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16. Abstract This report presents findings from the first (1991), second (1993), and third (1995) surveys conducted by the National Highway Traffic Safety Administration on attitudes and behaviors of the general public related to drinking and driving. The purpose of these periodic surveys is to track change in drinking and driving attitudes and behaviors, and thereby provide data needed to guide programmatic activity directed at the drinking and driving problem. The three surveys were administered to a national probability sample of driving age individuals residing in the United States. The surveys provide data on various topics relevant to the drinking and driving problem, including: support for taking action to reduce drinking and driving, opinions about current enforcement and penalties, expectations of consequences, intervention behavior, avoidance of drinking and driving, frequency of drinking and driving, efforts by hosts to prevent their guests from drinking and driving, and frequency of riding with a driver who may have consumed too much alcohol to be safe. The 1995 survey findings show that positive changes have taken place in drinking and driving attitudes and behavior since the 1991 and 1993 surveys. There has been a decline in the proportion of the population (age 16-64) who report having driven after drinking in the past year (from 28% to 24%) and the proportion who have ridden with a driver who may have drunk too much to be safe (from about 14% to 11%). Despite a slight decline since 1993, the public's concern about drinking and driving remains very high; 86% think it is "very important" to do something about the problem and 79% see drinking and driving as a "major threat" to the personal safety of themselves or their family. Two thirds of the public (age 16-64) believe sobriety checkpoints should be used more frequently, (up slightly from 1993), while the percentage of the public who think penalties for drinking and driving violations should be much more severe is up substantially (37% in 1993 vs. 46% in 1995).			
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EXECUTIVE SUMMARY

The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) has made the reduction of alcohol-impaired driving in the United States a mission priority. NHTSA develops, disseminates, and evaluates programs directed toward this end.

NHTSA began in 1991 to conduct periodic surveys of the driving age public (age 16 and older) to identify patterns and trends in public attitudes and behaviors related to drinking and driving. The first survey in 1991 was followed by a second in 1993. The 1995 survey, upon which this report is based, is the third. These biennial surveys are designed to measure the scope of the drinking driving problem and to acquire data on topic areas useful for guiding programmatic activity directed at reducing its severity.

1995 Survey Highlights

Drinking and Driving Behavior

- One in five people 16 and older (22%) drove within two hours after drinking alcohol in the past year. (These people are identified throughout this report as "drinking-drivers.")
- Nearly a third of males (31%) drove after drinking in the past year, compared with only 13% of females.
- The highest percentage of drinking-drivers among any age-gender group is found among males in their 20s (39%).
- Drinking-drivers are more than twice as likely to drink alcohol frequently (3 or more days per week) compared with other drivers who drink, and also almost twice as likely to have at least three drinks at each sitting.
- "Problem drinkers" represent 16% of the drinking-drivers and take about 20% of the drinking-driving trips.
- Drivers age 16-20 consumed, on average, four drinks before their most recent drinking-driving occasion, compared with about two-and-a-half drinks for other drinking-drivers.

- About one in five people age 16-20 have, in the past year, ridden with a driver they thought might have consumed too much alcohol to drive safely. About one in six people age 21-29 and less than 10% of those age 30 and older have had this experience. Overall, a third of these passengers decided the driver was unsafe before they were riding in the vehicle with them.
- Among drivers who at least sometimes drink alcohol, males age 19-20 were most likely of any age and gender group to have been stopped for suspicion of impaired driving and, along with 21-29 year old males, most likely to have been arrested for a drinking-driving law violation. (Results should be viewed cautiously because of the small number of convicted violators in each respondent age group).

Beliefs about Drinking and Driving

- Two-thirds of the driving age population believe that scientific evidence has shown that any amount of alcohol impairs driving.
- Most people of driving age (97%) consider drinking and driving by others a threat to themselves and their families; 87% think it is very important that something be done about it.
- Two-thirds (66%) of the driving age public think that a designated driver should not drink any alcohol at all.

Preventing Driving after Drinking

- More than 90% of the driving age public believe they should try to prevent someone they know from driving when they see he/she has had too much to drink.
- More than 90% of people who were with a friend whom they considered to have had too much alcohol to drive safely tried to prevent the friend from driving. They were successful almost 90% of the time.
- Younger people (age 16-20) are most likely of any age group to use various strategies, when hosting a social occasion where alcohol is served, to try to prevent their guests from drinking and driving.

Enforcement

- Nearly three out of four (72%) of the driving age public think that penalties for drinking and driving should be more severe.

- About 80% of the driving age public have heard of blood alcohol concentration (BAC) levels, but only about one in five know the BAC limit in their state.

Crash Experience

- Drivers who drink were somewhat more likely than drivers who do not drink to have been a driver in a vehicle crash in the past year (8% vs. 5%).

Continuity and Change, 1991, 1993, 1995

The 1995 survey contained a number of questions that were included in both the 1991 and 1993 surveys, as well as a few questions that were in the 1993 but not the 1991 survey. Data from these questions were compared to identify changes that may have occurred in attitudes or behavior¹. Since the 1991 survey did not include people age 65 and older, all comparisons are based on the population age 16-64. Some important changes are listed below.

- The percentage of the population who drove within two hours after drinking alcoholic beverages in the past year ("drinking-drivers") declined from 28% in previous surveys to 24% in 1995.
- "Drinking-drivers" drove after drinking less frequently in 1995 than in 1991: the average number of past-month trips declined from 2.3 to 1.5 during this period.
- Among drivers who drink alcohol at all, the percentage who drank and drove in the past month declined from 26% in 1991 and 24% in 1993 to 21% in 1995.
- Fewer people rode with a driver who had consumed too much alcohol to be safe: 15% in 1991 versus 11% in 1995.
- Most people still think it is "very important" to do something to reduce drinking and driving, although the percentage who say this has declined somewhat from 91% in 1991 to 86% in 1995.
- A higher percentage (46% in 1995 vs. 37% in 1993) think that penalties for drinking and driving should be "much more severe."

¹ Changes over time that are cited in the Executive Summary were tested for statistical significance using a Pearson chi-square test. All were found to be significant at the p = .01 level.

- Support for more frequent use of sobriety checkpoints has increased since 1993 (from 64% to 67%).
- Most people see drinking and driving as a threat to the personal safety of themselves or their family, but the percentage who see it as a "major threat" has declined from 84% in 1991 to 79% in 1995.
- A higher percentage (31% in 1995 vs. 25% in both previous surveys) strongly agree that most people who drive after drinking too much are alcoholics or problem drinkers.
- Use of designated drivers has declined: fewer people report having been a designated driver in the past year (down from 42% in 1993 to 39% in 1995) or having ridden with a designated driver in the past year (down from 37% to 32%).
- There is a decline (from 52% in 1993 to 48% in 1995) in the percentage of people who think that a person charged with a drinking-driving offense is "almost certain" to receive some sort of punishment, but an increase (24% to 31%) in the percentage who believe that if the driver is punished, the punishment will be "very severe."

INTRODUCTION

Background

The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) has made the reduction of alcohol-impaired driving in the United States a mission priority. NHTSA develops, disseminates, and evaluates programs directed toward this end. The efforts by NHTSA and other federal, state, and local governments and non-profit organizations have resulted in a decrease in the percentage of fatal vehicle crashes that were alcohol-related from 57% in 1982 to 41% in 1994. Despite this progress, alcohol-related crashes resulted in 16,589 fatalities and about 297,000 injuries in 1994.

NHTSA began in 1991 to conduct periodic surveys of the driving age public to identify patterns and trends in public attitudes and behaviors related to drinking and driving. The first survey was followed by a second in 1993; findings from these two surveys were reported in National Survey of Drinking and Driving Attitudes and Behavior: 1993, published by NHTSA in January 1995. The 1995 survey, upon which this report is based, is the third survey in the series.

Purpose and Objectives

The purpose of the survey is to provide NHTSA with information that will enable its staff to direct their programs and activities more effectively toward the reduction of drinking and driving in the United States.

The objectives of this survey are (1) to measure the current status of public attitudes, knowledge and behavior related to drinking and driving; and (2) to identify areas in which changes in these attitudes, knowledge or behavior may have occurred since the 1991 and 1993 Drinking and Driving Surveys.

Methods

Sampling Objective

The objectives for the survey sampling were to obtain (a) a national sample of the driving age public from which national estimates of attitudes and behavior could be derived and (b) a large enough sample of young drivers (age 16-20) to allow for detailed analyses of this segment of the driving-age population.

Sample Design

The study design specified a national adult sample of 3,250 cases and a national young adult (age 16-20) oversample of 750 cases, for a total of 4,000 interviews. Each national sample (adult sample and youth oversample) of telephone households was drawn, using a four-step procedure:

- 1) Allocate the sample in proportion to the geographic distribution (by the ten NHTSA regions) of the target population according to the most recent Census estimates.
- 2) Perform a systematic selection of assigned telephone banks within the geographically stratified first stage sample design.
- 3) Conduct a random digit dialing (RDD) sampling of telephone households within the telephone banks selected in the second stage.
- 4) Identify and select one eligible respondent within each sampled household so that the household sampling frame yields a population sample of the eligible population.

These procedures produced a relatively unbiased sample of the target population from which valid generalizations can be made to the total population, within specified limits of expected sampling variability. The maximum expected sampling error for a simple random sample of 4,000 cases is ± 1.5 percentage points at the 95% confidence interval (see Appendix A, Methods, for more precise estimates and illustrations).

Weighting

Sample weighting consisted of a multi-stage sequential process to correct for biases in the final sample:

- 1) To correct for the selection bias that a random digit dialing process will give households with more than one telephone number an unequal likelihood of selection, each household was given a first stage weight equal to the inverse of the number of different telephone numbers in the household.
- 2) Since only one eligible person per household could be interviewed, a respondent's probability for selection was inverse to the size (number of other eligible adults) of the household. Hence, the second stage weight was equal to the number of eligible respondents within the household.
- 3) The third stage weight was introduced to correct for deliberate disproportionate selection of population subsets in the sample design (the design included a cross-sectional sample of respondents age 16 and older and an oversample of persons age 16 to 20) and for differential participation rates by age and gender. This weight was calculated by dividing the expected population distribution, based on the Census Population Projections for Age, Sex and Race for 1995, by the achieved sample distribution by age and gender.

Achieved Sample

Table 1 presents the age and gender characteristics of the achieved sample of 4,008 completed interviews. The upper row presents the actual number of completed interviews in each category ("unweighted") and the lower row presents the corresponding number after the weighting process was conducted ("weighted").

TABLE 1: NUMBER OF RESPONDENTS IN THE FINAL ACHIEVED SAMPLE, BY GENDER AND AGE

N	GENDER		AGE				
	Male	Female	16-20	21-29	30-45	46-64	65+
Unweighted	1982	2026	946	529	1159	856	507
Weighted	1926	2083	354	662	1355	965	669

Survey Administration

Interviews, averaging 20 minutes in length, were conducted during the period from September 25 to November 27, 1995, using computer-assisted telephone interviewing (CATI). Sixty-six of the 4,008 completed interviews were conducted using a Spanish language version of the questionnaire. The participation rate for the cross-sectional sample was 77.8% and even higher for the youth oversample due to screen-outs by age.

Appendix A to this report provides a more detailed presentation of the survey methods, including the final sample disposition.

Data Reporting Conventions

In this report, the following conventions are used:

- Numbers of respondents (N) are unweighted unless specified otherwise.
- Values presented on charts as "0%" represent either a true 0% or a percentage less than 0.5% which, when rounded, equals 0%.
- Throughout the report the term "drinking-drivers" is used to refer to the group of drivers who drove within two hours after drinking alcohol at least once in the past year. This group is distinct from other drivers who drink alcohol but who report having never driven within two hours after drinking in the past year.

Where data have been analyzed by age, respondents between the ages of 16 and 20 were analyzed as two subgroups (16-18 and 19-20) except when the number of respondents was too small for meaningful analysis.

References cited in the report can be found in Appendix A, page A-28.

1995 SURVEY FINDINGS

This portion of the report presents key findings from the 1995 survey. It is organized into the following sections:

- 1: Drinking and Driving Behavior and Attitudes**
- 2: Preventing Drinking and Driving**
- 3: Enforcement of Drinking and Driving Laws**
- 4: Blood Alcohol Concentration Levels and Legal Limits**
- 5: Crash and Injury Experience**

1: DRINKING AND DRIVING BEHAVIOR AND ATTITUDES

This section discusses the following topics from the 1995 survey:

- **Drinking and driving behavior (past year, past month)**
- **Suspected and actual drinking and driving violations**
- **Riding with drivers who may have consumed too much alcohol to drive safely**
- **Youth drinking/driving profile (ages 16-18 and 19-20), including selected trends from 1993-1995**
- **Beliefs about drinking and driving**

DRINKING AND DRIVING BEHAVIOR

Proportion of the General Public Who Drive After Drinking

Twenty-two percent of the population age 16 and older drove within two hours of drinking alcoholic beverages at some time in the past year [Figure 1-A]. People in their 20s were most likely to report driving after drinking, with the percentage then declining with age. Youth age 16-18 (below the legal drinking age) were least likely to report this behavior. Males were more than twice as likely as females to report driving after drinking in the past year.

Frequency "Drinking-Drivers"¹ Drive After Drinking

Drinking-drivers, on average, reported driving after drinking about 13 times in the past year. Males are more likely than females (44% vs. 28%) to have driven after drinking at least five times in the past year [Figure 1-B].

Note that a higher percentage of drinking-drivers age 65 and older drove after drinking five or more times in the past year compared with their younger counterparts [Figure 1-B]. However, this pattern (which is consistent with data from the 1993 survey [see Figure 27-D, on page 93]) does not tell the whole story. Two other factors need to be considered: the proportion of drinking-driving trips and the amount of alcohol usually consumed before these trips.

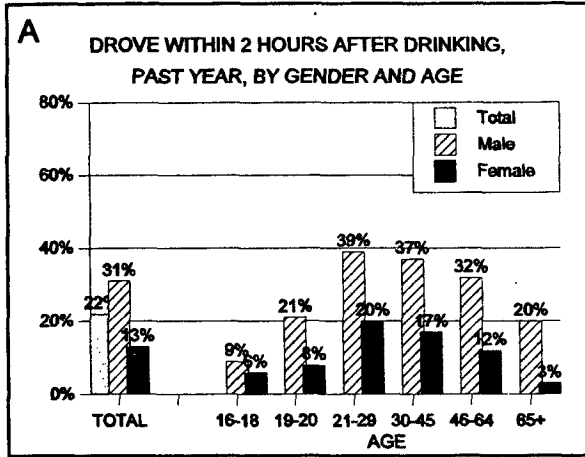
The 65 and older group took only 21% of total past-year drinking-driving trips [Figure 1-C]. This is attributable to population demographics and to the fact that a relatively low percentage, overall, of people 65 and older do any drinking and driving [Figure 1-A]. In contrast, drinking-drivers age 30-45 who are *least* likely to report frequent drinking-driving [Figure 1-B] account for the *greatest* proportion of drinking-driving trips [Figure 1-C].

Considering the quantity of alcohol consumed before making a drinking-driving trip reveals that those drivers age 65 and older who drink and drive do so after having the *fewest* drinks of all age groups [Figure 1-D]. Indeed, compared with 16-20 year olds, the 65 and older group had less than half as many drinks prior to their most recent drinking-driving trip (1.8 vs. 4.1).

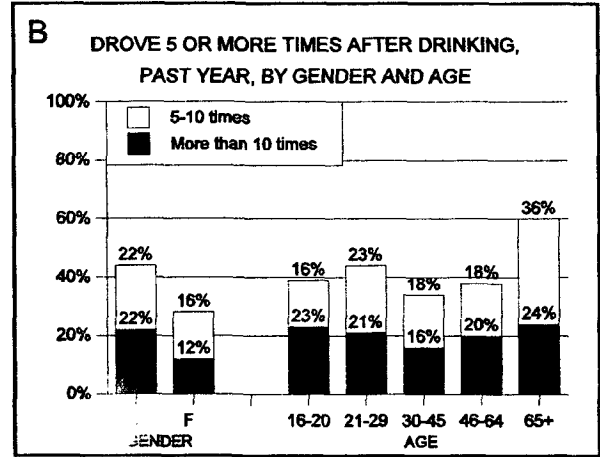
These two factors help to explain why older drivers are not showing up as a problem in alcohol-involved crashes.

¹ "Drinking-drivers", as defined here, drove at least once in the past year within two hours after drinking alcoholic beverages.

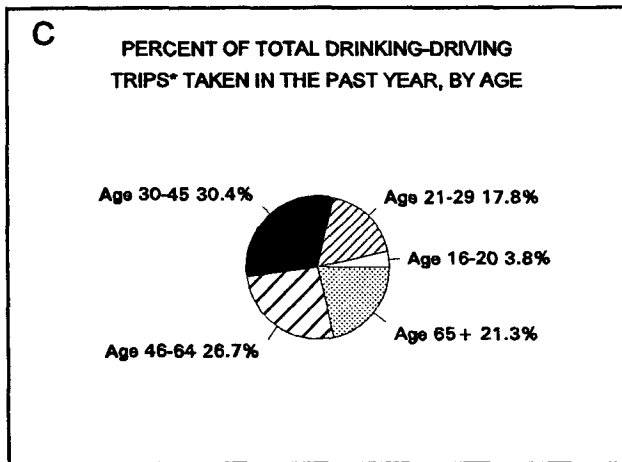
FIGURE 1: DRIVING AFTER DRINKING



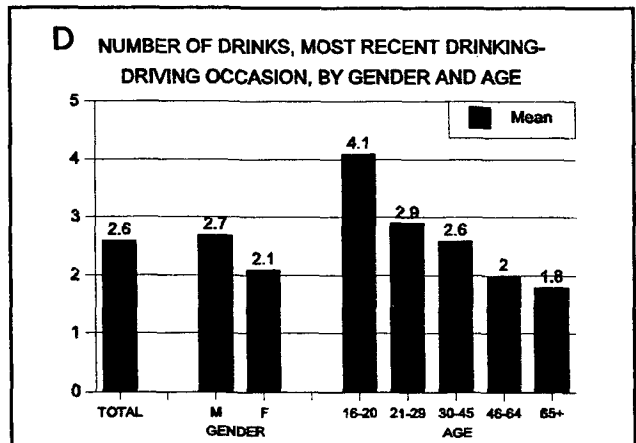
Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: all respondents]



Qx: How many times in the past 12 months have you driven within two hours after drinking any alcohol? [Base: drove after drinking, past year]



Qx: How many times in the past 12 months have you driven within two hours after drinking any alcohol? [Base: past year drinking-driving trips* (calculated by multiplying the mean reported number of trips by the number of respondents)]



Qx: When was the most recent occasion that you drove within two hours of drinking alcoholic beverages?

Qx: How many drinks did you have on that occasion? [Base: drove after drinking, past year]

* A drinking-driving "trip" is defined as an occasion when a driver drove within two hours after drinking any alcohol.

Frequency of Drinking: Drinking-Drivers vs. Others

Those who drove after drinking within the past year ("drinking-drivers") tend to drink much more often than do others of the driving age population (age 16 and older) who drink [Figure 2-A]. More than half of drinking-drivers usually drink alcohol at least one day a week and more than one in five drink several days a week.

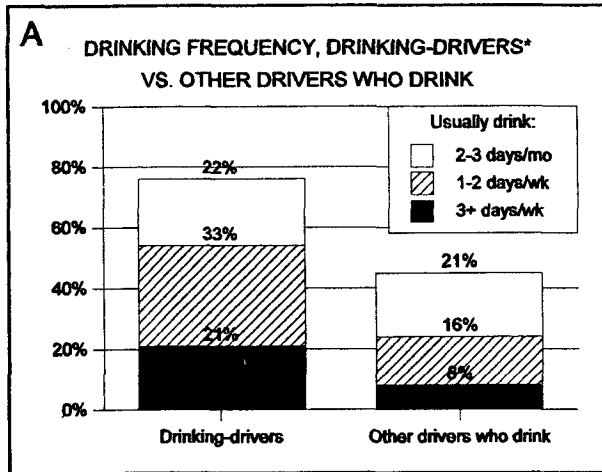
Males are almost twice as likely as females to be very frequent drinkers (three or more days per week) [Figure 2-B]. This difference holds for those who drove after drinking in the past year and those who did not.

Those who drink most often also drove after drinking most often in the past year. More than a third of the most frequent drinkers (three or more days per week) drove after drinking 12 or more times in the past year [Figure 2-C].

Usual Number of Drinks Per Sitting: Drinking-Drivers vs. Others

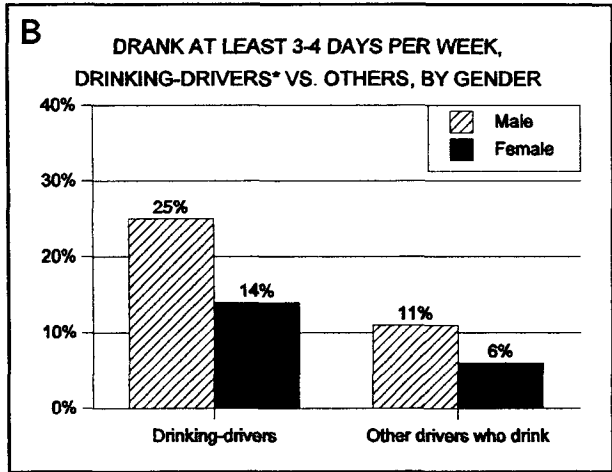
Those who drove after drinking in the past year not only tend to drink more often than other drivers, they also drink more at each sitting. The percentage of drinking-drivers who usually have three or more drinks per sitting is nearly twice that of other drivers who drink but who did not drive after drinking in the past year [Figure 2-D].

**FIGURE 2: DRINKING FREQUENCY AND AMOUNT:
DRINKING-DRIVERS* VS. OTHERS**



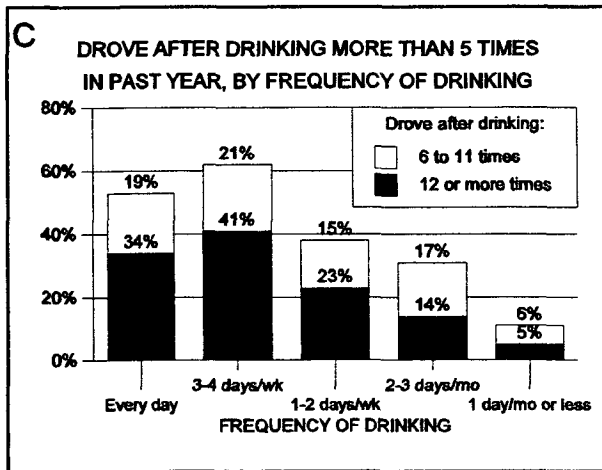
Qx: During the last 12 months, how often did you usually drink any alcoholic beverages, including beer, light beer, wine, wine coolers, or liquor? Would you say you usually drank alcoholic beverages. . . ?

Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? ["Yes" = drinking-drivers]
[Bases: specified in the chart]



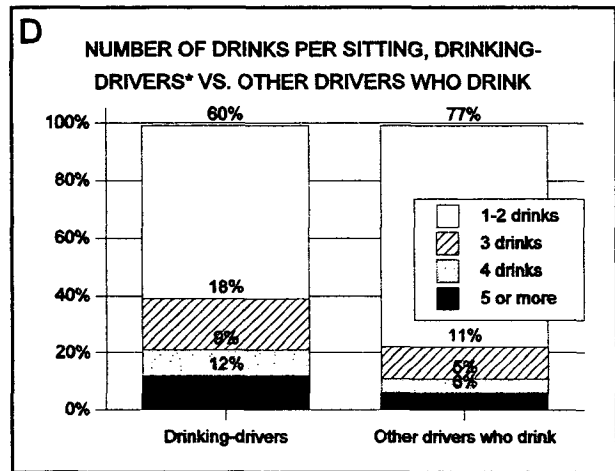
Qx: During the last 12 months, how often did you usually drink any alcoholic beverages, including beer, light beer, wine, wine coolers, or liquor? Would you say you usually drank alcoholic beverages. . . ?

Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? ["Yes" = drinking-drivers]
[Bases: specified in the chart]



Qx: During the last 12 months, how often did you usually drink any alcoholic beverages, including beer, light beer, wine, wine coolers, or liquor? Would you say you usually drank alcoholic beverages. . . ? [Base: all respondents]

Qx: About how many times in the past 12 months would you say that have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drivers who drove after drinking in the past year]



Qx: When you drink [alcoholic beverage drunk most often] about how many [drinks] do you usually drink per sitting?

Qx: In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages? ["Yes" = drinking-drivers]
[Bases: specified in the chart]

* Drove within two hours after drinking in the past year

Drinking Patterns and Driving after Drinking, Past Month

Drinking Patterns, Past Four Weeks

Young people who drink, on average, drink less frequently than do those age 21 and up but they tend to consume more on the days when they do drink [Figure 3-A]. The average (mean) number of days in a four-week period in which they consumed any alcoholic beverages at all increases from about three days for those age 16-18 to about eight days (or about two days of drinking per week) for those age 65 and older.

