26,379	7,558	28.7	11,343	3,585	31.6
1988	27,253	8,410	30.9	11,866	4,128	34.8
1987	26,831	8,363	31.2	12,008	4,125	34.4
1986	26,629	8,712	32.7	12,018	4,532	37.7
1985	25,337	8,321	32.8	10,915	4,072	37.3
1984	25,582	8,629	33.7	11,145	4,345	39.1
1983	24,135	8,017	33.2	10,393	3,992	38.4
1982	24,617	8,512	34.6	10,655	4,254	39.9
1981	28,182	9,764	34.6	12,056	4,702	39.0
1980	28,807	10,565	36.7	12,130	5,040	41.5
1979	28,859	10,861	37.6	11,402	4,787	42.0

¹ Ages 16 to 24.

Table 13. Percentage¹ distribution of BAC, according to age group, United States, 1979-92.

Year and age	BAC level ²						
	0.02	0.07	0.12	0.17	0.22	0.27	0.30+
1992							
16-19.....	13.0	21.2	25.9	23.7	10.3	4.7	1.2
20-24.....	9.6	15.1	22.5	26.0	17.2	7.1	2.6
25-34.....	6.2	10.9	18.0	25.4	21.1	12.3	6.1
35-44.....	7.6	9.4	14.7	22.9	21.9	15.2	8.3
45+.....	11.5	12.9	15.1	18.4	21.4	13.4	7.3
1991							
16-19.....	13.6	20.9	26.9	21.0	12.2	3.5	2.0
20-24.....	7.6	15.2	23.9	26.6	17.8	6.7	2.3
25-34.....	6.1	10.6	18.6	25.0	21.9	12.2	5.6
35-44.....	7.1	9.3	14.6	21.9	22.6	15.6	9.0
45+.....	11.8	11.1	14.6	20.4	19.6	12.9	9.6
1990							
16-19.....	13.5	20.1	26.9	22.9	11.8	3.7	1.2
20-24.....	8.8	13.4	24.2	25.4	17.4	8.0	2.9
25-34.....	6.7	11.1	17.7	24.4	22.8	11.9	5.5
35-44.....	7.3	9.3	16.3	23.2	20.9	13.7	9.3
45+.....	12.6	11.4	14.4	20.1	19.8	12.2	9.4
1989							
16-19.....	13.8	21.7	25.1	22.4	13.0	3.0	1.1
20-24.....	7.9	14.9	24.1	25.1	18.0	7.3	2.7
25-34.....	7.2	11.0	17.9	24.1	21.9	12.2	5.8
35-44.....	6.6	9.5	16.6	21.6	22.3	14.4	9.1
45+.....	11.6	10.5	14.7	20.8	21.5	12.4	8.6
1988							
16-19.....	15.0	21.2	26.2	20.5	11.7	3.9	1.5
20-24.....	8.8	14.5	23.6	25.6	17.8	6.7	3.1
25-34.....	6.8	10.8	17.4	24.5	22.3	12.6	5.7
35-44.....	7.3	8.6	15.8	22.8	23.3	13.7	8.5
45+.....	12.0	11.0	14.9	18.6	21.0	13.2	9.4
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

See footnotes at end of table.

Table 13. Percentage¹ distribution of BAC, according to age group, United States, 1979-92. (Continued)

Year and age	BAC level ²						
	0.02	0.07	0.12	0.17	0.22	0.27	0.30+
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
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

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.