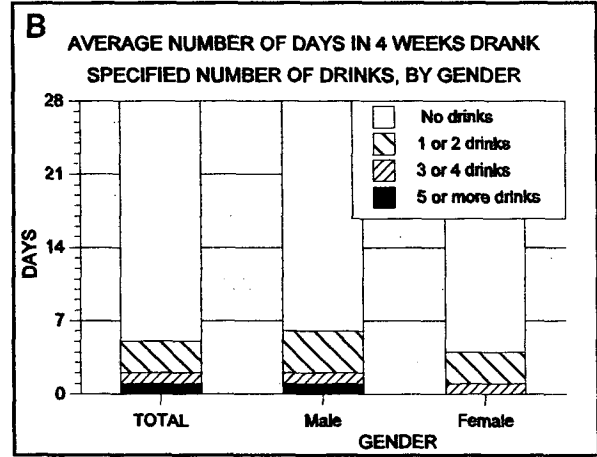
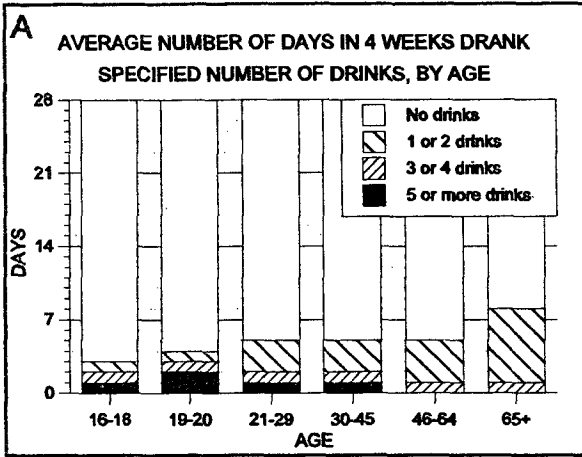
Males drink more often than do females and tend to consume more when they do drink [Figure 3-B]. Females and those age 46 and older averaged less than one day per month in which they had five or more drinks. All others averaged about one day a month of this level of drinking.

Drivers who drove within two hours after drinking in the past year ("drinking-drivers") drink more frequently and in larger amounts than do other drivers who drink [Figure 3-C]. Drinking-drivers drink, on average, nearly two days per week, compared with only one day for other drivers who drink. Drinking-drivers also average one day in a four-week period of having five or more drinks.

Driving after Drinking, Past Month

Although the number of drinking days per month generally increases with age [Figure 3-A] the proportion of drinking-driving trips in the past month is more heavily concentrated in the middle age groups (age 30-45 and 46-64) than in either the youngest or oldest drivers [Figure 3-D].

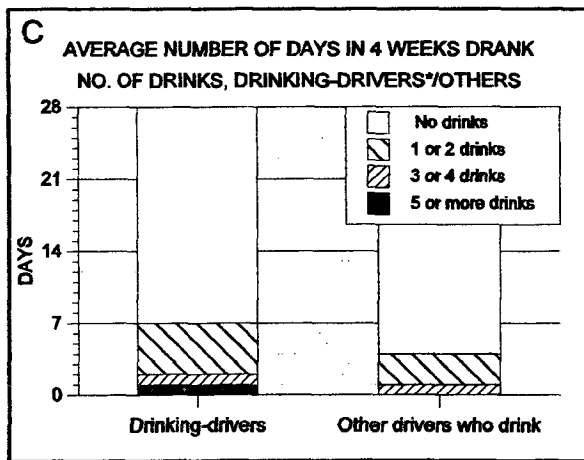
FIGURE 3: DRINKING PATTERNS AND DRIVING AFTER DRINKING, PAST MONTH



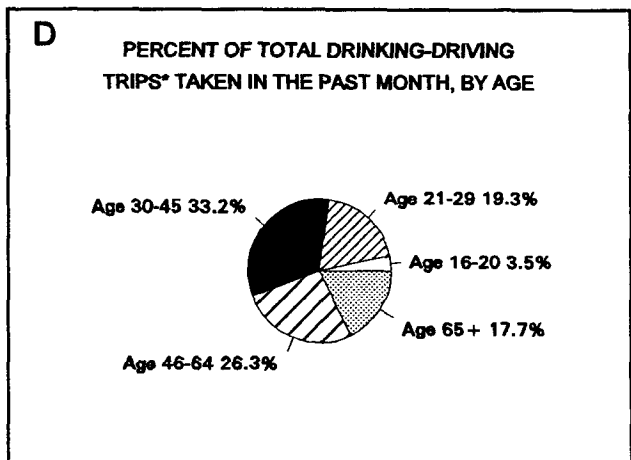
Qx: *People often drink different amounts of alcohol depending on the time, place or occasion. On some days they may drink small amounts, on some days they may drink medium amounts, and on other days they may drink large amounts. Think about the days when you drank alcohol during a typical four-week period (28 days) in the past six months.*

On how many days in this typical four-week period did you not have any alcoholic beverages?

[Of those remaining ___ days that you did drink] on how many days did you have 1 or 2 drinks? 3 or 4 drinks? 5 or more drinks? [Base: drank alcohol in past year]



Qx: [see Figure A,B]



Qx: *In the past 30 days, how many times have you driven within two hours after drinking any alcohol? [Base: past month drinking-driving trips* (calculated by multiplying the mean reported number of trips by the number of respondents)]*

* Drinking-drivers: Drove within two hours after drinking in the past year

"CAGE" Measures of Potential Problem Drinking

This series of questions asks people who drank alcohol in the past year about four dimensions of past year experience that may indicate problem drinking, represented by the acronym "CAGE" (Ewing, 1984): "Have you felt you should cut down ("C" for "cut down") on your drinking?" "Have people annoyed ("A") you about your drinking?" "Have you felt bad or guilty ("G") about your drinking?" "Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover ("E" for "eye-opener")?"

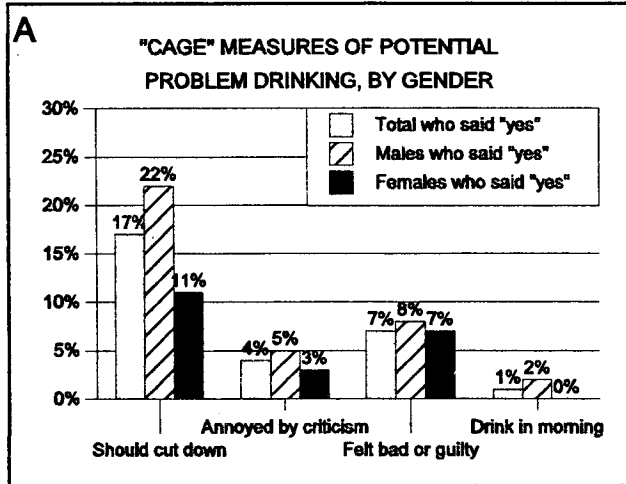
Demographic Differences on CAGE Measures

Males are twice as likely as females to feel they should cut down on their drinking (Figure 4-A). On all four "CAGE" measures, the youngest members of the driving age public most often report having these feelings, with the percentages saying "yes" to each question generally declining with age (Figure 4-B).

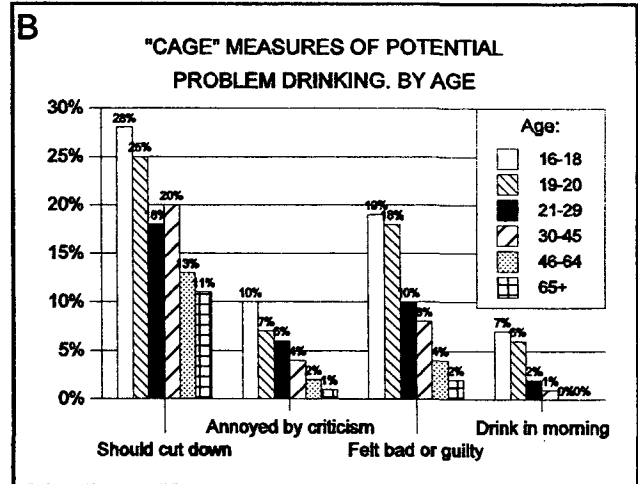
"Problem Drinkers" and Driving after Drinking

For purposes of analysis, "problem drinkers" were defined as meeting at least one of three criteria, described below Figure 4-C. These people comprise 16% of those who drove after drinking in the past year and they took 20% of the drinking and driving trips (a "trip" is one time or occasion that an individual drove after drinking in the past year).

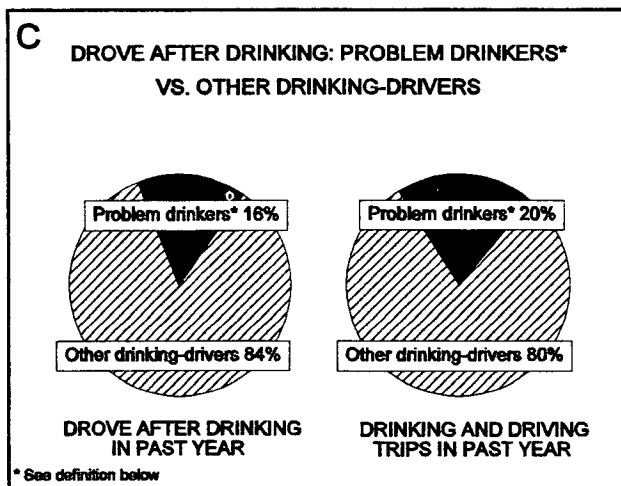
FIGURE 4: POTENTIAL PROBLEM DRINKING AND DRIVING AFTER DRINKING



Qx: *Have you felt you should cut down on your drinking?* ("C")
 Qx: *Have people annoyed you by criticizing your drinking?* ("A")
 Qx: *Have you felt bad or guilty about your drinking?* ("G")
 Qx: *Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover?* ("E") [Base: Drank alcohol in past year]



Qx: *Have you felt you should cut down on your drinking?* ("C")
 Qx: *Have people annoyed you by criticizing your drinking?* ("A")
 Qx: *Have you felt bad or guilty about your drinking?* ("G")
 Qx: *Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover?* ("E") [Base: Drank alcohol in past year]



Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* ["Yes" = drinking-drivers]
 Qx: *About how many times in the past 12 months would you say that you have driven within two hours after drinking any alcohol?* [each time = 1 "trip"]

* "Problem drinkers" are defined as those who meet at least one of the following three conditions: (a) said "yes" to two or more of the "CAGE" measures; (b) consumed five or more drinks on four or more days in a typical four-week period; or (c) for females, consumed eight or more drinks on a given day in the past four weeks, or for males, consumed nine or more drinks on a given day in the past four weeks (Ewing, 1984; Skinner and Holt, 1987).

Most Recent Occasion of Driving After Drinking

Interviewers asked those who had driven a vehicle within two hours after drinking in the past year ("drinking-drivers") about the most recent occasion when they had done so. Asking about the most recent occasion allows individuals to focus on the drinking-driving event they are likely to recall most accurately. Although it may not be typical of an individual's experience as a drinking-driver, in aggregate, it serves as a useful proxy for the experiences of drinking-drivers as a whole. Data on the details of the event (amount consumed, over what time period, at what location, etc.) will assist in the development of targeted, situation-specific countermeasures.

When the Occasion Occurred

For about a third of drinking-drivers (32%), the occasion had been within the past week. Only 5% said it was more than six months ago [Figure 5-A].

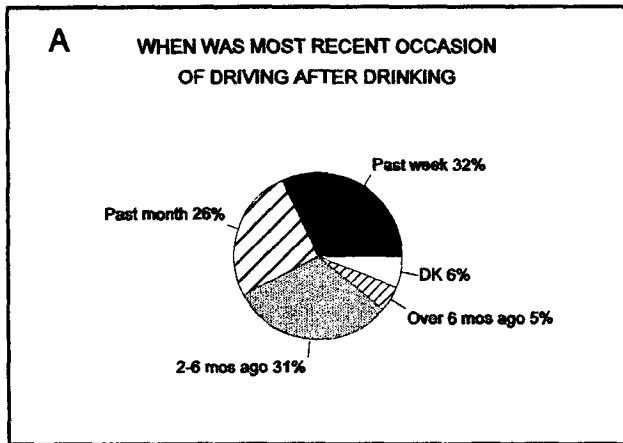
Where the Drinking Took Place

The drinking most often occurred at another's home (25%), a restaurant (23%) or a bar or tavern (21%) [Figure 5-B].

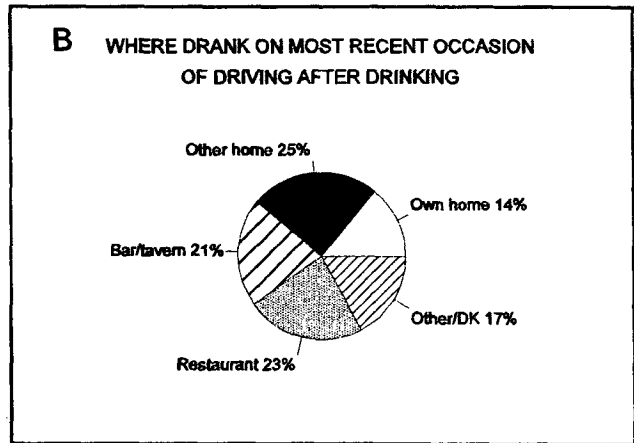
Amount of Alcohol Consumed

Drinking-drivers had consumed, on average, about 2½ drinks on their most recent drinking and driving occasion. However, young drinking-drivers (age 16-20) reported having drunk an average of four drinks [Figure 5-C]. There is a general decline with age in the average number of drinks consumed on the most recent drinking-driving occasion; however, there is some variability due to small sample sizes [Figure 5-D].

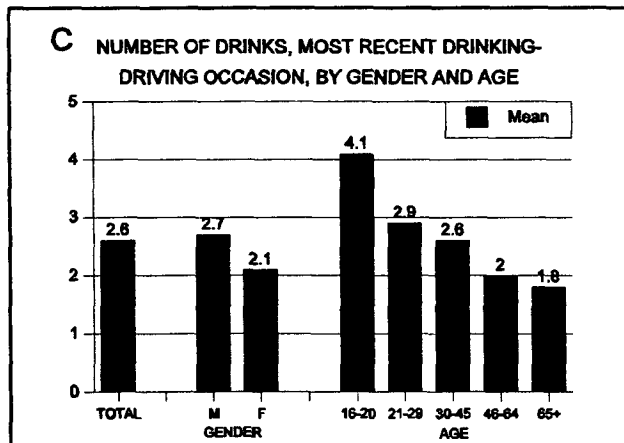
FIGURE 5: MOST RECENT OCCASION OF DRIVING AFTER DRINKING



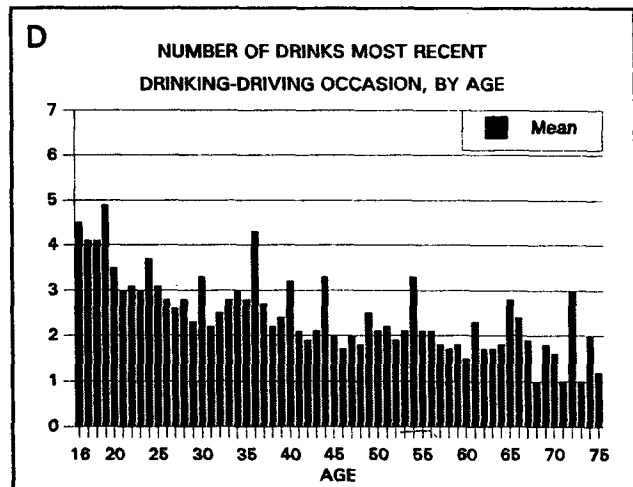
Qx: When was the most recent occasion that you drove within two hours of drinking alcoholic beverages? [Base: drove after drinking, past year]



Qx: Where did you drink on that occasion? [Base: drove after drinking, past year]



Qx: How many drinks did you have on that occasion? [Base: drove after drinking, past year]



Qx: How many drinks did you have on that occasion? [Base: drove after drinking, past year]

Most Recent Occasion of Driving After Drinking (cont.)

Over What Time Period Was the Alcohol Consumed

The average time was just under three hours. Females, who tended to drink somewhat less, also tended to drink over a longer period of time than did males [Figure 5-E].

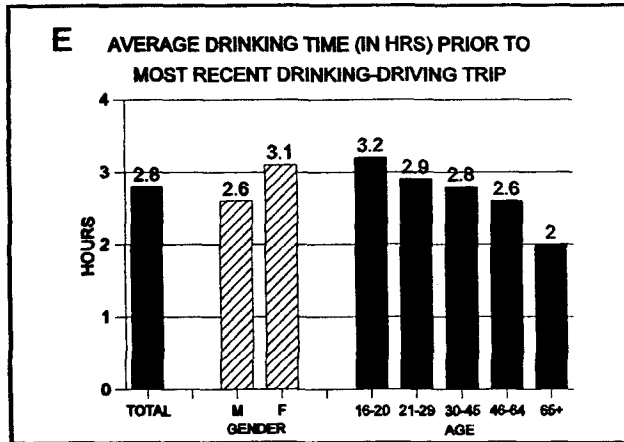
Time From Last Drink to Start Driving

The average time from the last drink until the person started driving was about an hour and a half. Males tended to drive sooner after drinking than females, and drivers in their 20s drove sooner than those in other age groups [Figure 5-F].

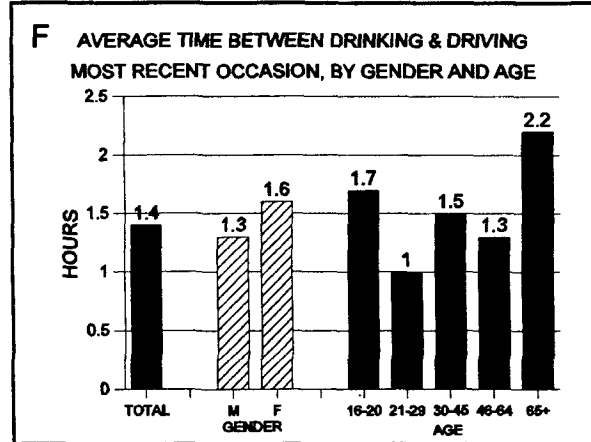
Distance Driven

About half of drinking-drivers drove five miles or less after drinking; however, 44% drove more than five miles after drinking [Figure 5-G].

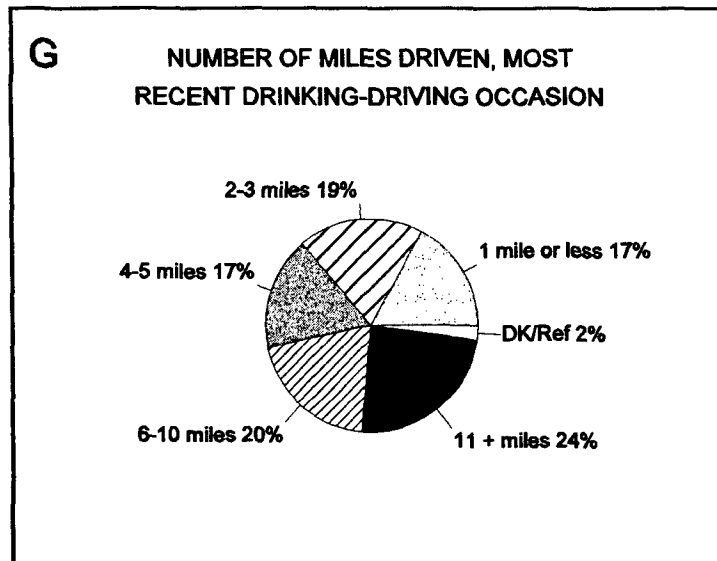
FIGURE 5 (cont.): MOST RECENT OCCASION OF DRIVING AFTER DRINKING



Qx: Over what length of time (in hours) did you have those drinks? [Base: drove after drinking, past year]



Qx: How long (in hours) after your last drink did you start driving? [Base: drove after drinking, past year]



Qx: About how many miles did you drive on this occasion? [Base: drove after drinking, past year]

DRINKING AND DRIVING VIOLATIONS

Total Population

About 2% of the driving age public (age 16 and older) have been stopped by police in the past year for suspicion of a drinking and driving law violation [Figure 6-A]. Of those stopped, 18% were arrested for a drinking and driving violation [Figure 6-B].

Drinking-Drivers

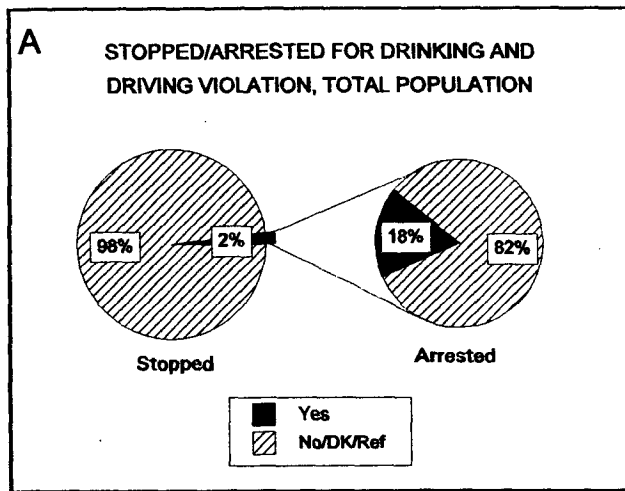
Drivers who drove within two hours after drinking in the past year ("drinking-drivers") were three times as likely as the total driving age population to have been stopped for suspicion of a drinking and driving violation and somewhat more likely to have been arrested if stopped.

Age and Gender Differences

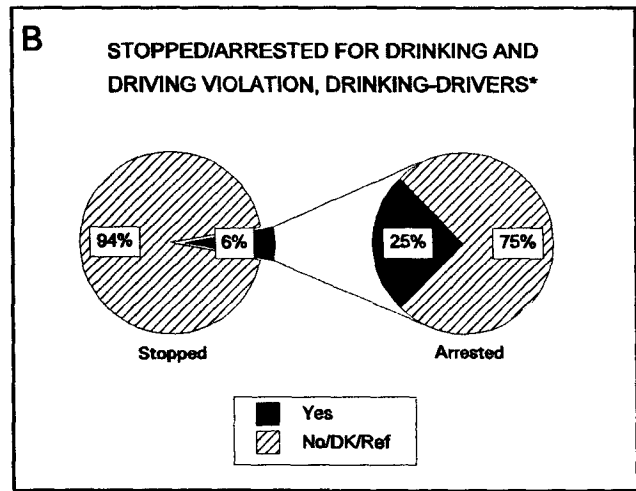
Males were about four times as likely as females to have been stopped by police in the past year on suspicion of a drinking and driving law violation and about seven times as likely to have been arrested [Figure 6-C].

The highest percentage of the driving age public stopped by police for suspicion of drinking and driving of any age and gender category was among male drivers age 19-20, followed by male drivers in their 20s. These two groups also had the highest percentage of drinking-driving arrests overall [Figure 6-D]. [These results should be viewed cautiously because of the small number of respondents (1-6 people) arrested in each age-and-gender category.]

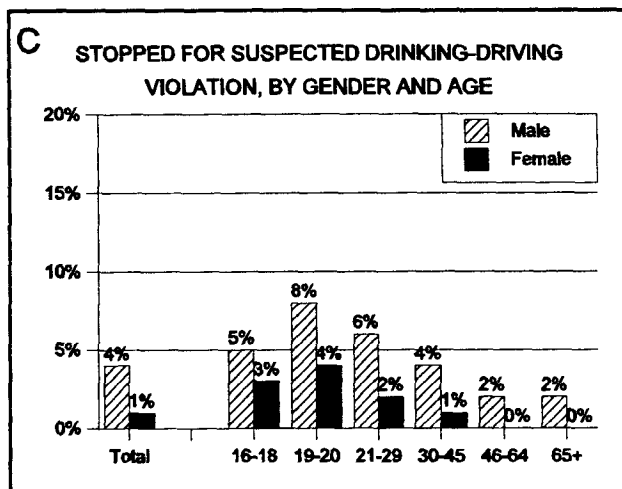
FIGURE 6: SUSPECTED AND ACTUAL DRINKING AND DRIVING VIOLATIONS



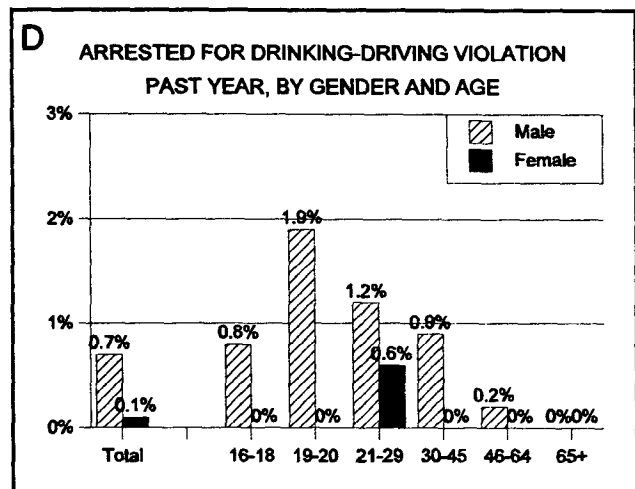
Qx: In the past 12 months, have you been stopped by a police officer who suspected you of drinking and driving? [Base: all respondents]
 Qx: Were you arrested for a drinking and driving violation in the past 12 months? [Base: stopped for suspicion of a drinking-driving violation]



Qx: In the past 12 months, have you been stopped by a police officer who suspected you of drinking and driving? [Base: drove within two hours after drinking in past year]
 Qx: Were you arrested for a drinking and driving violation in the past 12 months? [Base: drinking-drivers stopped for suspicion of a drinking-driving violation]



Qx: In the past 12 months, have you been stopped by a police officer who suspected you of drinking and driving? [Base: all respondents]



Qx: Were you arrested for a drinking and driving violation in the past 12 months? [Base: all respondents]

* Drinking-drivers: Drove within two hours after drinking in the past year

RIDING WITH DRIVERS WHO DRANK TOO MUCH TO BE SAFE

There are two primary ways in which individuals have direct control over putting themselves at risk for an alcohol-involved crash: drinking and driving themselves and riding with drinking-drivers.

About one in ten persons age 16-64 has, in the past year, ridden with a driver they thought might have consumed too much alcohol to drive safely. Young people (age 16-20) and males age 21-29 are most likely to have done so [Figure 7-A].

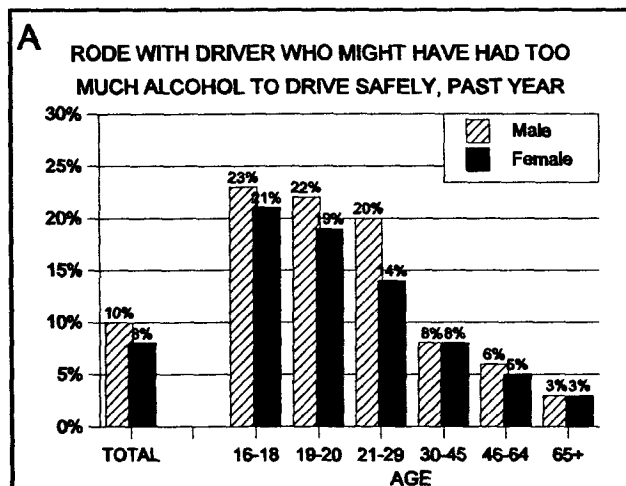
Drivers Who Drink, Drivers Who Do Not Drink, and Non-Drivers

Drivers who do not drink at all are about half as likely as drivers who drink or non-drivers to have ridden with someone who they believe had consumed too much alcohol to drive safely [Figure 7-B].

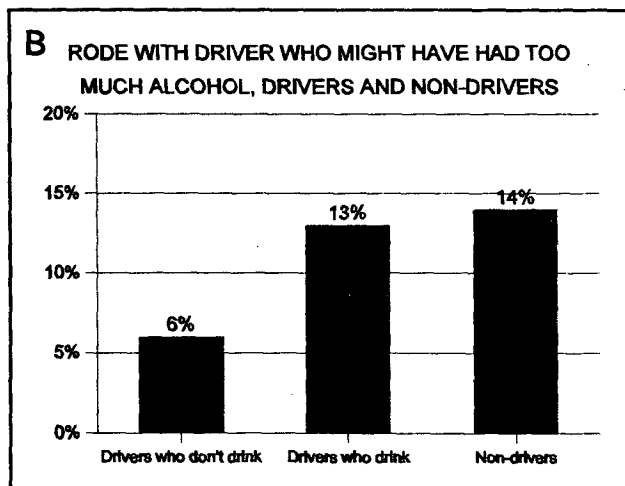
Came to Believe the Driver Was Unsafe Before or After Riding

Interviewers asked those who had in the past year ridden with a driver they believed may have consumed too much alcohol to drive safely about the most recent occasion when they had done so. Most of those who rode with such a driver decided the driver was unsafe after they were already riding in the vehicle [Figure 7-C]. However, a third decided the driver was unsafe before riding in the vehicle. Females were more likely than males to have ridden with a driver who they had decided was unsafe before riding in the vehicle [Figure 7-D].

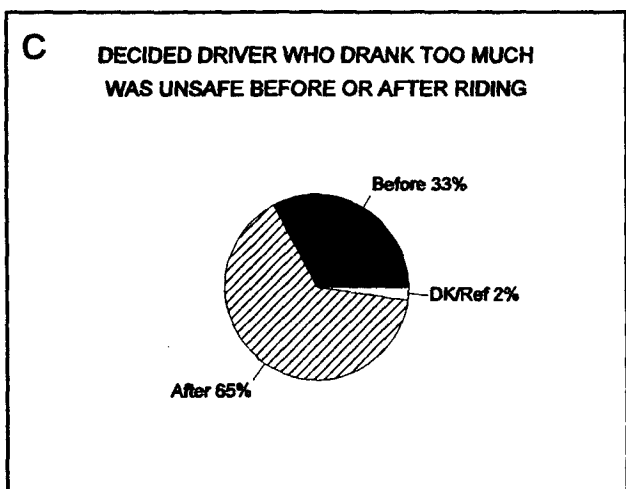
FIGURE 7: RIDING WITH DRIVERS WHO DRANK TOO MUCH TO DRIVE SAFELY



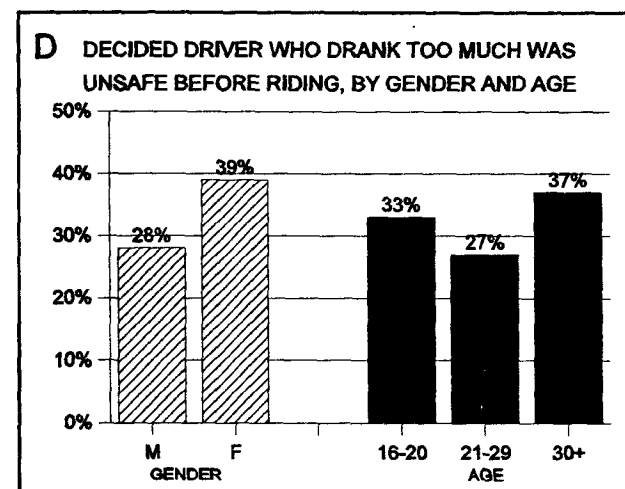
Qx: In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely? [Base: all respondents]



Qx: In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely? [Base: specified in the chart]



Qx: Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the vehicle? [Base: rode with driver who may have consumed too much alcohol to drive safely, past year]



Qx: Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the vehicle? [Base: rode with driver who may have consumed too much alcohol to drive safely, past year]

YOUTH DRINKING AND DRIVING PROFILE

Past Year Drinking and Driving

Youth age 16-18 and 19-20, both males and females, were less likely to have driven within two hours after drinking in the past year than were persons of their same gender age 21 and older. However, more than one in five 19-20 year old males drove after drinking in the past year [Figure 8-A].

Changes in Youth Drinking and Driving

There are indications of a decline since 1993 in the percentage of youth who drove after drinking in the past year, most noticeably among 19-20 year olds [Figure 8-B].

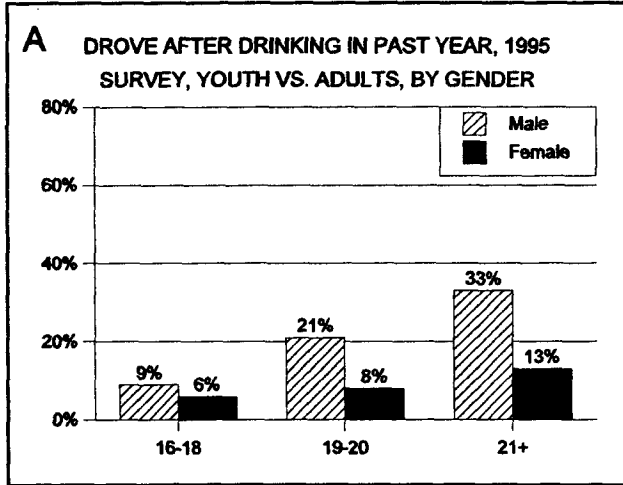
Riding with a Driver Who Drank Too Much to Be Safe

Both males and females age 16-20 were much more likely than those 21 and older to have, in the past year, ridden with a driver they thought might have consumed too much alcohol to drive safely [Figure 8-C].

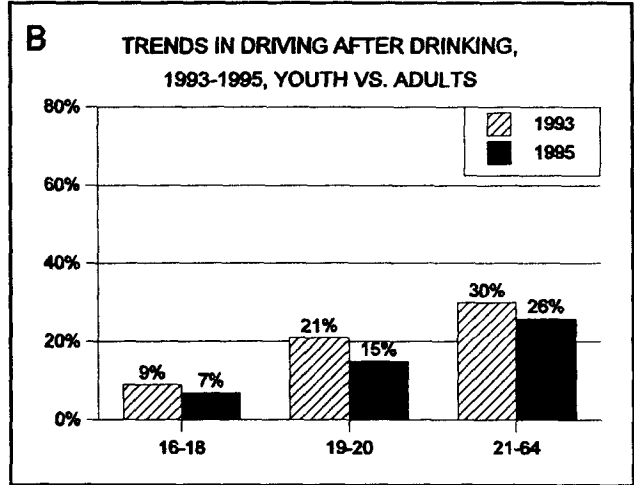
Changes in Riding with Drivers Who Drank Too Much to Be Safe

As with youth drinking and driving, there are indications of a decline since 1993 in the percentage of youth who rode with someone they thought may have had too much alcohol to drive safely, both among those age 16-18 and those age 19-20, as well as of adults [Figure 8-D]. However, because the sample sizes are relatively small, it will be important to monitor this pattern in future surveys to see whether these early indications do, in fact, reflect a trend.

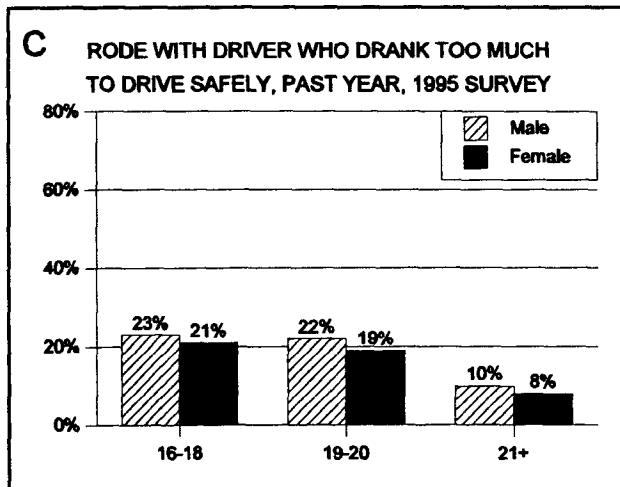
FIGURE 8: YOUTH DRINKING AND DRIVING; RIDING WITH DRIVERS WHO DRANK TOO MUCH TO DRIVE SAFELY



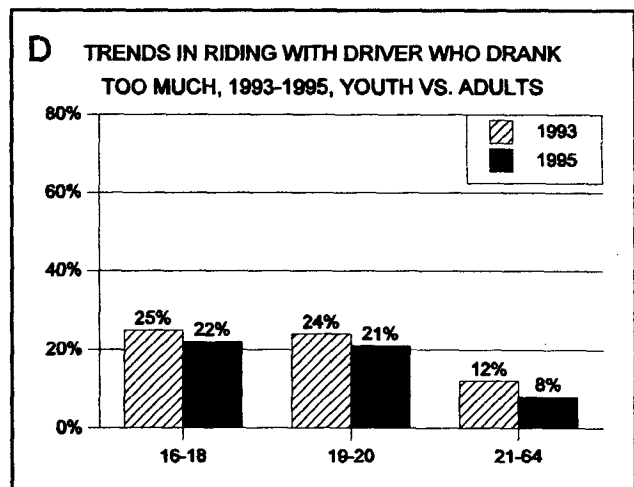
Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: All respondents]



Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: All respondents]



Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents]



Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents]

BELIEFS ABOUT DRINKING AND DRIVING

The survey addressed the driving age public's beliefs on these topics:

- Are most people who drive after drinking alcoholics or problem drinkers?
- Is drinking and driving by people who are not alcoholics or problem drinkers a serious highway safety problem?
- Does scientific research show that having only one drink will impair driving?
- Has scientific evidence shown that any amount of alcohol impairs driving?
- How much is drinking and driving by other people a threat to the personal safety of an individual and his or her family?
- How important is it that something be done about the problem of drinking and driving?
- Should people be allowed to drive if they have been drinking any alcohol at all?
- How many drinks could a person drink in two hours before he or she should not drive?

Are Most People Who Drink and Drive Problem Drinkers?

A majority of the driving age public agree that most people who drive after drinking too much are problem drinkers or alcoholics [Figure 9-A].

Are Non-Problem Drinkers a Serious Highway Safety Problem?

The public strongly agrees that drinking and driving by people who are not alcoholics or problem drinkers is a serious highway safety problem [Figure 9-B].

Will Having Only One Drink Impair Driving?

A majority of the driving age public thinks that scientific research has shown that having only one drink will not impair driving [Figure 9-C].

Will Any Amount of Alcohol Impair Driving?

In what appears to be a contradictory opinion, two-thirds of people age 16 and older believe that scientific research has shown that any amount of alcohol impairs driving. The apparently contradictory opinions on the last two questions given by a majority of the driving age public ("one drink will not impair driving" versus "any amount of alcohol impairs driving") suggest that either the questions were not clear or the public is somewhat confused about the issue [Figure 9-D].

FIGURE 9: BELIEFS ABOUT DRINKING AND DRIVING

Qx: For each of the following statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. [Base: all respondents]

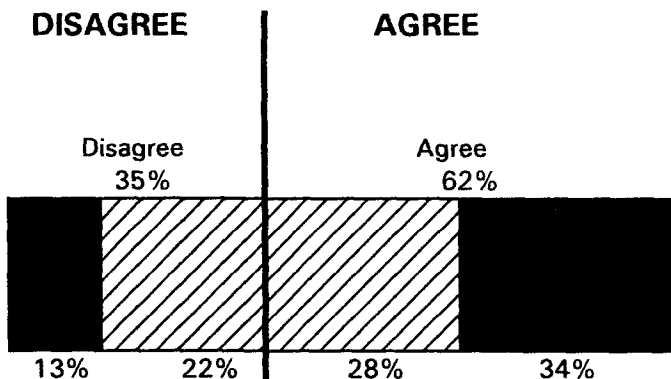
 Somewhat

 Strongly

A ARE MOST PEOPLE WHO DRINK AND DRIVE PROBLEM DRINKERS?

Qx: *Most people who drive after drinking too much alcohol are alcoholics or problem drinkers.*

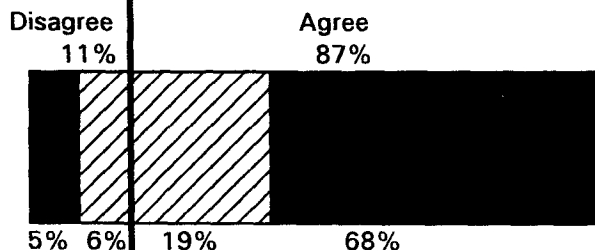
Not sure = 3%



B ARE NON-PROBLEM DRINKERS A SERIOUS HIGHWAY SAFETY PROBLEM?

Qx: *Drinking and driving by people who are not alcoholics or problem drinkers is a serious highway safety problem.*

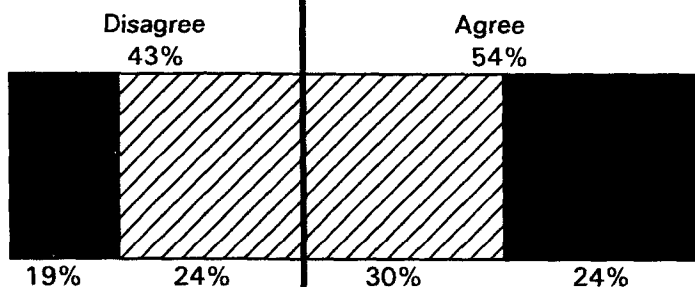
Not sure = 2%



C WILL HAVING ONLY ONE DRINK IMPAIR DRIVING?

Qx: *Scientific research shows that having only one drink will not impair driving.*

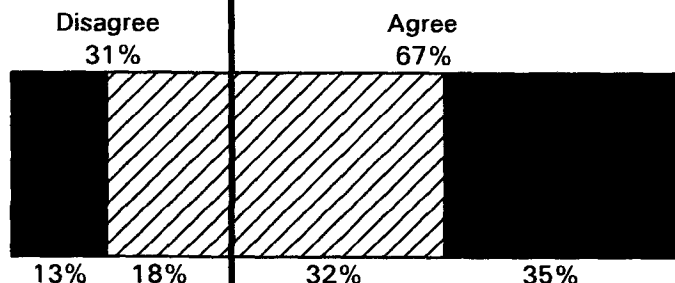
Not sure = 2%



D DOES ANY AMOUNT OF ALCOHOL IMPAIR DRIVING?

Qx: *Scientific evidence has shown that any amount of alcohol impairs driving.*

Not sure = 2%



How Much is Drinking and Driving a Threat to Personal Safety?

Virtually all people age 16 and older (97%) consider drinking and driving by others a threat to the personal safety of themselves and their families, and 80% of them consider it a "major threat" [Figure 10-A].

How Important is it That Something Be Done?

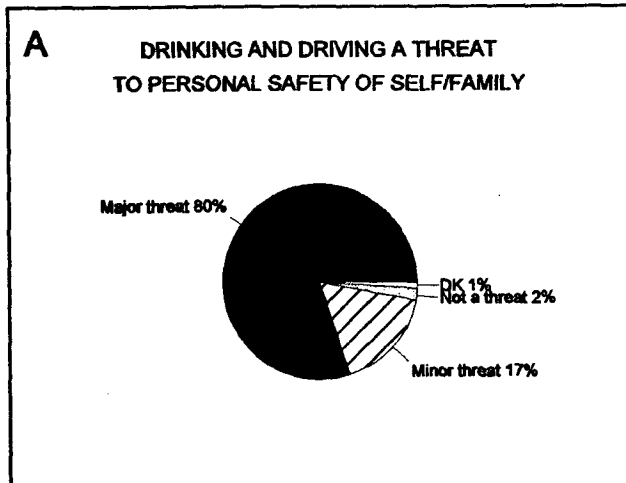
An even higher percentage (99%) think it is important that something be done about the problem of drinking and driving, including 87% who say it is "very important" that something be done [Figure 10-B].

Should People Be Allowed to Drive After Drinking At All?

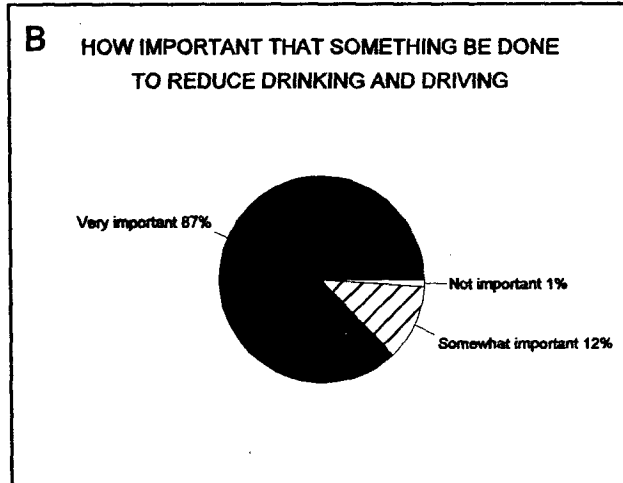
More than half the population age 16 and older strongly agree with the statement that "People should not be allowed to drive if they have been drinking any alcohol at all." Another 20% agree somewhat with this statement [Figure 10-C].

People who drove within two hours of drinking in the past year are much less likely to agree with this view; however, even among those who drive after drinking, more than half strongly or somewhat agree that people who have drunk any alcohol at all should not be allowed to drive [Figure 10-D].

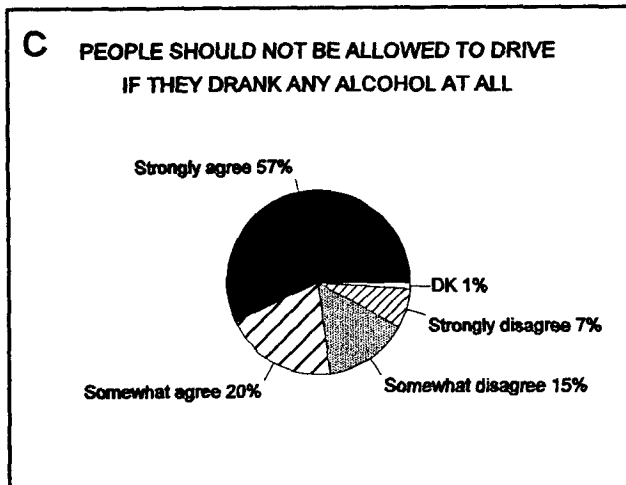
FIGURE 10: BELIEFS ABOUT DRINKING AND DRIVING (cont.)



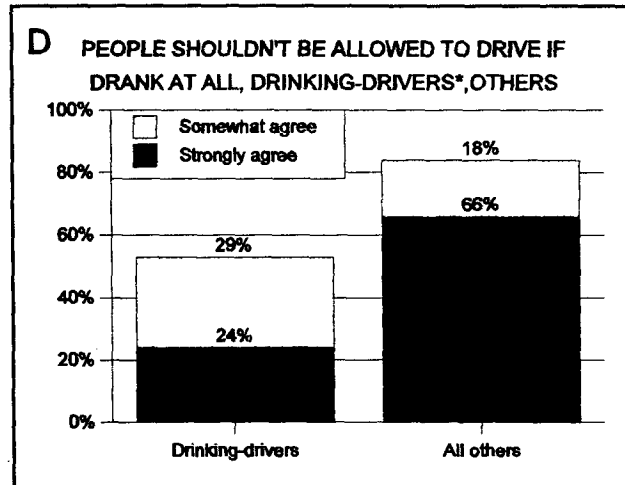
Qx: *In your opinion, how much is drinking and driving by other people a threat to the personal safety of you and your family?* [Base: all respondents]



Qx: *How important is it that something be done to reduce drinking and driving?* [Base: all respondents]



Qx: *For [each of] the following statement[s], please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. People should not be allowed to drive if they have been drinking any alcohol at all.* [Base: all respondents]



Qx: *For [each of] the following statement[s], please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. People shouldn't be allowed to drive if they have been drinking any alcohol at all.* [Base: specified in the chart]

* Drinking-drivers: Drove within two hours after drinking in the past year

Amount of Alcohol Before One Should Not Drive

When asked about the number of drinks of their usual alcoholic beverage that they could consume before they should not drive, fully 74% said they should not drive after 4 or fewer drinks [Figure 11-A]. It is noteworthy that this is equivalent to a BAC level of .06 or less for an average 170 lb. male drinking within a two-hour period on an empty stomach -- well under the legal limit in all states.

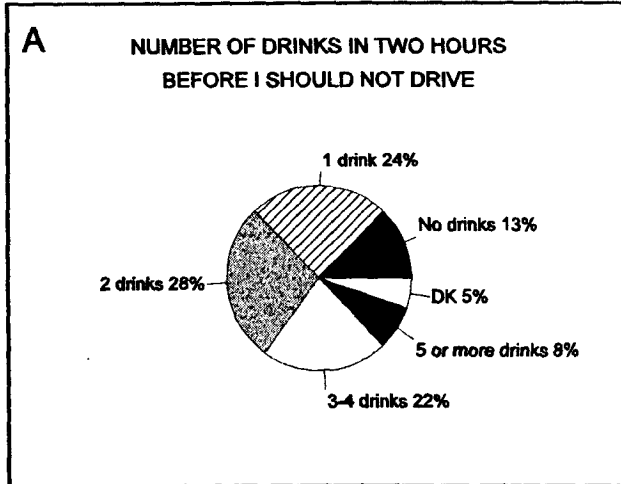
Age and Gender Differences

Beliefs about the number of drinks they could consume before they should not drive vary considerably by age and gender. Males (correctly) think they could drink more than females before becoming an unsafe driver. In general, younger drivers think they can drink more before they should not drive than do older drivers [Figure 11-B].

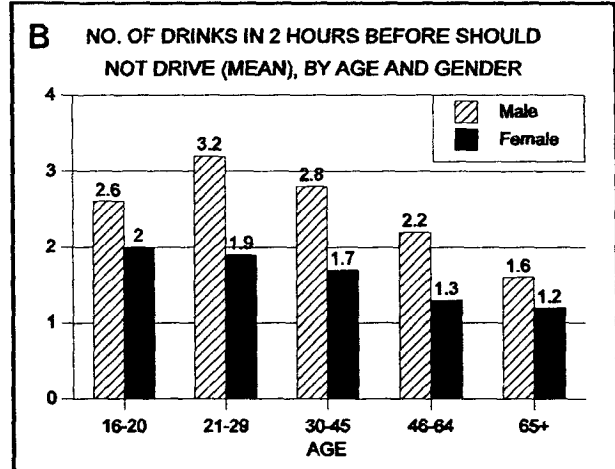
Drinking-Drivers vs. Other Drivers Who Drink

Drivers who drove within two hours after drinking in the past year ("drinking-drivers") believe a person can drink more alcohol before they should not drive than do other drivers who drink [Figure 11-C].

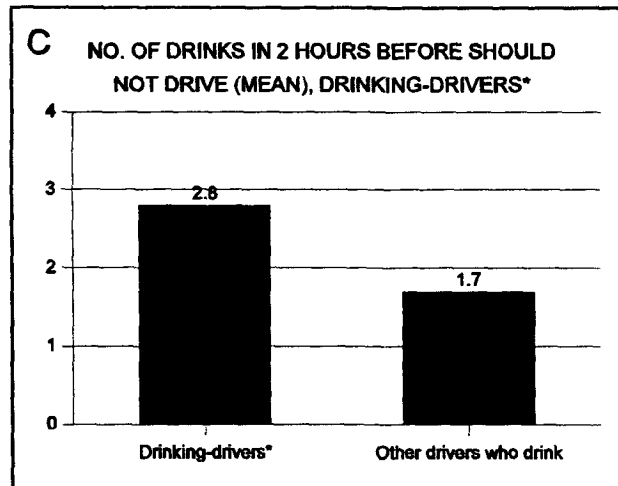
FIGURE 11: AMOUNT OF ALCOHOL BEFORE ONE SHOULD NOT DRIVE



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Base: Drivers who drink]



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Base: Drivers who drink]



Qx: How many [drinks of alcoholic beverage drunk most often] could you drink in two hours before you should not drive? [Bases: specified in the chart]

* Drinking-drivers: Drove within two hours after drinking in the past year

2: PREVENTING DRINKING AND DRIVING

This section discusses ways in which individuals attempt to prevent themselves or others from driving after drinking. It includes two broad categories of actions: prevention and intervention. Prevention involves taking action in advance of a potential drinking and driving situation to keep those who will drink from driving or those who will drive from drinking. Intervention occurs when an individual sees or suspects that a driver has already become impaired and takes action to try to stop the person from driving in their impaired condition.

This section covers the following topics from the 1995 survey:

- **Personal actions to avoid drinking and driving**
- **Actions by hosts of social occasions for adults to prevent their guests from drinking and driving**
- **Use of designated drivers**
- **Intervention with friends who had too much to drink to drive safely**

PERSONAL ACTIONS TO AVOID DRINKING AND DRIVING

What actions did drivers who at least sometimes drink take in the past year to avoid drinking and driving?

All Drivers Who Drink

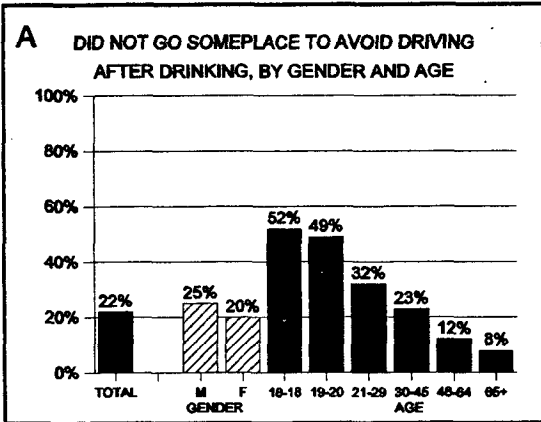
- Only about one in five (22%) chose not to go to someplace because they did not want to drive after drinking [Figure 12-A].
- The most commonly used strategy (by 67% of drivers who drink) was not to drink any alcohol when they were at an event where alcohol was being served [Figure 12-B].
- A third or more of drivers who drink reported having decided not to drive after they had been drinking (39%) [Figure 12-C] or having made prior arrangements not to drive to a social event where they expected to drink (33%) [Figure 12-D].

The mean number of times each strategy was used was five or six times, and the median was about three times [Figure 12-E].

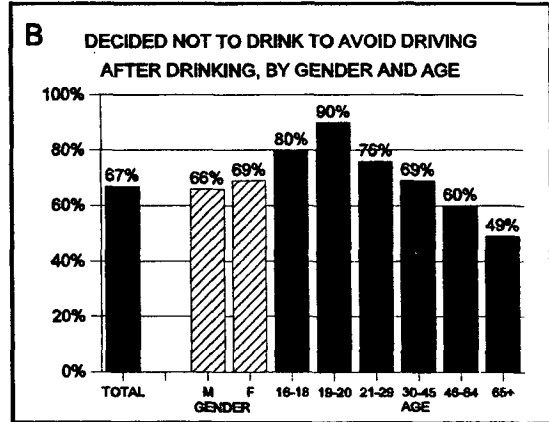
Age and Gender Differences

Younger drivers (particularly those age 19-20) were most likely to have used each of these strategies, with percentages declining markedly with age [Figure 12A-D]. A substantially higher percentage of males than females (45% vs. 31%) drove someplace, drank, then did not drive afterward.

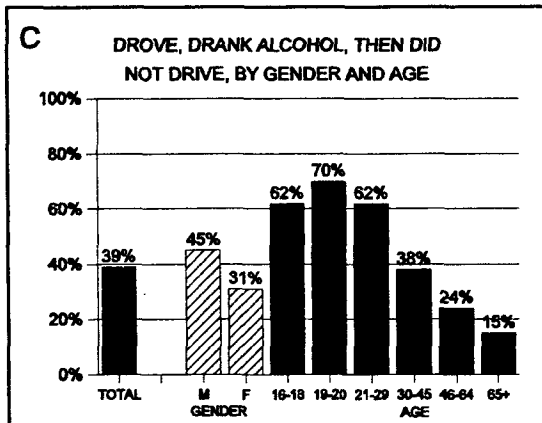
FIGURE 12: PERSONAL ACTIONS TO AVOID DRINKING AND DRIVING



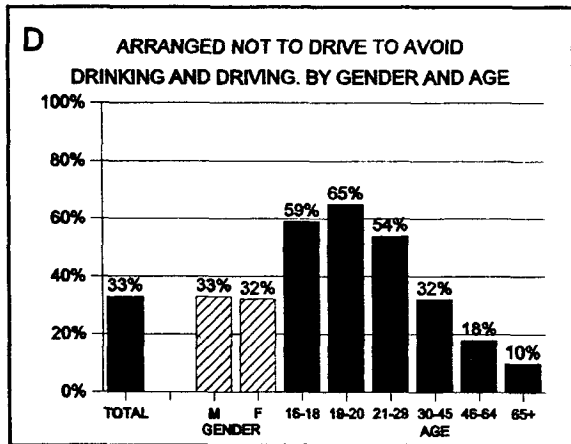
Qx: *In the past year, did you ever decide not to go someplace because you did not want to drive after drinking?* [Base: drivers who drink]



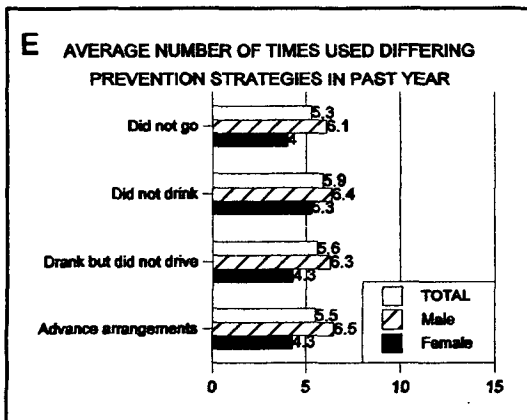
Qx: *In the past year, did you ever go someplace where alcohol was present, but decided not to drink any alcohol because you did not want to drive after drinking?* [Base: drivers who drink]



Qx: *In the past year, did you ever drive someplace, drink alcohol, and then not drive afterward because you did not want to drink and drive?* [Base: drivers who drink]



Qx: *In the past year, did you make arrangements ahead of time not to drive to a social event because you wanted to avoid driving after drinking?* [Base: drivers who drink]



Qx: *In the past year, did you ever decide not to go someplace because you did not want to drive after drinking?*

Qx: *In the past year, did you ever go someplace where alcohol was present, but decided not to drink any alcohol because you did not want to drive after drinking?*

Qx: *In the past year, did you ever drive someplace, drink alcohol, and then not drive afterward because you did not want to drink and drive?*

Qx: *In the past year, did you make arrangements ahead of time not to drive to a social event because you wanted to avoid driving after drinking?*

Avoided Driving When Had Too Much to Drink

All Drivers Who Drink

Did drivers who drink report having deliberately avoided driving because they thought they probably had too much to drink to drive safely? Those who had driven after drinking in the past year ("drinking-drivers") were more likely than other drivers who drink to have avoided driving because they had too much to drink [Figure 13-A].

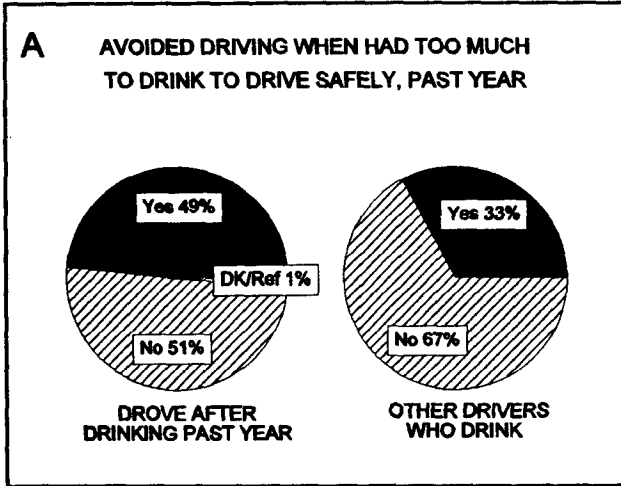
Age and Gender Differences

Overall, males were more likely than females to have avoided driving when they drank too much alcohol at some time in the past year. However, among drivers from age 19-20 who drink, females were more likely than males to have taken this action [Figure 13-B].

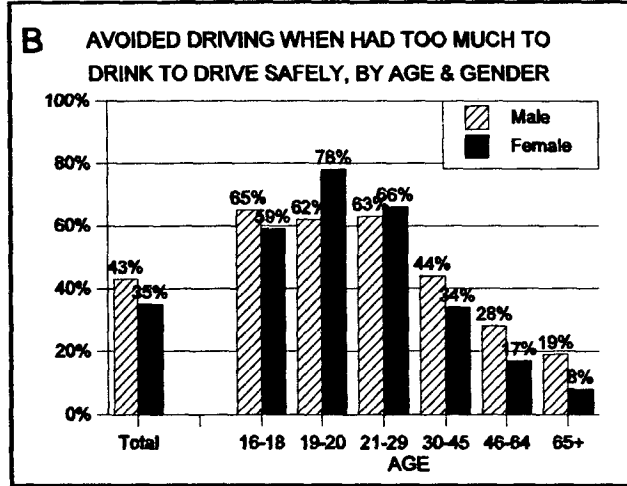
Actions Taken to Avoid Driving When Had Too Much to Drink

Drivers who had avoided driving after drinking too much were asked what they did to avoid driving. Most rode with another driver [Figure 13-C]. Those in the 16-20 year old age group were more than twice as likely as those in older age categories to have stayed overnight to avoid driving [Figure 13-D].

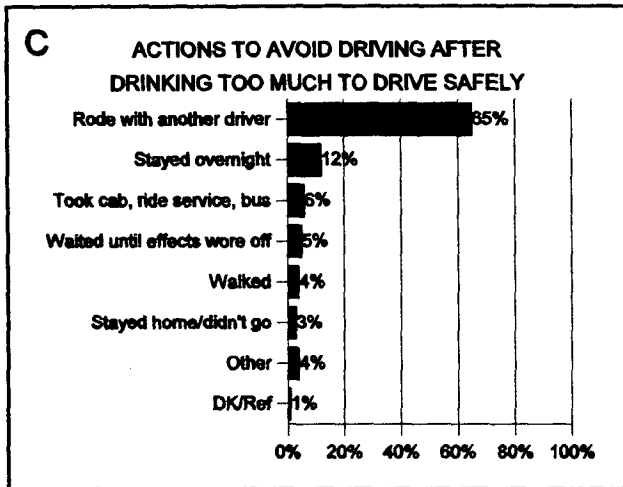
FIGURE 13: AVOIDED DRIVING WHEN HAD TOO MUCH TO DRINK



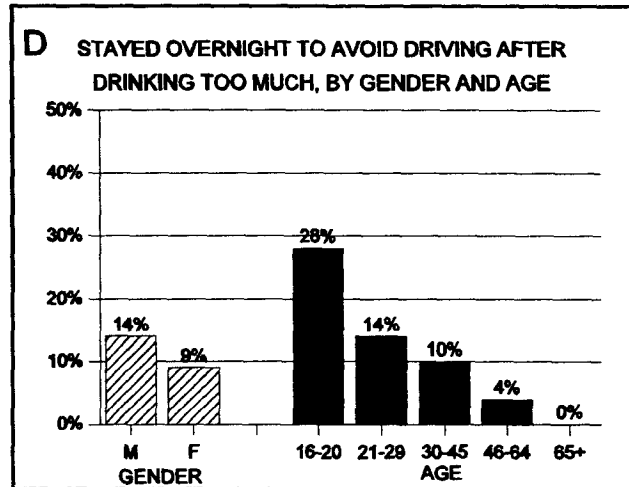
Qx: In the past 12 months, have you ever deliberately avoided driving a motor vehicle because you felt you probably had too much to drink to drive safely? [Bases: specified in the chart]



Qx: In the past 12 months, have you ever deliberately avoided driving a motor vehicle because you felt you probably had too much to drink to drive safely? [Base: drivers who drink]



Qx: On the most recent time that you deliberately avoided driving after drinking, how did you do it? [Base: avoided driving after drinking, past year]



Qx: On the most recent time that you deliberately avoided driving after drinking, how did you do it? [Base: avoided driving after drinking, past year]

ACTIONS BY HOSTS TO PREVENT DRINKING AND DRIVING

Hosts of social occasions for adults can sometimes help prevent their guests from drinking and driving. Interviewers asked hosts if they served alcoholic beverages and, if so, whether they did anything to keep their guests from drinking and driving.

Whether Hosts Served Alcohol

About 40% of those age 16 and older hosted a social event for adults in the past year [Figure 14-A]. Almost two thirds of these hosts served alcohol.

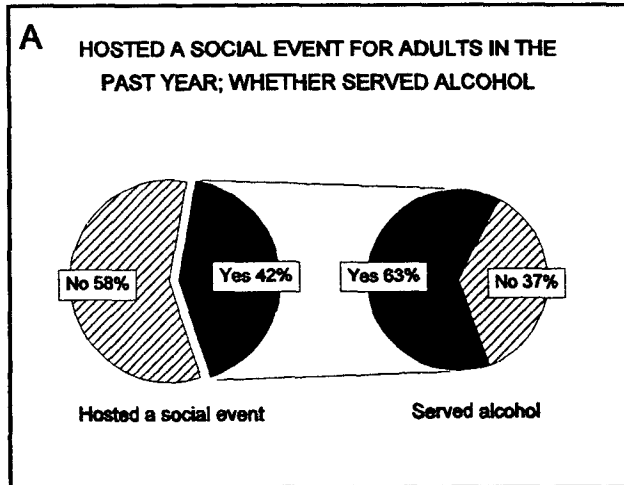
Keep Drinking Guests from Driving

When hosts were planning the most recent event where they served alcohol, 44% acted to keep guests who were going to drink from driving [Figure 14-B], most commonly arranging for them to stay overnight or for others to drive them home [Figure 14-C].

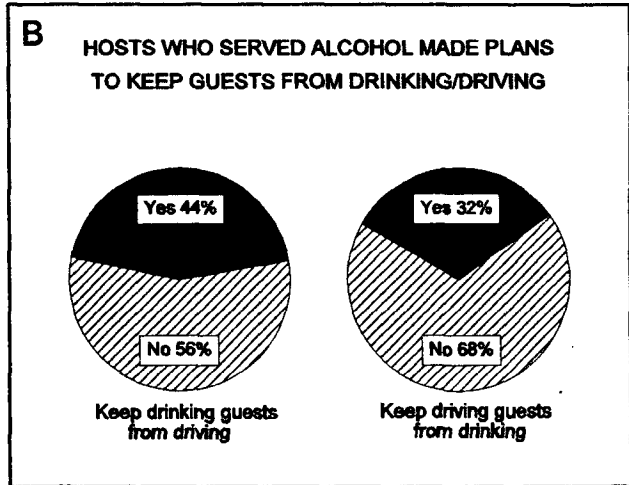
Keep Driving Guests from Drinking

About a third of hosts took some action, when planning the last social occasion where they served alcohol, to help guests who were going to drive to refrain from drinking [Figure 14-B]. Most commonly, they served non-alcoholic beverages [Figure 14-D].

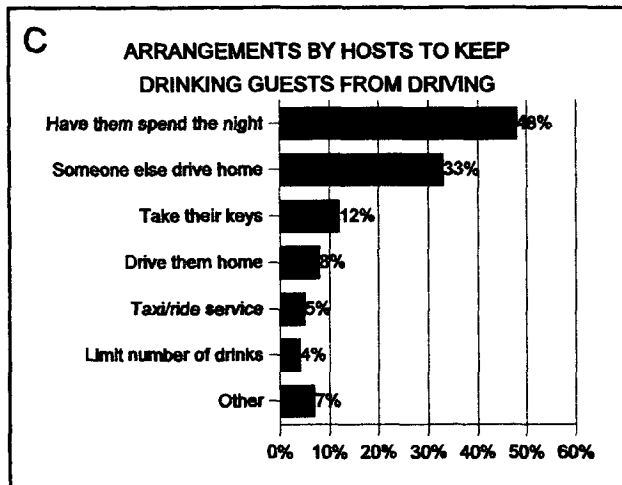
FIGURE 14: ACTIONS BY HOSTS TO PREVENT DRIVING AFTER DRINKING



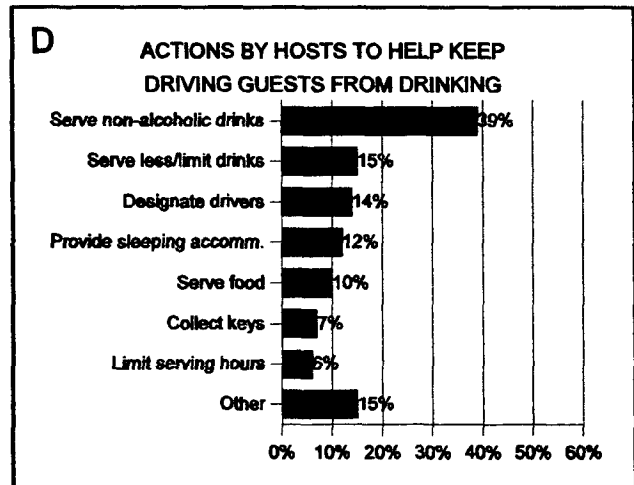
Qx: *Have you hosted a social event in the past year for adults?* [Base: all respondents]
 Qx: *Now I'd like you to think about the last time you hosted a social event for adults. Did you make alcoholic beverages available?* [Base: hosted a social event for adults in the past year and served alcohol]



Qx: *While you were planning that event, did you make any arrangements to keep guests who were going to drink from driving?*
 Qx: *While you were planning that event, did you do anything to help guests who were going to drive to refrain from drinking?* [Base: hosted a social event for adults in the past year and served alcohol]



Qx: *While you were planning that event, did you make any arrangements to keep guests who were going to drink from driving?*
 Qx: *What arrangements did you make?* [Base: hosted a social event for adults in the past year and served alcohol]



Qx: *While you were planning that event, did you do anything to help guests who were going to drive to refrain from drinking?*
 Qx: *What did you do to help guests who were going to drive?* [Base: hosted a social event for adults in the past year and served alcohol]

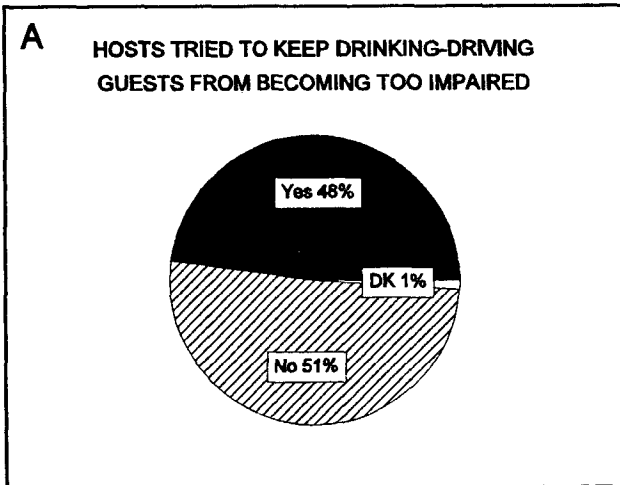
Keep Drinking-Driving Guests from Becoming Too Impaired

About half of hosts took some action to prevent guests who would be both driving and drinking from becoming too impaired to drive safely [Figure 15-A]. The action most commonly taken was to serve less alcohol or limit the number of drinks [Figure 15-B].

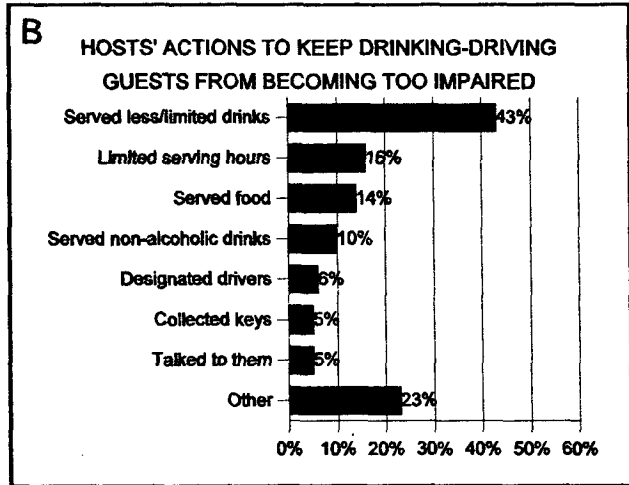
Differences in Hosts' Actions By Age and Gender

Younger hosts were more likely than older ones to have taken some action to help prevent drinking and driving by their guests [Figure 15-C]. There was no significant difference by gender [Figure 15-D].

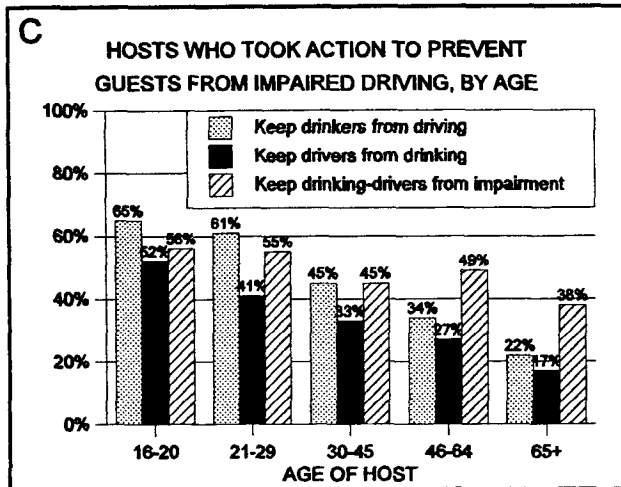
FIGURE 15: ACTIONS BY HOSTS (cont.)



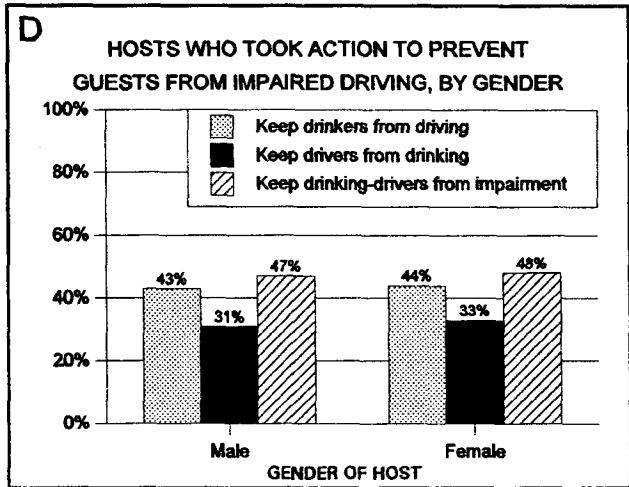
Qx: *Did you do anything to keep guests who were going to both drink and drive from becoming too impaired to drive?* [Base: hosted a social event for adults in the past year and served alcohol]



Qx: *What did you do to keep guests from becoming too impaired?*
 [Base: did something to keep drinking-driving guests from becoming too impaired to drive]



Qx: *While you were planning that event, did you make any arrangements to keep guests who were going to drink from driving?*
 Qx: *While you were planning that event, did you do anything to help guests who were going to drive to refrain from drinking?*
 Qx: *Did you do anything to keep guests who were going to both drink and drive from becoming too impaired to drive?* [Base: hosted a social event for adults in the past year and served alcohol]



Qx: *While you were planning that event, did you make any arrangements to keep guests who were going to drink from driving?*
 Qx: *While you were planning that event, did you do anything to help guests who were going to drive to refrain from drinking?*
 Qx: *Did you do anything to keep guests who were going to both drink and drive from becoming too impaired to drive?* [Base: hosted a social event for adults in the past year and served alcohol]

DESIGNATED DRIVERS

Rode with Designated Driver, Past Year

More than a fourth of the population age 16 and older have ridden with a designated driver in the past year [Figure 16-A]. A higher percentage of males than females and more younger people than older have done so.

Number of Times Rode with Designated Driver, Past Year

Using the median as a measure of the average number of times those who rode with a designated driver did so in the past year, the overall average was about four times [Figure 16-B]. The frequency of riding with a designated driver was higher among males than females and highest among those age 16-29 of any age group.

Mean scores are higher than median scores for the number of times ridden with a designated driver in the past year, due to the fact that about 20% of those who have ridden with a designated driver in the past year have done so 10 or more times.

Have Been Designated Driver in the Past Year

About a third of drivers age 16 and older have been a designated driver at some time in the past year [Figure 16-C]. More than half of drivers age 19-29 have performed this role in the past year.

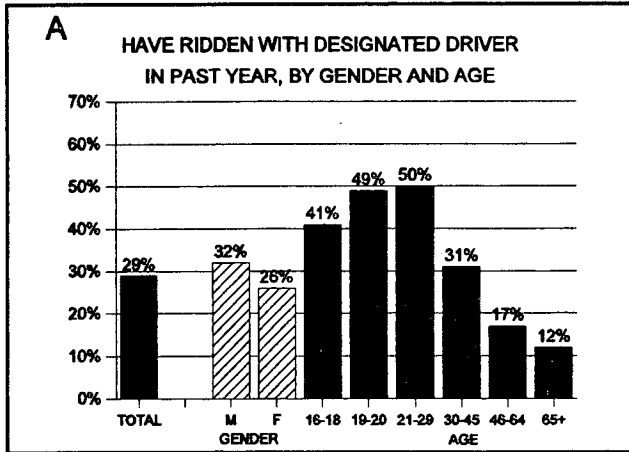
Number of Drinks by the Designated Driver

Designated drivers were reported to have drunk, on average, less than one drink on the specified occasion [Figure 16-D]. The reported alcohol consumption was approximately the same whether the respondent was describing his/her own experience as designated driver or when riding with another designated driver.

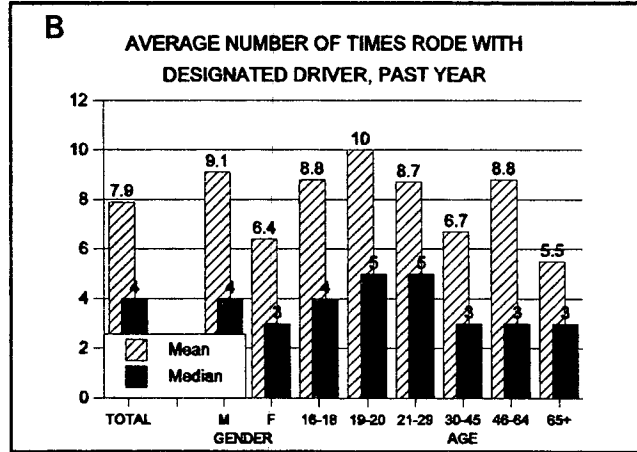
Number of Drinks a Designated Driver Should Have

Two-thirds of the population age 16 and older think a designated driver should not drink at all and another one in six think they should have no more than one drink [Figure 16-E]. Those who have ridden with a designated driver in the past year are less likely to think a designated driver should drink no alcohol.

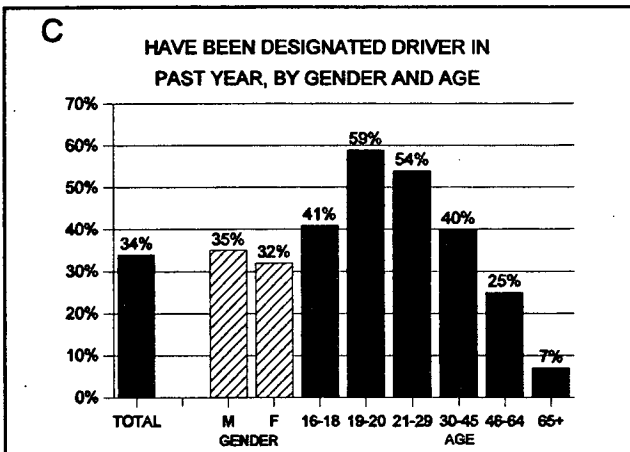
FIGURE 16: DESIGNATED DRIVERS



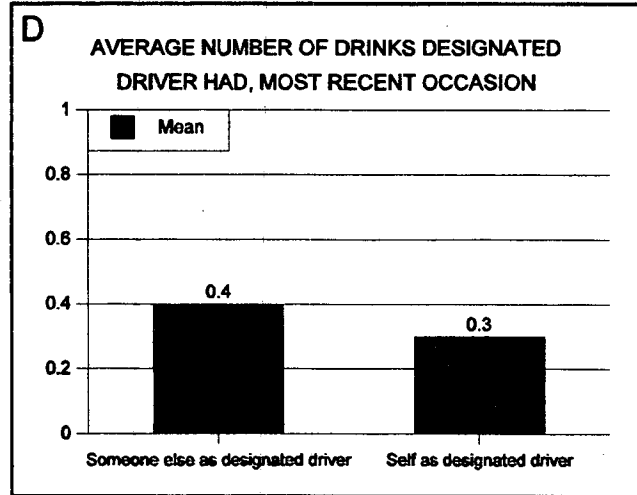
Qx: In the past 12 months, have you ridden anywhere with someone else who agreed to be the designated driver? [Base: all respondents]



Qx: In the past year, how many times have you ridden with someone else who had agreed to be the designated driver? [Base: Rode with designated driver at least once in the past year]

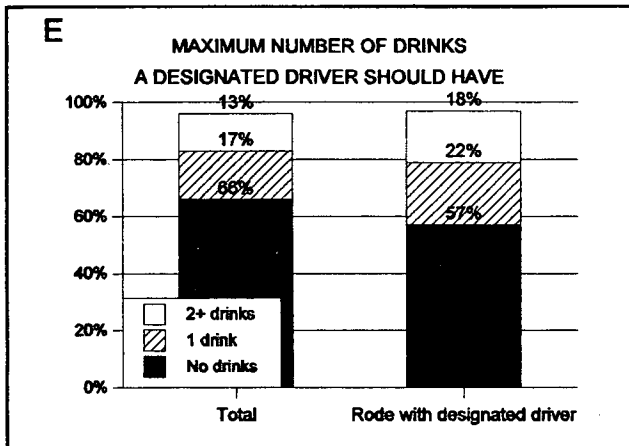


Qx: In the past 12 months, have you ever been the designated driver when driving with others? [Base: drivers]



Qx: On the most recent occasion that you rode somewhere with a designated driver, how many drinks did the designated driver have before driving, if any? [Base: rode with designated driver in past year]

Qx: On the most recent occasion that you were the designated driver, how many drinks did you have before driving, if any? [Base: have been designated driver in past year]



Qx: What is the maximum number of drinks a person should have if he or she is the designated driver? [Base: specified in the chart]

INTERVENTION WITH FRIENDS

Times with a Friend Who had Too Much to Drink to Drive Safely

More than a fourth (29%) of those age 16 and older were in a situation at least once in the past year where they were with a friend who had too much to drink to drive safely. Males were more often in this situation than females, and younger people (age 16-29) more often than older [Figure 17-A,B].

Whether or Not Tried to Prevent the Friend from Driving

When asked about the most recent time when they were with a friend who had too much to drink to drive safely, 92% reported doing something to try to stop the friend from driving [Figure 17-C]. In a related question, interviewers asked how many times the respondent had been in this situation and then how many times he/she tried to stop the friend from driving. Overall, the individual tried to prevent the friend from driving in about three-quarters of the instances [Figure 17-D].

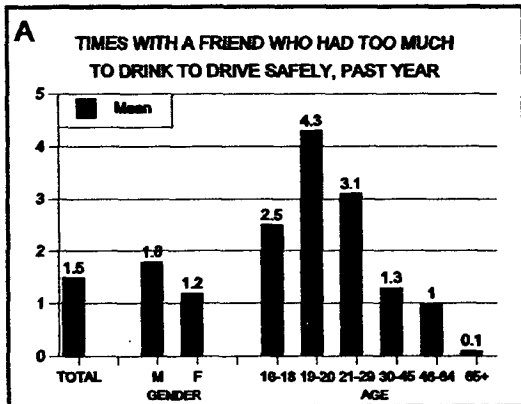
Whether the Friend Drove Anyway

In almost nine out of ten instances, when a friend took action to prevent a friend from driving who had too much to drink to drive safely, the friend did not drive [Figure 17-C].

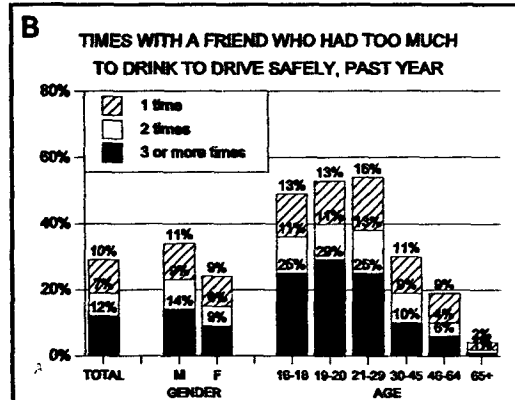
Reasons for Not Intervening

Those who did not try to prevent their friend from driving when the friend had consumed too much alcohol to drive safely most frequently said their reason was a feeling that there was nothing they could do [Figure 17-E].

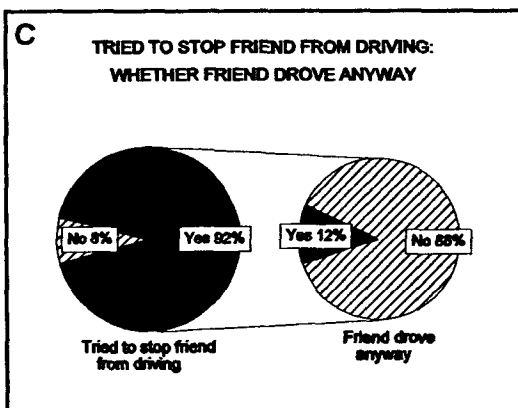
FIGURE 17: INTERVENTION WITH FRIENDS



Qx: In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely? [Base: all respondents]

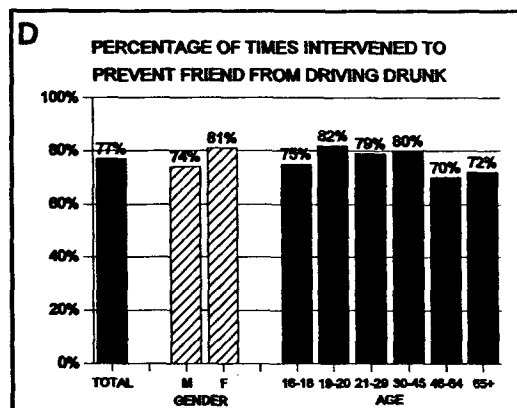


Qx: In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely? [Base: all respondents]

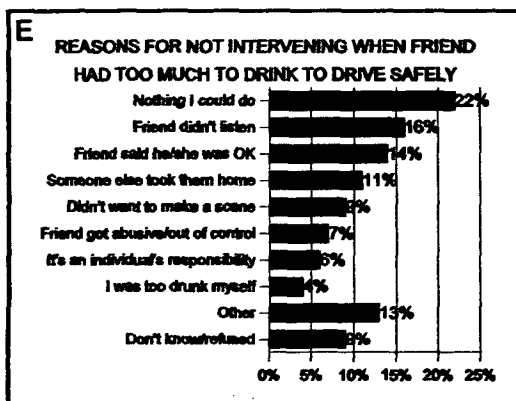


Qx: Think of the most recent time you were in this situation. Did you do something to stop them from driving? [Base: with a friend who had too much to drink to drive safely, one or more times in past year]

Qx: Did they drive anyway?



Qx: How many of those times did you do something to stop them from driving? [Percentages were computed by dividing the number of times intervened by the number of times in the situation for each respondent and then calculating averages (means) of these quotients for all respondents in the specified demographic category.]



Qx: Why didn't you do something? [Base: Did not do something to stop friend from driving who had too much to drink]

Personal Responsibility to Intervene

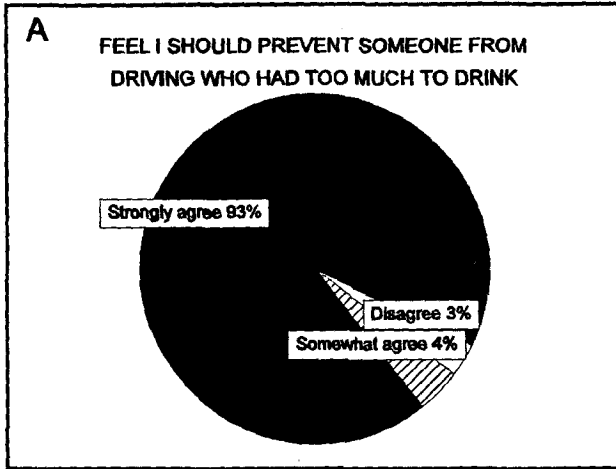
More than 90% of people age 16 and older "strongly agree" with the statement that "I feel I should prevent someone I know from driving when I see they have had too much to drink" [Figure 18-A]. This suggests that most people feel a sense of personal responsibility to intervene with a friend or acquaintance to try to prevent them from driving drunk.

Slightly lower percentages of males than females, across all age categories, believe they should intervene in this kind of situation. Males age 21-29 and males age 65 and older are least likely to say they strongly agree with this statement [Figure 18-B].

Comparing Attitudes with Actions

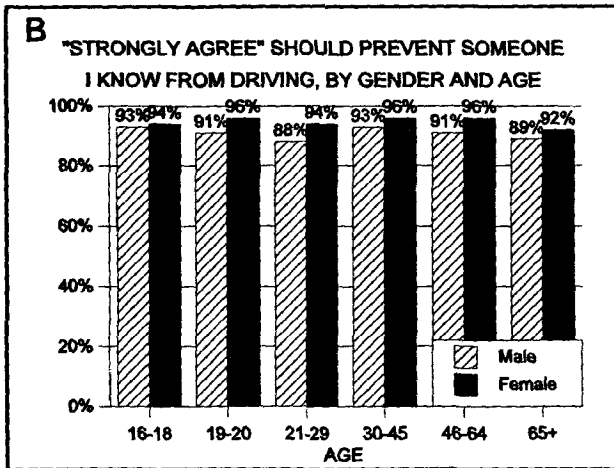
Ninety percent of those who "strongly agree" they should try to prevent someone they know from driving who has had too much to drink actually did try to prevent a friend from driving on the most recent occasion when they were in that situation, compared with 80% of those who "somewhat agree" [Figure 18-C].

FIGURE 18: PERSONAL RESPONSIBILITY TO INTERVENE



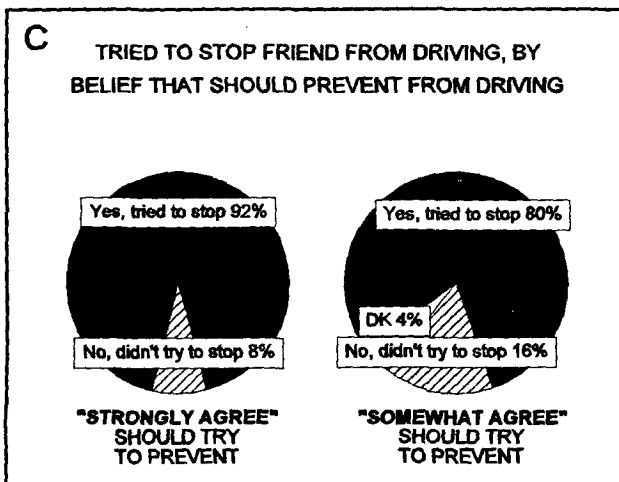
Qx: For . . . the following statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

I feel I should prevent someone I know from driving when I see they have had too much to drink.
[Base: all respondents]



Qx: For . . . the following statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

I feel I should prevent someone I know from driving when I see they have had too much to drink.
[Base: all respondents]



Qx: For . . . the following statement, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree.

I feel I should prevent someone I know from driving when I see they have had too much to drink.

Qx: In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely?

Qx: Think of the most recent time you were in this situation. Did you do something to stop them from driving? [Bases: specified in the chart]

3: ENFORCEMENT OF DRINKING AND DRIVING LAWS

This section discusses the following topics from the 1995 survey:

- Beliefs about enforcement of laws against drinking and driving
- Attitudes about penalties for violation of drinking and driving laws
- Use of sobriety checkpoints

BELIEFS ABOUT ENFORCEMENT

Several questions addressed beliefs about the nature and extent of enforcement of drinking and driving laws in a respondent's local community.

Which is More Likely: To Be Stopped by Police or Have an Accident?

Two-thirds of the driving age public say a person who drinks and drives would be more likely to have an accident than to be stopped by the police for drinking and driving [Figure 19-A].

How Likely Are You to Be Stopped by Police?

A majority of the driving age public (age 16 and older) believe they are likely to be stopped by police if they drive after they have had too much to drink [Figure 19-B]. About a fourth believe it is very likely or almost certain that they will be stopped in this situation.

What is the Likelihood of Being Punished If Charged?

Nine out of ten people age 16 and older believe they are likely to receive some sort of punishment if a police officer stops them and charges them with breaking the drinking and driving laws [Figure 19-C]. More than two-thirds think it is very likely or almost certain that they will be punished in some way.

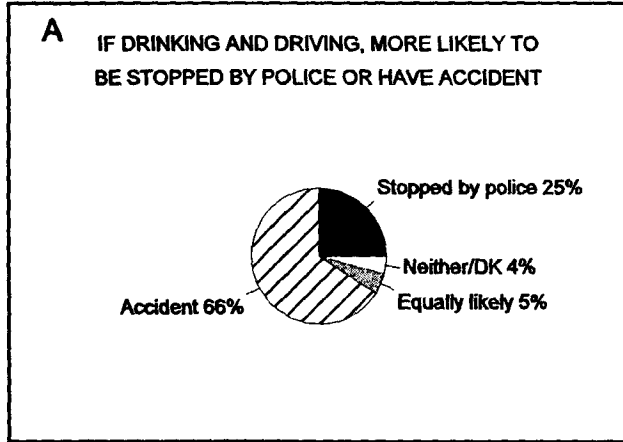
What is the Likely Severity of the Punishment?

More than three fourths of the driving age public think the punishment they would receive for violating drinking and driving laws would most likely be very or somewhat severe. One in three think it would likely be very severe [Figure 19-D].

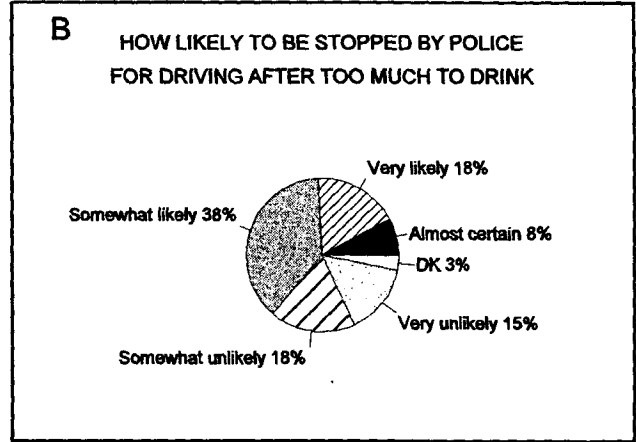
What is the Likely Punishment for a First Offense?

The punishments most commonly expected for a first offense drinking and driving law violation are a fine and suspension or restriction of their driver's license [Figure 19-E]. One in seven think they are likely to receive jail time for a first offense.

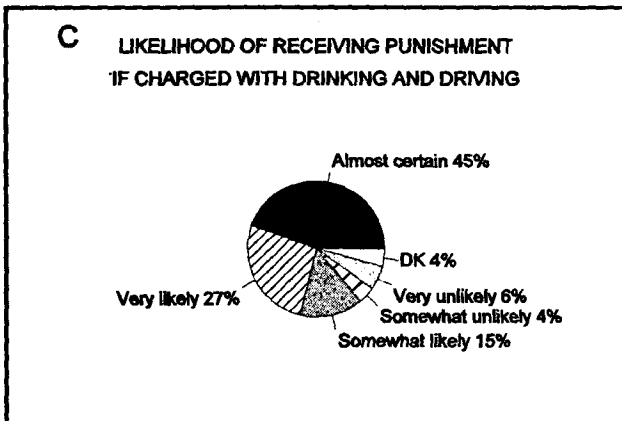
FIGURE 19: BELIEFS ABOUT ENFORCEMENT



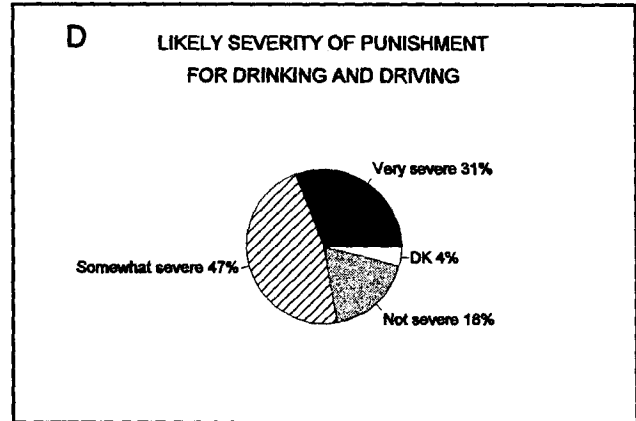
Qx: In your community, if a person drinks too much before driving (and then drives), which do you think is more likely to happen to them--being stopped by the police or having an accident? [Base: all respondents]



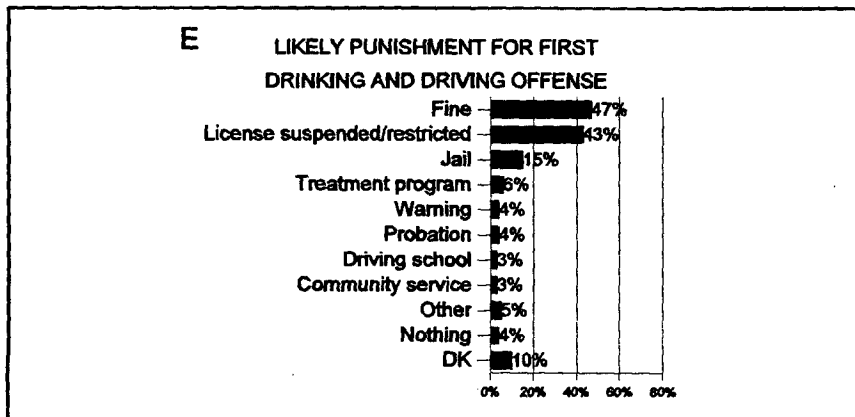
Qx: How likely are you to be stopped by a police officer for driving after you have had too much to drink? [Base: all respondents]



Qx: If a police officer stops you and charges you with breaking the drinking and driving laws, how likely are you to receive some sort of punishment such as a fine, a suspension of your driver's license, or something more severe? [Base: all respondents]



Qx: If you were actually punished for drinking and driving, do you think the punishment would most likely be very severe, somewhat severe, or not severe? [Base: all respondents]



Qx: What would most likely happen to a driver the first time he or she was punished for drunk driving? [Base: all respondents]

ATTITUDES ABOUT PENALTIES

The survey asked about the severity and effectiveness of current penalties, and what penalties people thought were appropriate for first time and repeat offenders.

Should Penalties be More Severe or Less Severe?

Nearly three out of four people age 16 and older believe that penalties for drinking and driving should be more severe, with nearly half saying they should be much more severe [Figure 20-A].

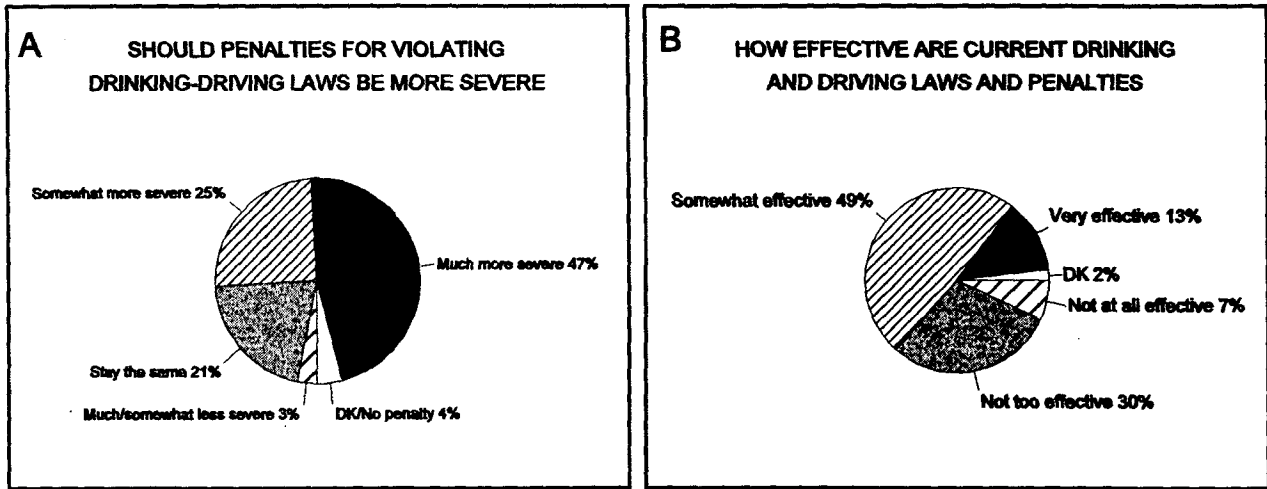
How Effective are Current Laws and Penalties?

Half of the driving age population (age 16 and older) think that current laws and penalties for drinking and driving are somewhat effective [Figure 20-B]. However, about a third think they are not too effective, while only one in eight think the current laws and penalties are very effective.

What Penalties Would You Recommend?

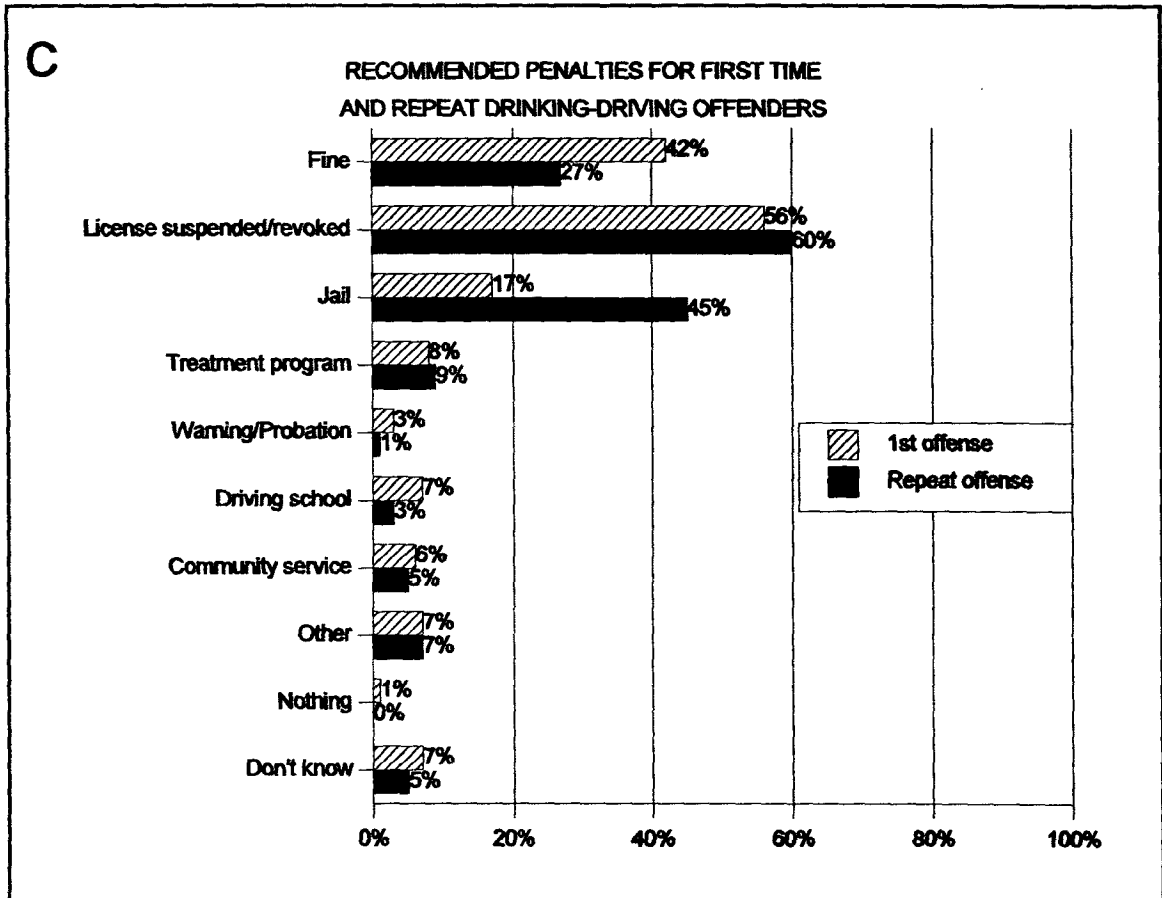
The two most popular penalties for the first drinking-driving offense are suspension or revocation of the offender's driving license and a fine [Figure 20-C]. For repeat offenders, a jail sentence replaces the fine as the second most popular penalty.

FIGURE 20: ATTITUDES ABOUT PENALTIES



Qx: *In your opinion, should the penalties that are given out to drivers who violate the drinking and driving laws be . . . ?* [Base: all respondents]

Qx: *In your opinion, how effective are current laws and penalties at reducing drinking and driving?* [Base: all respondents]



Qx: *What do you think the penalty should be for driving under the influence of alcohol if it is the first time the driver has been convicted of that offense? What do you think the penalty should be for persons who have been previously convicted for driving under the influence of alcohol?* [Base: all respondents]

SOBRIETY CHECKPOINTS

Sobriety checkpoints have been used as a means of deterring alcohol impaired driving and of apprehending drivers who are alcohol-impaired.

Have Seen a Checkpoint, Past Year

Between a fourth and a third of the population age 16 and older have seen a sobriety checkpoint in the past year [Figure 21-A]. A higher percentage of males than females have seen one, and the likelihood of having seen one generally declines with age.

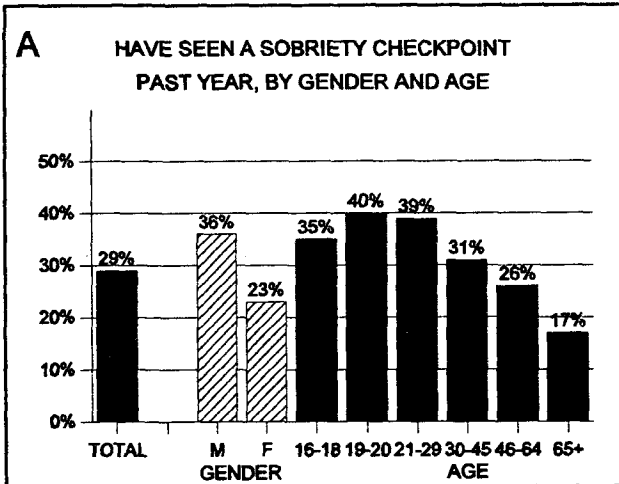
Number of Times Through a Checkpoint, Past Year

One in five people of driving age have been through a sobriety checkpoint at least once in the past year [Figure 21-B]. One in ten have been through a checkpoint more than once in the past year.

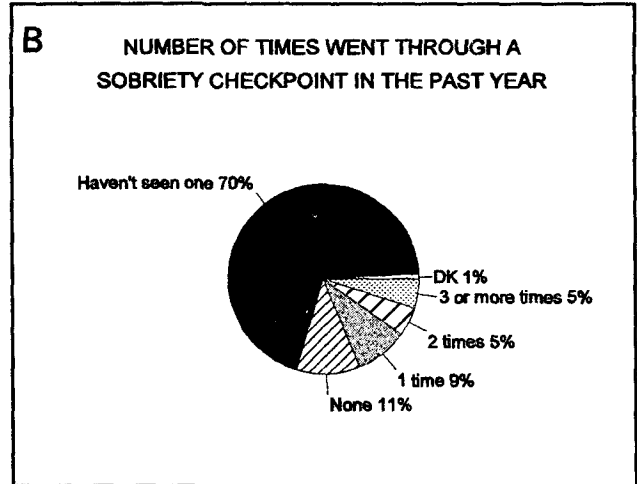
Should Checkpoints Be Used More Frequently or Less Frequently?

Two thirds of the driving age public believe sobriety checkpoints should be used more frequently than they are now [Figure 21-C]. Only 6% believe their use should be reduced. Even a majority of drivers who drink support increased use of sobriety checkpoints [Figure 21-D].

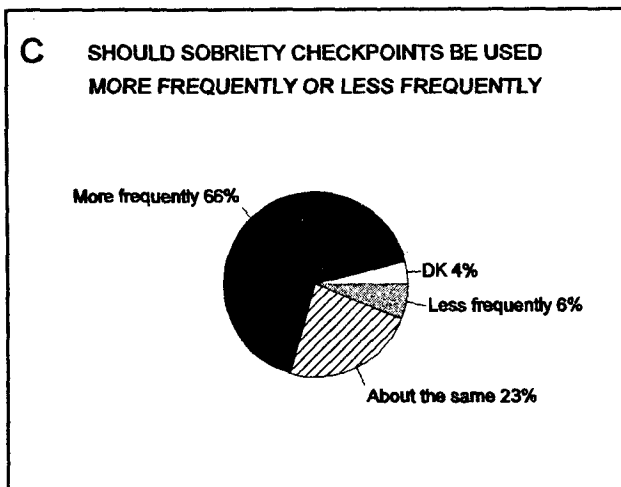
FIGURE 21: SOBRIETY CHECKPOINTS



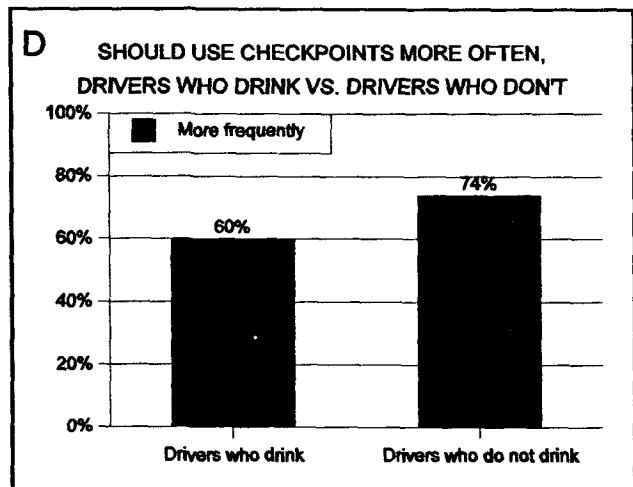
Qx: In the past 12 months, have you seen a sobriety checkpoint—where drivers are stopped briefly by police to check for alcohol-impaired driving? [Base: all respondents]



Qx: In the past 12 months, have you seen a sobriety checkpoint—where drivers are stopped briefly by police to check for alcohol-impaired driving? How many times have you been through a checkpoint in the last 12 months? [Base: all respondents]



Qx: Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently? [Base: all respondents]



Qx: Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently? [Bases: specified in the chart]

4: BLOOD ALCOHOL CONCENTRATION LEVELS AND LEGAL LIMITS

This section discusses the following topics from the 1995 survey:

- Knowledge about blood alcohol concentration (BAC) levels and legal limits
- BAC legal limits for drivers under age 21
- Amount of alcohol to reach the BAC legal limit

KNOWLEDGE OF BAC LEVELS AND LEGAL LIMITS

Awareness of BAC Levels

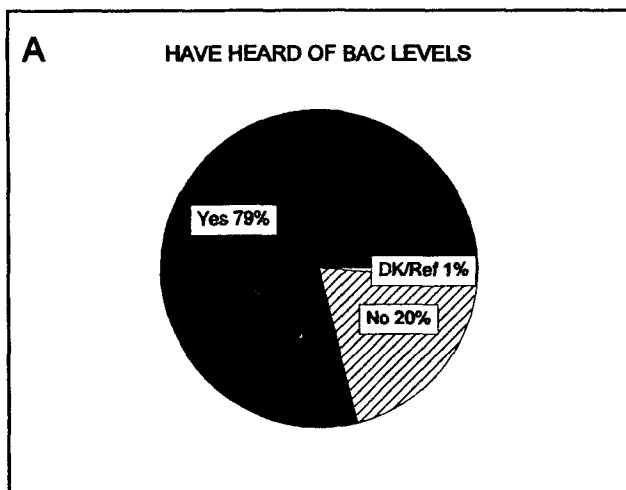
Four out of five of the driving age public are aware of blood alcohol concentration (BAC) levels [Figure 22-A]. Awareness is substantially higher among those who have driven within two hours of drinking alcohol in the past year than among others of the driving age public [Figure 22-B].

Knowledge of State's BAC Legal Limit

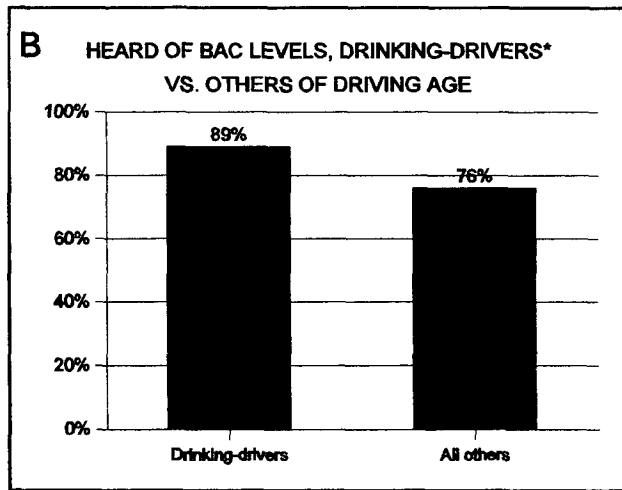
About half the driving age public think they know their state's BAC legal limit [Figure 22-C]. However, when asked to say what the limit was in their state, only 43% of those who thought they knew the limit gave the correct answer. This indicates that, overall, only about 20% of the total driving age population know their state's BAC legal limit.

Of those who thought they knew their state's BAC limit, a higher percentage of residents of states with a .08 limit were correct than residents of states with a .10 limit [Figure 22-D].

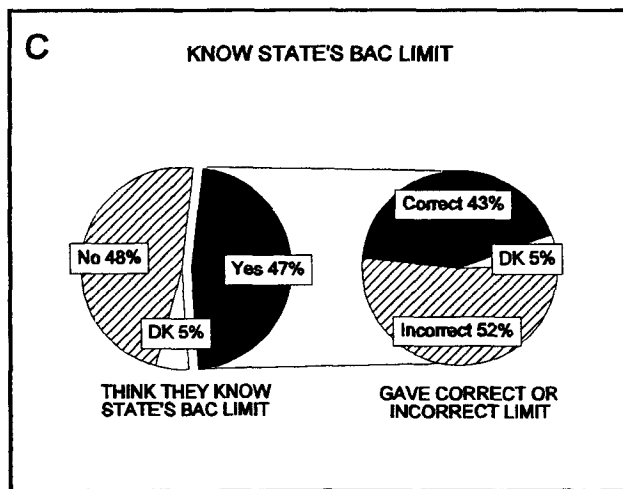
FIGURE 22: AWARENESS AND KNOWLEDGE ABOUT BAC LEVELS AND LEGAL LIMITS



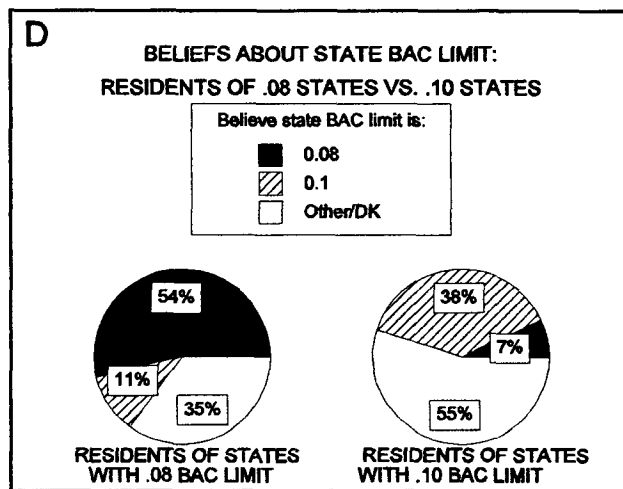
Qx: The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration," which is often called the BAC level. Have you heard of blood alcohol concentration or BAC levels? [Base: all respondents]



Qx: The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration," which is often called the BAC level. Have you heard of blood alcohol concentration or BAC levels? [Bases: specified in the chart]



Qx: Do you know the specific BAC limit for your state?
 Qx: What do you think the limit is?
 [Base: all respondents; answers were compared with actual BAC limits for each respondent's state of residence]



Qx: Do you know the specific BAC limit for your state?
 Qx: What do you think the limit is?
 [Base: respondents who thought they knew state's BAC limit; answers were compared with actual BAC limits for each respondent's state of residence]

* Drinking-drivers: Drove within two hours after drinking in the past year

BAC LIMITS FOR DRIVERS UNDER AGE 21

Alcohol consumption by minors is illegal in all states and some states have a lower BAC limit for underage drivers. These lower limits are typically for drivers under age 21, but in some states they apply only to drivers under age 18.

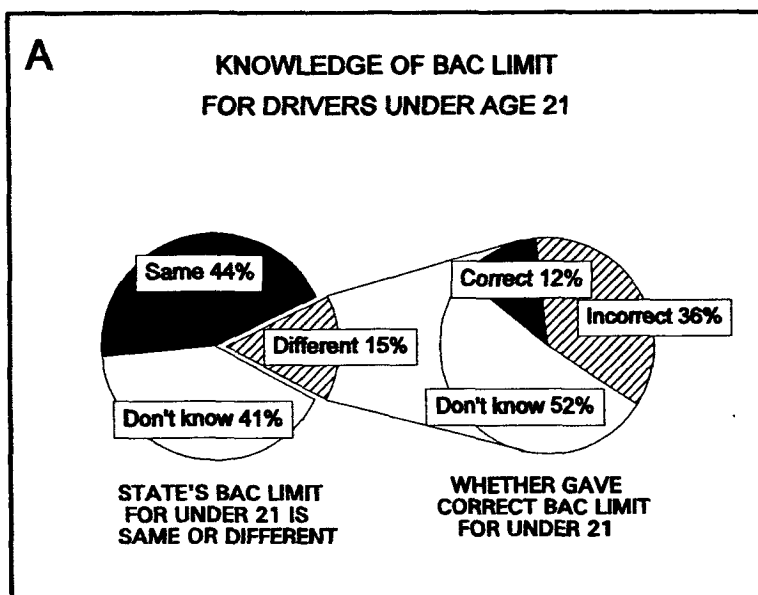
Knowledge of State's BAC Limit for Drivers Under Age 21

Forty-one percent of the driving age public (age 16 and older) say they do not know whether their state has a different BAC limit for drivers under age 21 [Figure 23-A]. Those who thought their state had a lower BAC limit for young drivers were asked to say what they thought it was; only 12% of these people cited the correct limit.

Should the BAC Limit Be Lower for Drivers Under Age 21?

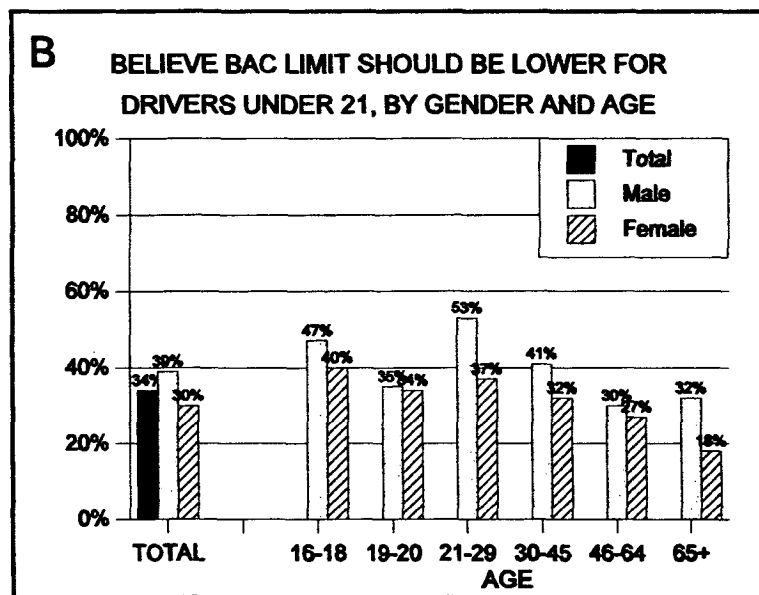
Only about a third of the driving age public say they believe that the BAC limit should be lower for drivers under age 21 than for drivers 21 and older [Figure 23-B]. These data should be viewed cautiously. Figure 22-C, on page 59, and Figure 23-A indicate that the public does not fully understand BAC limits. It is noteworthy that when the focus of the question is the amount of alcohol rather than legal BAC limits, fully 57% of the public "strongly agree" that people should not be allowed to drive after drinking any alcohol at all (see Figure 10-C, on page 29). One possible interpretation is that when asked if the BAC limit for drivers under age 21 should be lower than for drivers 21 and over, respondents may have thought that "lower" actually supported a looser requirement for those under 21. A clearer understanding of this problem awaits analysis of the 1997 survey.

FIGURE 23: BAC LIMITS FOR DRIVERS UNDER AGE 21



Qx: In some states the legal BAC limit for drivers under 21 is different than for drivers over 21. In your state, is the legal limit the same for drivers under 21? [Base: all respondents]

Qx: What is the legal limit in your state for drivers under 21? [Base: Said their state had a different BAC limit for younger drivers. Answers were compared with actual BAC limits for drivers under 21 for each respondent's state of residence]



Qx: Do you believe the BAC limit for drivers under 21 should be lower than for drivers over 21? [Base: all respondents]

AMOUNT OF ALCOHOL TO REACH BAC LIMIT

Interviewers asked respondents who thought they knew the state's legal BAC limit to give their opinions about the number of beers necessary to reach that limit, and whether or not drivers would be dangerous at that blood alcohol concentration level.

How Many Beers Does It Take to Reach the BAC Limit?

About two-thirds of those who believe they know their state's BAC limit say that a person would reach the legal limit by drinking four or fewer beers in a two-hour period [Figure 24-A]. For an average 170-pound male, this number of beers in two hours on an empty stomach would result in a BAC level of .06 or less.

How Many Drivers are Dangerous with a BAC at the Legal Limit?

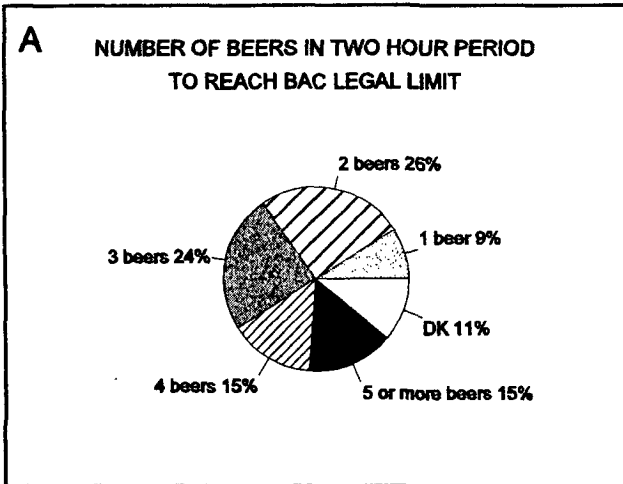
A majority of those who have heard of BAC levels think that most or all drivers would be dangerous at the legal BAC limit [Figure 24-B].

Beliefs about the number of drivers who would be dangerous at the legal limit are similar among residents of states with a BAC limit of .08 and those of states with a .10 limit [Figure 24-C].

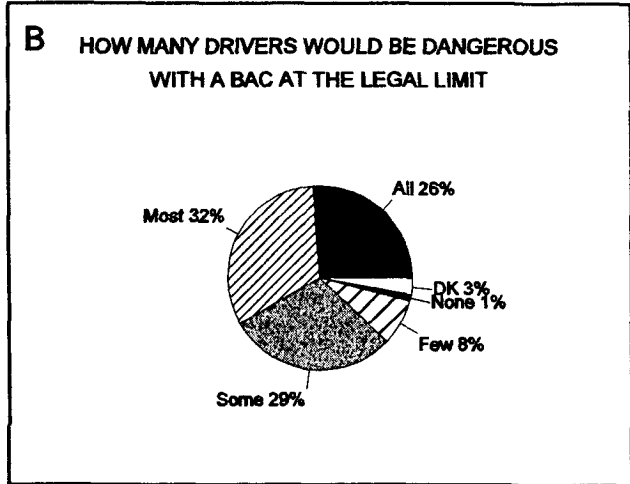
What Percentage of Drivers are Dangerous after Five Beers in Two Hours?

Three out of four people of driving age believe that at least half of drivers would be dangerous after having five beers in two hours, and 28% think all drivers would be unsafe after drinking this much beer [Figure 24-D].

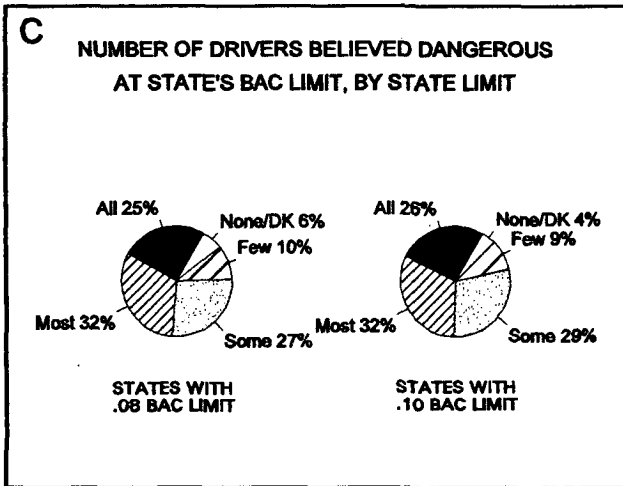
FIGURE 24: AMOUNT OF ALCOHOL TO REACH BAC LIMIT



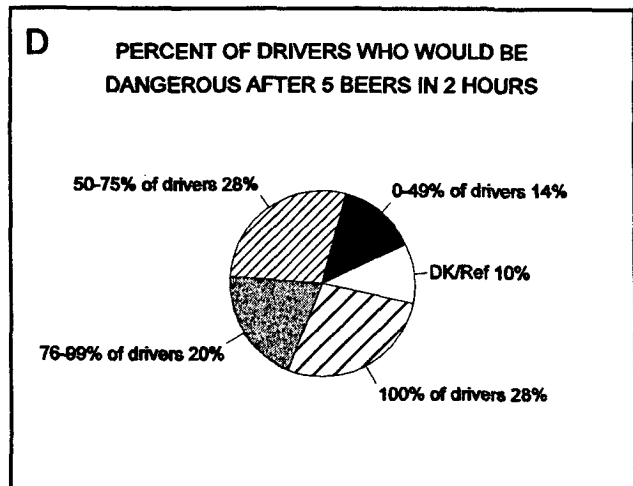
Qx: How many beers would a person about your size have to drink in a two hour period to just reach the legal limit? [Base: believe they know the state's BAC limit]



Qx: In your opinion, how many drivers would actually be dangerous drivers with a BAC at the legal limit? [Base: have heard of BAC levels]



Qx: In your opinion, how many drivers would actually be dangerous drivers with a BAC at the legal limit? [Base: state residents who have heard of BAC levels]



Qx: In some states, the average person will reach the legal limit after drinking five beers in two hours. In your opinion, what percent of drivers would be dangerous after having five beers in two hours? [Base: all respondents]

5: CRASH AND INJURY EXPERIENCE

This section discusses the following topics from the 1995 survey:

- Involvement in a vehicle crash as a driver, past year
- Whether consumed alcohol within two hours prior to crash as driver
- Whether crash as driver resulted in injury to anyone
- Involvement in a vehicle crash as a passenger, past year
- Whether anyone was injured in the crash in which the respondent was a passenger
- Whether the driver of the respondent's vehicle had consumed alcohol within two hours before driving

CRASH AND INJURY EXPERIENCE AND ALCOHOL INVOLVEMENT

Had a Vehicle Crash While Driving, Past Year

About 7% of drivers were involved in a vehicle crash as a driver in the past year. Young drivers (age 16-20) were significantly more likely than those in other age categories to have been involved in a vehicle crash as a driver. The next highest rate of crash involvement as a driver was among drivers in their 20s [Figure 25-A].

Whether Consumed Alcohol Prior to Crash

About 6% of crash-involved drivers had consumed alcohol within two hours before the crash. Male drivers were about 10 times as likely as female drivers to have consumed alcohol prior to the crash [Figure 25-B].

Driver in an Injury Crash, Past Year

Just under 2% of drivers were involved as drivers in a past-year crash in which someone received an injury [Figure 25-C]. Females were more likely than males to have been a driver in an injury crash. Drivers in their 20s had the highest rate of involvement in injury crashes of any age group.

Passenger in a Vehicle Crash, Past Year

About 3% of the driving age public were involved as passengers in a vehicle crash in the past year. Youth age 16-18 were five times as likely as others of driving age to have been a passenger in a vehicle crash in the past year [Figure 25-D].

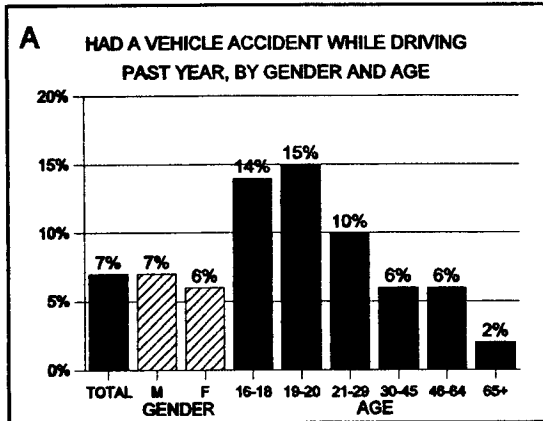
Passenger in an Injury Crash, Past Year

In just over a third of the past-year crashes in which the public was involved as a passenger, someone received an injury [Figure 25-E].

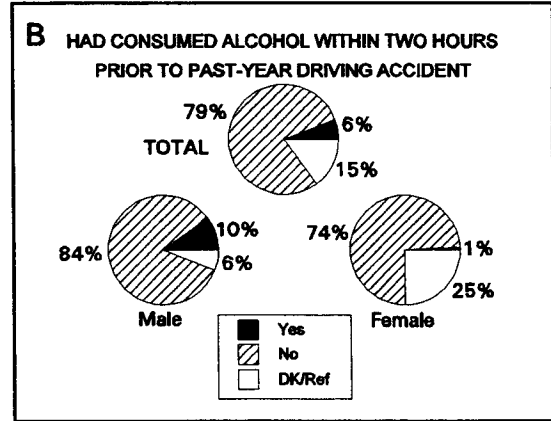
Whether Driver in Passenger Crash Had Consumed Alcohol

In 8% of crashes involving respondents as passengers, the driver had consumed alcohol within two hours before driving [Figure 25-F].

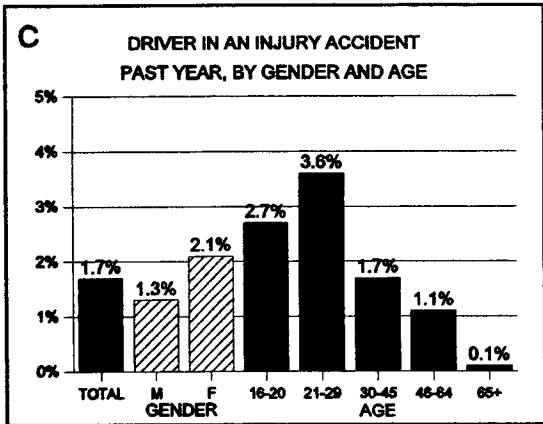
FIGURE 25: CRASH AND INJURY EXPERIENCE, PAST YEAR



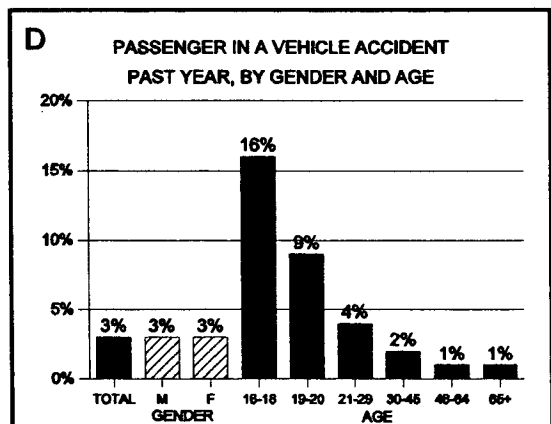
Qx: *In the past 12 months, have you had an accident while driving a motor vehicle?* [Base: drivers]



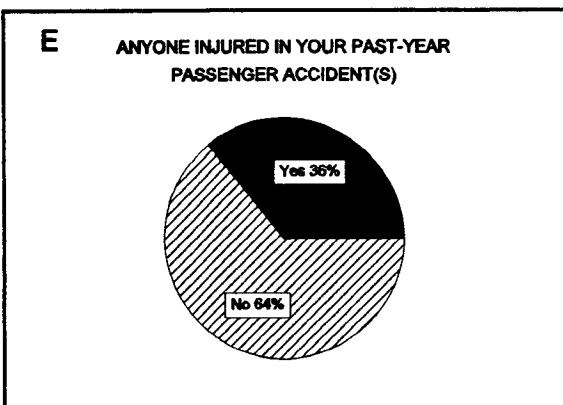
Qx: *Had you consumed alcohol within two hours prior to the accident?* [Base: involved in a crash as a driver, past year]



Qx: *In the past 12 months, have you had an accident while driving a motor vehicle? Was anyone injured (in any of those accidents)?* [Base: drivers]



Qx: *In the past 12 months, have you been in an accident while you were a passenger?* [Base: all respondents]



Qx: *Was anyone injured (in any of those accidents)?* [Base: involved in a crash as a passenger, past year]



Qx: *Had your driver consumed alcohol within two hours before getting behind the wheel?* [Base: involved in a crash as a passenger, past year]

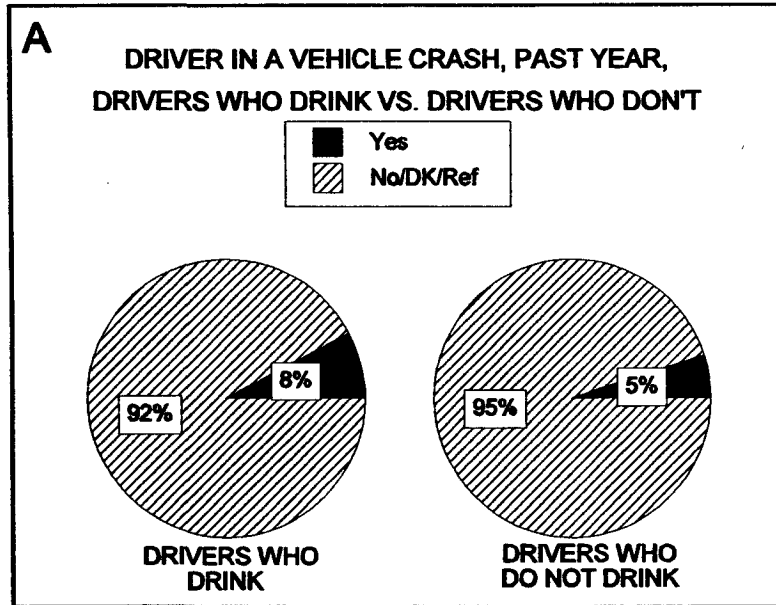
Crash Experience of Drivers Who Drink vs. Drivers Who Do Not

Drivers who drink alcohol at all were more likely than drivers who do not drink to have been involved as a driver in a past-year vehicle crash [Figure 26-A].

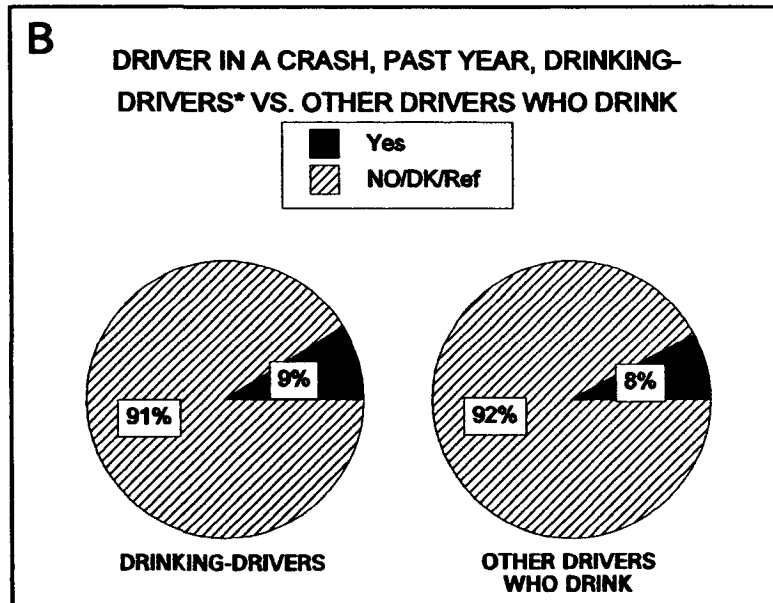
Crash Experience by Whether Drove after Drinking in Past Year

There is a negligible difference between drivers who drove within two hours after drinking in the past year ("drinking-drivers") and other drivers who drink in the likelihood that they had been a driver in a past-year vehicle crash [Figure 26-B].

FIGURE 26: CRASH EXPERIENCE OF DRIVERS WHO DRINK, DRIVERS WHO DO NOT DRINK, AND DRINKING-DRIVERS*



Qx: *In the past 12 months, have you had an accident while driving a motor vehicle?* [Base: specified on the charts]



Qx: *In the past 12 months, have you had an accident while driving a motor vehicle?* [Base: specified on the charts]

* Drinking-drivers: Drove within two hours after drinking in past year

CONTINUITY AND CHANGE IN DRINKING AND DRIVING ATTITUDES AND BEHAVIOR: 1991, 1993, 1995

The 1995 Survey of Drinking and Driving Attitudes and Behavior is the third in a series of tracking surveys conducted by NHTSA. The first, conducted in 1991, established the baseline. The second, conducted in 1993, provided the first set of comparisons with the baseline to indicate whether attitudes and behavior by the driving age public were changing. The 1995 survey provides updated information on whether change is actually taking place among the driving age public, and if so, in what areas, to what extent, and in what direction. Because three data points provide only an idea of possible trends, statistical tests for significance of trends will be deferred until the next survey is completed in 1997.

This part of the report looks at indications of continuity and change over time on variables from the 1995 survey that were also included in the 1991 and/or 1993 surveys. Topics examined are:

- Drinking and driving, past year and past month
- Riding with a driver who may have had too much to drink to drive safely
- Use of designated drivers
- Attitudes and beliefs about drinking and driving
- Attitudes and beliefs about enforcement of drinking and driving laws
- Opinions about penalties for violation of drinking and driving laws
- The use of sobriety checkpoints in enforcement
- Measures of potential problem drinking

Although the 1993 and 1995 surveys included all persons age 16 and older (including those age 65 and up), the 1991 survey was limited to respondents age 16-64. Therefore, results presented here compare data between surveys only for those age 16-64, except when noted. Because of this population difference, some results for the 1995 survey will differ in this section from that presented earlier in the report.

CHANGES IN DRINKING AND DRIVING, PAST YEAR

Drove Within Two Hours After Drinking

Total Population, Age 16-64

Overall, drinking and driving shows a decline in 1995 from both previous surveys. In 1995, 24% of the public age 16-64 report having driven within two hours of drinking alcoholic beverages some time in the past year, compared with 28% from both the 1991 and 1993 surveys [Figure 27-A].

Gender Differences

A lower percentage of both males and females drank and drove in 1995 than in either previous survey year. However, males are still more than twice as likely as females to have driven after drinking in the past year [Figure 27-B].

Age Differences

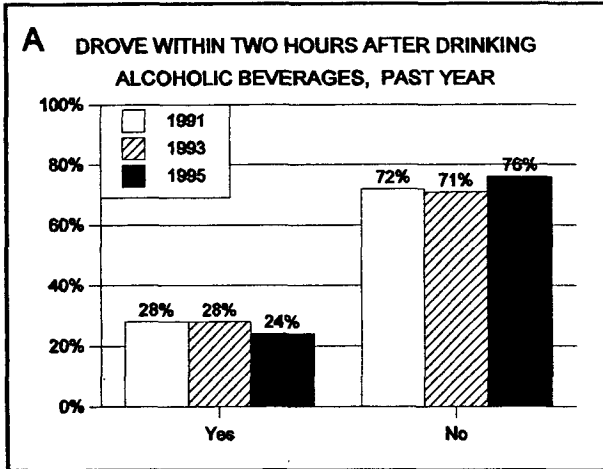
The percentage who drank and drove was lower for all age groups in 1995 than in 1993. However, only the 21-29 year old group showed a consistent pattern of decline from 1991 to 1995 [Figure 27-C].

Number of Times Drove After Drinking, Past Year

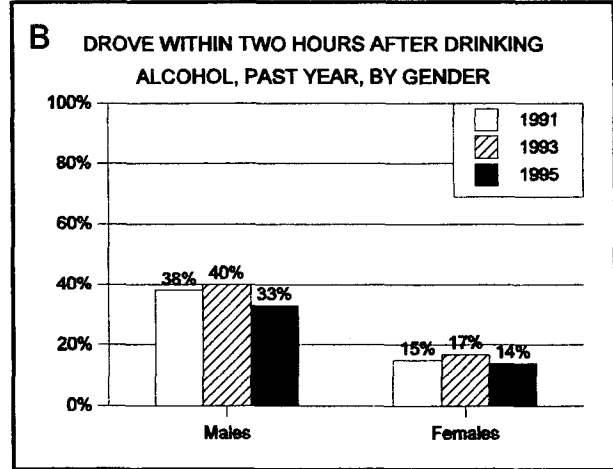
In the 1993 and 1995 surveys, those who said they had driven after drinking sometime in the past year were asked how many times they had done so. The 1995 survey shows no significant change overall in the average number of trips taken by each drinking-driver in the past year [Figure 27-D]. However, within certain age groups (e.g., age 65+), there are noteworthy changes that should be monitored to see whether they hold in the future [some sample sizes, such as the 65+ group (for 1995, N=35), are too small to permit a high level of confidence that the differences are significant]. Although the average number of trips taken by each drinking-driver has not changed, because there are fewer drinking-drivers [Figure 27-A] the total number of drinking-driving trips would appear to have declined since 1993¹.

¹ Projecting these findings to national population figures indicates that the estimated reduction is approximately 85,000 drinking-driving trips (from about 575,000 trips in 1993 to about 490,000 trips in 1995). These estimates are intended to provide only a rough approximation of the extent of the decline and should be viewed cautiously.

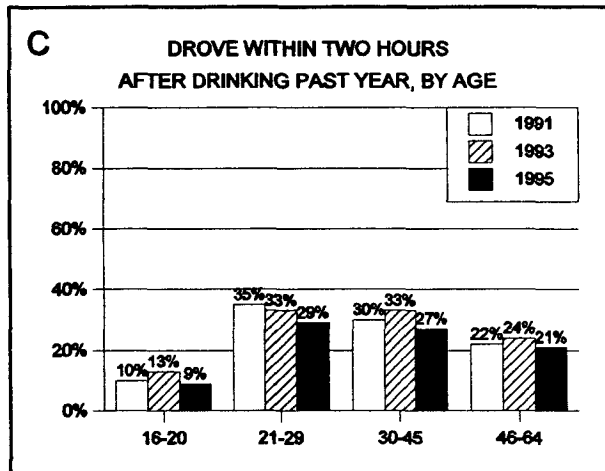
FIGURE 27: CHANGES IN DRINKING AND DRIVING, PAST YEAR



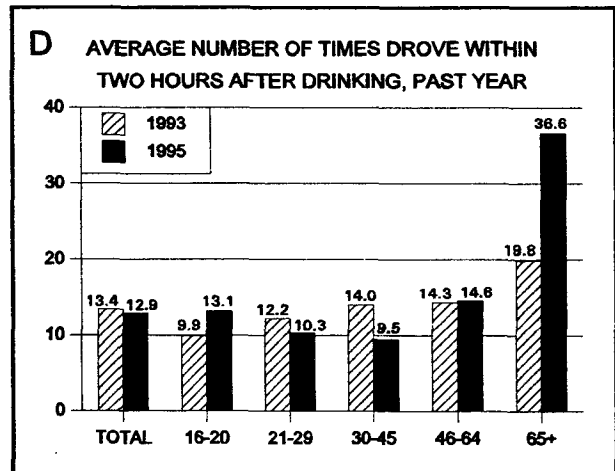
Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: All respondents]



Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: All respondents]



Qx: *In the past 12 months, have you ever driven a motor vehicle within two hours after drinking alcoholic beverages?* [Base: All respondents]



Qx: *How many times in the past 12 months have you driven within two hours after drinking any alcohol?* [Base: Drivers who drove within two hours after drinking in the past year]

CHANGES IN DRINKING AND DRIVING, PAST MONTH

Drivers (age 16-64) who had driven within two hours of drinking at some time in the past year ("drinking-drivers") were asked how often they had done so in the past month.

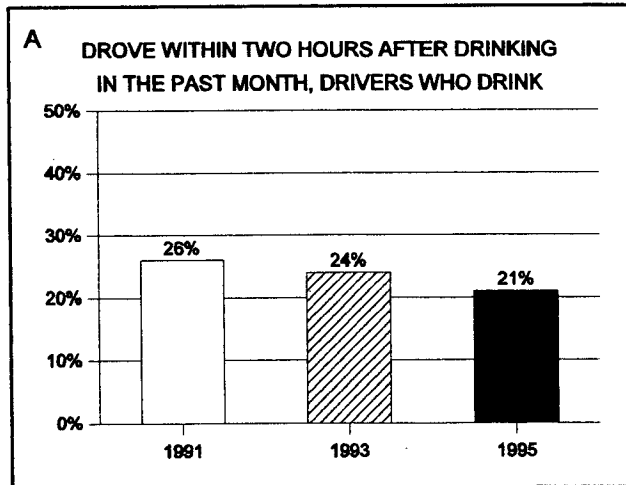
Drove After Drinking at Least Once in the Past Month

The percentage of drinking-drivers who had driven after drinking at least once in the past month has declined consistently from 1991 to 1995. [Figure 28-A].

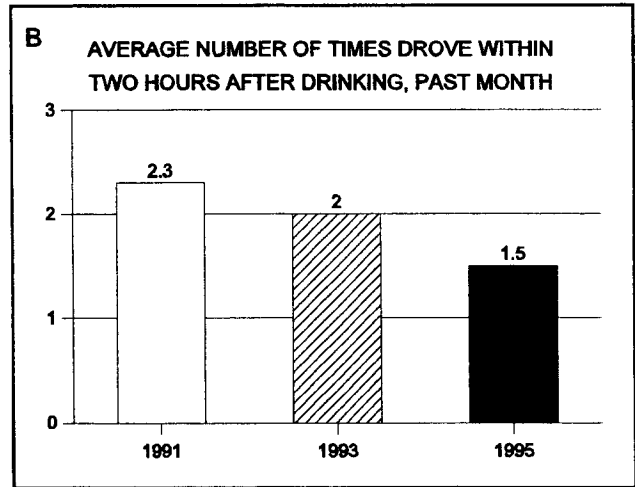
Average Number of Times

The average (mean) number of times drinking-drivers engaged in driving after drinking in the past month has also steadily declined over the three surveys [Figure 28-B]. The average number of drinking-driving trips in the past month has declined for both males and females since the 1991 survey but for males only since 1993 [Figure 28-C]. Past-month drinking-driving trips have declined since 1991 for people in all age groups and, for all but 16-20 year olds, the number dropped noticeably in both 1993 and 1995 from the previous survey [Figure 28-D].

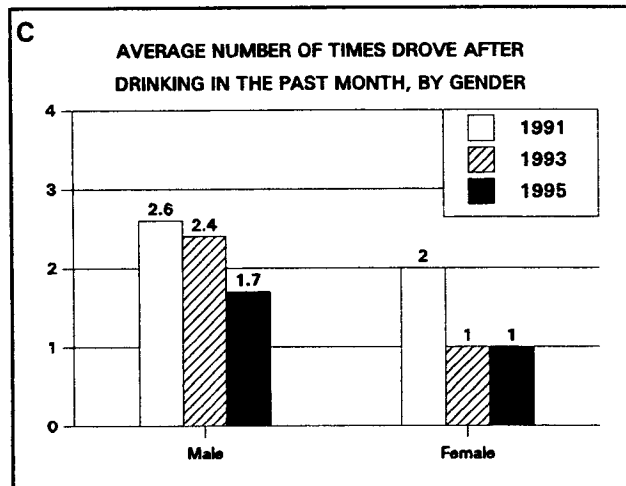
FIGURE 28: CHANGES IN DRINKING AND DRIVING, PAST MONTH



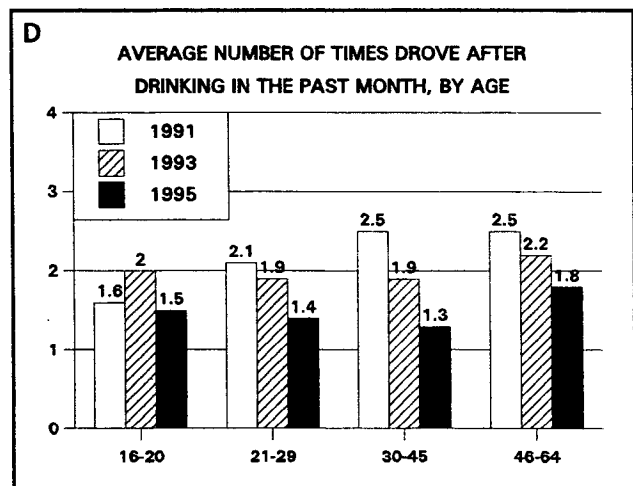
Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drivers who drank alcohol in past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drove after drinking in the past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drove after drinking in the past year]



Qx: In the past 30 days, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages? [Base: drove after drinking in the past year]

CHANGES IN EXPERIENCE AS PASSENGER OF A POTENTIALLY UNSAFE DRINKING-DRIVER

Riding With a Driver Who Drank Too Much to Drive Safely

Total Population, Age 16-64

There has been a decline in the percentage of the population age 16-64 who say they have, in the past year, ridden with someone they thought might have consumed too much alcohol to drive safely.

Age Differences

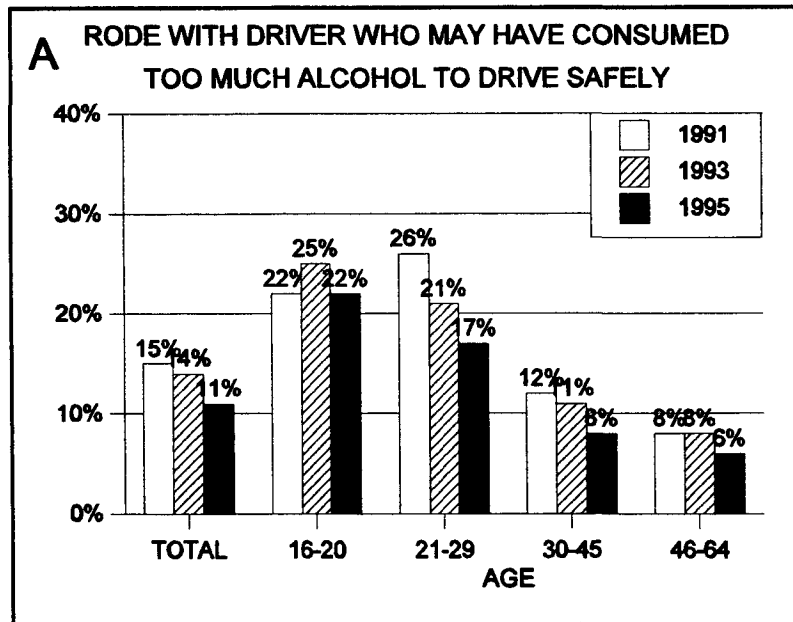
The percentage who say they have ridden with a driver who may have drunk too much to be safe declined (at least incrementally) from 1993 to 1995 for all age groups, and held steady or declined in all three surveys across all age groups except the 16-20 year olds [Figure 29-A].

The most pronounced decline in experience of riding with drivers who may have drunk too much to be safe was in the 21-29 year old group.

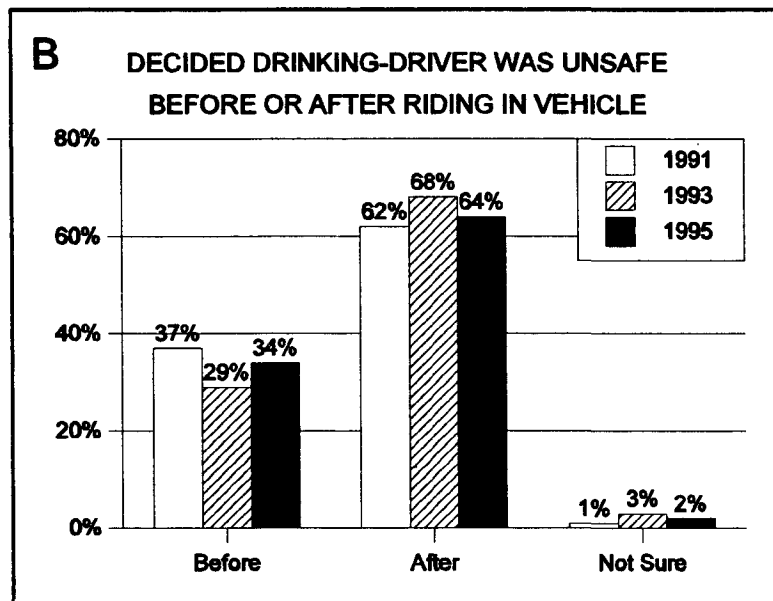
When Decided Driver Was Unsafe

There was an increase from 1993 to 1995 in the percentage of those riding with a potentially unsafe driver who decided the driver was unsafe before riding with them [Figure 29-B]. This follows a decline from 1991 to 1993.

FIGURE 29: CHANGES IN PAST-YEAR EXPERIENCE AS PASSENGER OF POTENTIALLY UNSAFE DRINKING-DRIVER



Qx: *In the past 12 months, did you ever ride in a motor vehicle with a driver you thought might have consumed too much alcohol to drive safely?* [Base: all respondents]



Qx: *Please think back to the last time you rode with a driver you thought might have consumed too much alcohol to drive safely. Did you decide the driver was unsafe before or after you were riding in the motor vehicle?* [Base: rode with driver who may have had too much alcohol to drive safely]

CHANGES IN THE USE OF DESIGNATED DRIVERS

In the 1993 and 1995 surveys, interviewers asked about the use of designated drivers as an alternative to driving after drinking.

Have Ridden with Designated Driver, Past Year

The 1995 survey showed an overall decline from 1993 in the use of designated drivers. A lower percentage of people age 16-64 reported having ridden with a designated driver in the past year compared with 1993. The decline in past year experience riding with a designated driver held for both males and females and, in varying degrees, for all age groups [Figure 30-A].

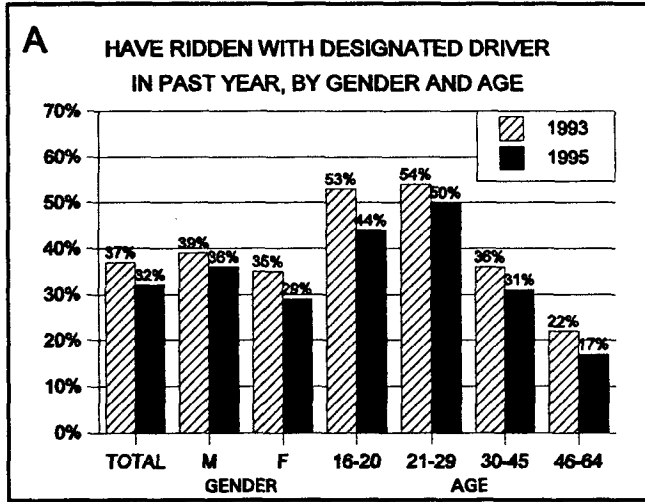
Have Been a Designated Driver, Past Year

The 1995 survey showed a slight decline overall (from 42% to 39%) in the percentage of drivers age 16-64 who said they had been a designated driver in the past year [Figure 30-B]. Virtually all this decrease was accounted for by females. Younger drivers (age 16-20 and 21-29) showed a more marked decline than older drivers in having served as a designated driver in the past year.

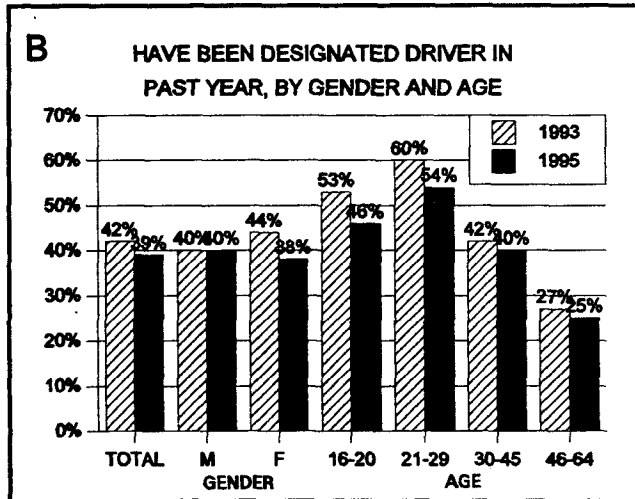
Number of Times Designated Driver, Past Month

Although there is virtually no change in the overall average number of times people served as designated driver in the past year, within some age groups the average number of times has changed noticeably [Figure 30-C].

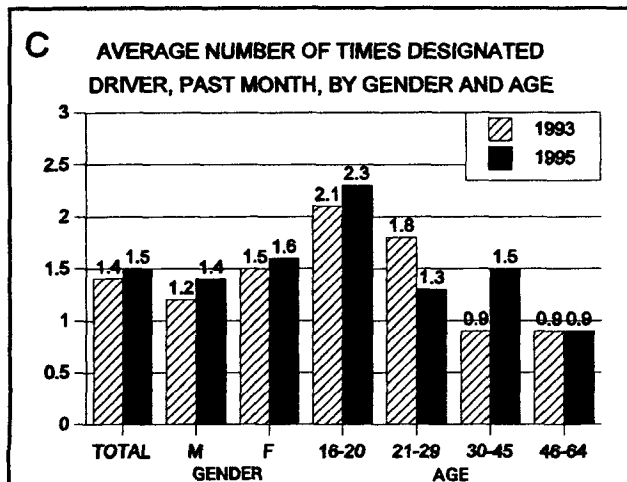
FIGURE 30: CHANGES IN USE OF DESIGNATED DRIVERS



Qx: *In the past 12 months, have you ridden anywhere with someone else who agreed to be the designated driver?* [Base: all respondents]



Qx: *In the past 12 months, have you ever been the designated driver when driving with others?* [Base: drivers]



Qx: *In the past 30 days, how many times have you been a designated driver?* [Base: have been designated driver in past year]

CHANGES IN ATTITUDES ABOUT DRINKING AND DRIVING

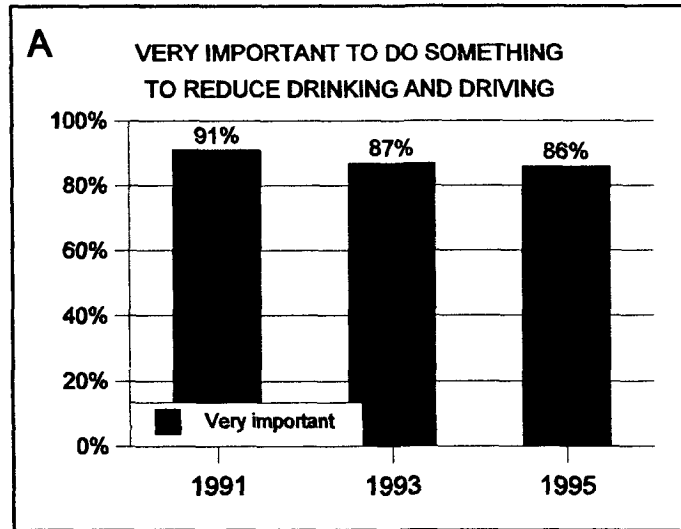
How Important is it to Reduce Drinking and Driving?

The perceived importance of doing something to reduce drinking and driving has declined somewhat since 1991. However, 86% of the public age 16-64 still say it is very important to do something to reduce it [Figure 31-A].

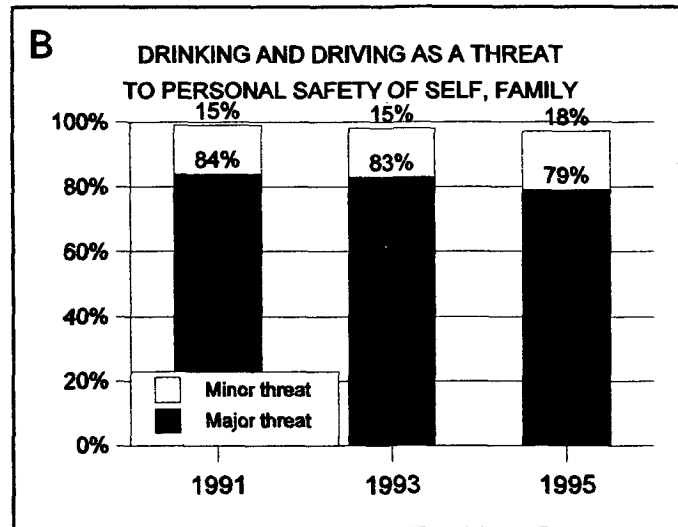
How Much is Drinking and Driving a Threat to Personal Safety?

Although there has been a slight decline in the percentage of the population age 16-64 who say that drinking and driving is a "major" threat to the personal safety of themselves and their family, 97% still see drinking and driving as a threat [Figure 31-B].

FIGURE 31: CHANGES IN ATTITUDES ABOUT DRINKING AND DRIVING



Qx: How important is it that something be done to reduce drinking and driving? Is it very important, somewhat important, or not important? [Base: all respondents]



Qx: In your opinion, how much is drinking and driving by other people a threat to the personal safety of you and your family? Would you say it is a major threat, a minor threat, or not a threat? [Base: all respondents]

CHANGES IN BELIEFS ABOUT DRINKING AND DRIVING

Are Most Impaired Drivers Problem Drinkers?

A higher percentage of the population (age 16-64) in 1995 than in 1993 agree with the notion that most people who drive after drinking are alcoholics or problem drinkers [Figure 32-A]. However, while the percentage who "strongly agree" with this view has clearly risen since 1993, the overall percentage who agree with this statement has shown no clear trend over the three surveys.

Are Non-Problem Drinkers a Serious Highway Safety Problem?

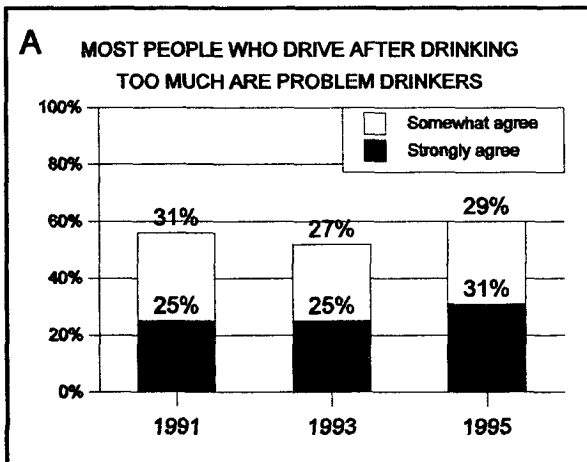
Nine out of ten people age 16-64 have, in all three surveys, agreed with the statement that drinking and driving by people who are not alcoholics or problem drinkers is a serious highway safety problem [Figure 32-B]. The percentage who strongly agree with this statement declined somewhat in 1995.

Should People Be Allowed to Drive Who Have Been Drinking at All?

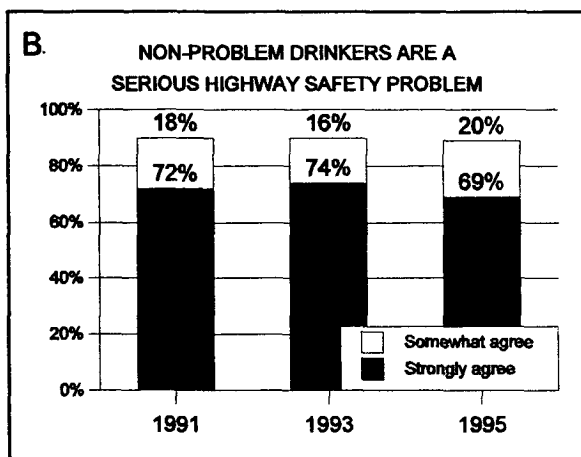
In all three surveys, three quarters of the population age 16-64 have agreed with the statement that people should not be allowed to drive if they have been drinking at all [Figure 32-C]. In 1995, 55% said they "strongly agree" with this statement, a very slight increase from previous surveys that bears watching in future surveys to see whether this is an emerging trend.

FIGURE 32: CHANGES IN BELIEFS ABOUT DRINKING AND DRIVING

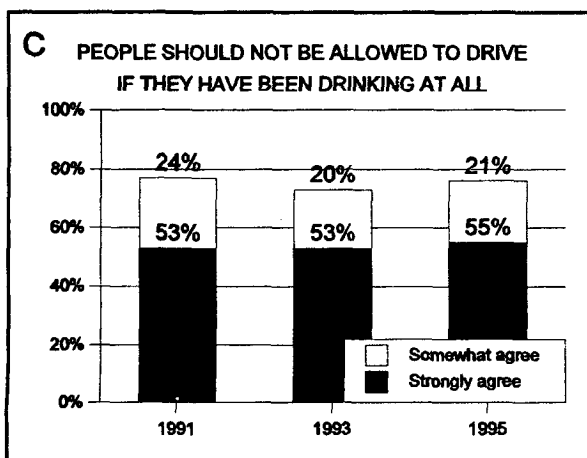
Qx: For each of the following statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree, or strongly disagree. [Base: all respondents]



Qx: Most people who drive after drinking too much are alcoholics or problem drinkers.



Qx: Drinking and driving by people who are NOT alcoholics or problem drinkers is a serious highway safety problem.



Qx: People should not be allowed to drive if they have been drinking at all.

CHANGES IN BELIEFS ABOUT ENFORCEMENT

Which is More Likely: To Be Stopped By Police or Have an Accident?

In 1995 as in 1993, about two thirds of people age 16-64 believe that, in their community, a person who drove after drinking too much would be more likely to have an accident than be stopped by police [Figure 33-A].

How Likely are You to Be Stopped By Police?

Public opinion has not changed significantly since 1993 on the likelihood that a driver who has had too much to drink will be stopped by the police [Figure 33-B]. While opinion is divided, about two thirds think it is at least somewhat likely these drinking-drivers will be stopped.

What is the Likelihood of Being Punished If Charged?

There has been a slight decrease in the percentage who are "almost certain" that a driver who is charged with breaking the drinking and driving laws will be punished [Figure 33-C].

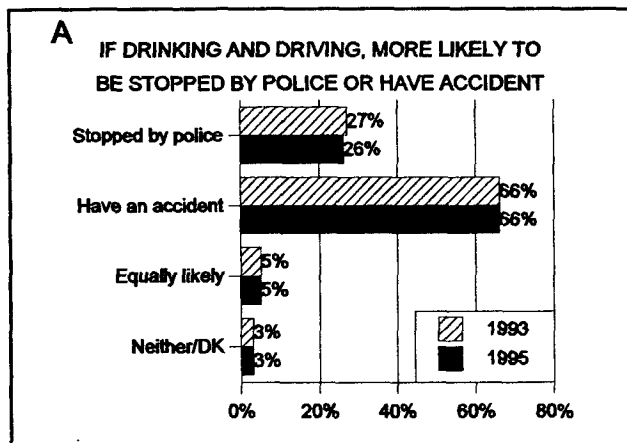
What is the Likely Severity of the Punishment?

The public (age 16-64) is more inclined in 1995 than it was in 1993 to think that the punishment for a drinking and driving offense will be very severe [Figure 33-D].

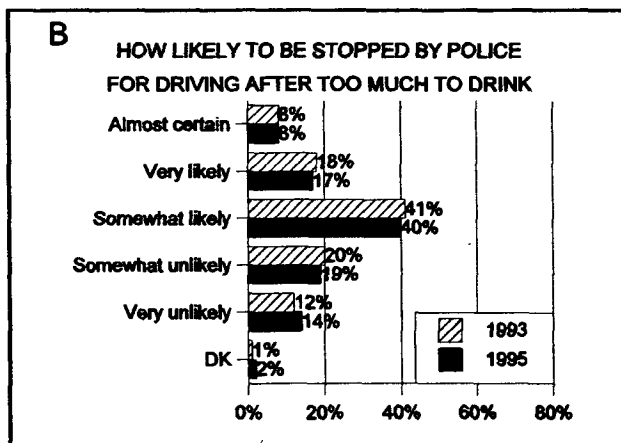
What is the Likely Punishment for a First Offense?

There has been negligible change in the percentage citing most forms of punishment for first offenders as a likely punishment (multiple responses were accepted) [Figure 33-E].

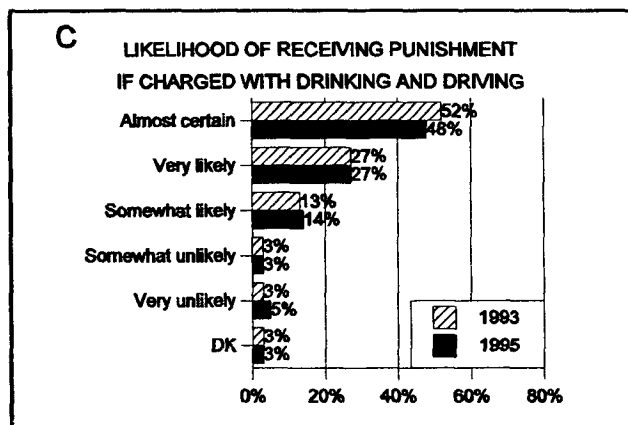
FIGURE 33: CHANGES IN BELIEFS ABOUT ENFORCEMENT



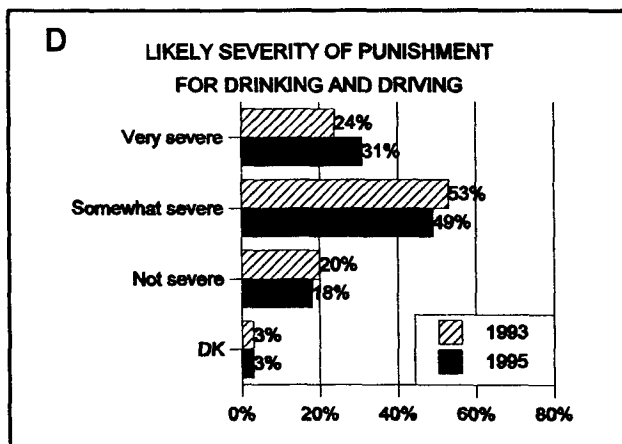
Qx: In your community, if a person drinks too much before driving (and then drives), which do you think is more likely to happen to them—being stopped by the police or having an accident? [Base: all respondents]



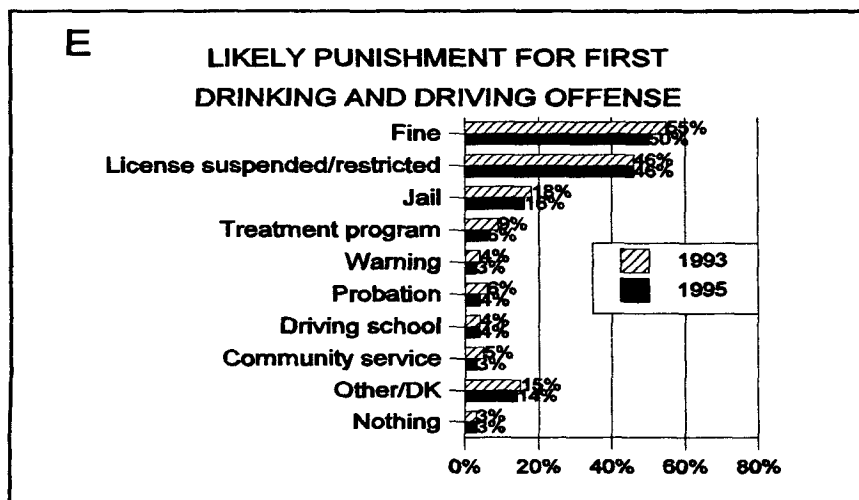
Qx: How likely are you to be stopped by a police officer for driving after you have had too much to drink? [Base: all respondents]



Qx: If a police officer stops you and charges you with breaking the drinking and driving laws, how likely are you to receive some sort of punishment such as a fine, a suspension of your driver's license, or something more severe? [Base: all respondents]



Qx: If you were actually punished for drinking and driving, do you think the punishment would most likely be very severe, somewhat severe, or not severe? [Base: all respondents]



Qx: What would most likely happen to a driver the first time he or she was punished for drunk driving? [Base: all respondents]

CHANGES IN OPINIONS ABOUT PENALTIES

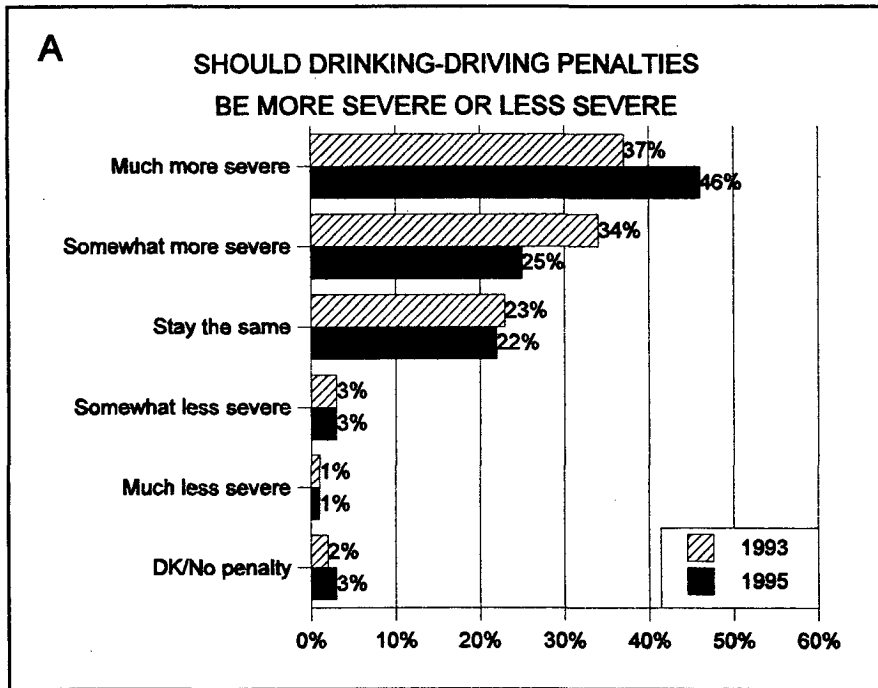
Should Penalties Be More Severe or Less Severe?

Comparing 1995 with 1993, a significantly greater percentage of the public (age 16-64) think penalties for drinking and driving violations should be much more severe than they currently are [Figure 34-A].

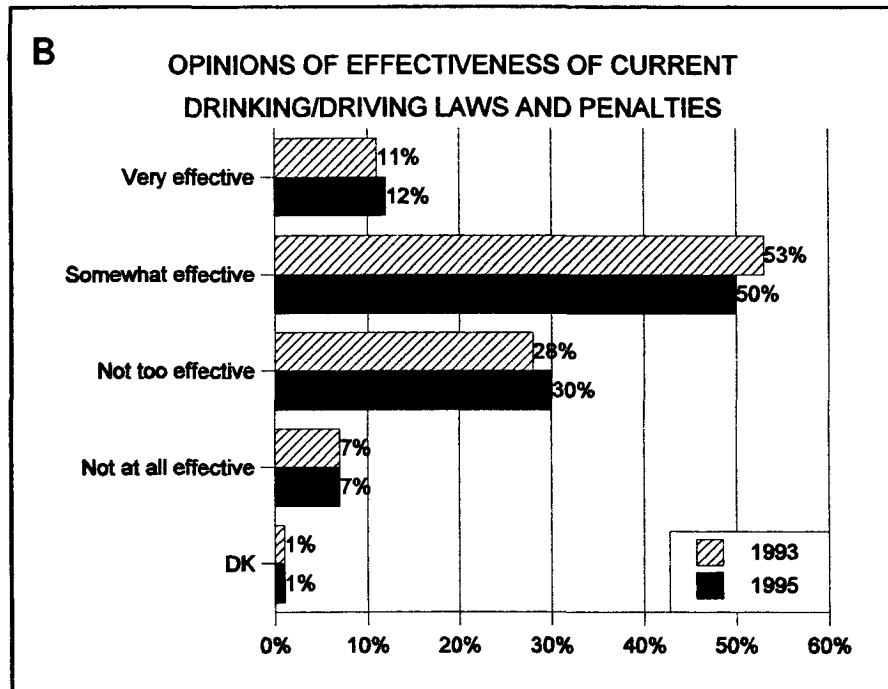
How Effective Are Current Laws and Penalties?

There has been no significant change in the public's opinion about the effectiveness of current drinking and driving laws and penalties in reducing drinking and driving. About half think the laws and penalties are somewhat effective, but only one in eight think they are very effective [Figure 34-B].

FIGURE 34: CHANGES IN OPINIONS ABOUT PENALTIES



Qx: *In your opinion, should the penalties that are given out to drivers who violate the drinking and driving laws be . . . ?* [Base: all respondents]



Qx: *In your opinion, how effective are current laws and penalties at reducing drinking and driving?* [Base: all respondents]

CHANGES REGARDING SOBRIETY CHECKPOINTS

Should Checkpoints Be Used More Frequently or Less Frequently?

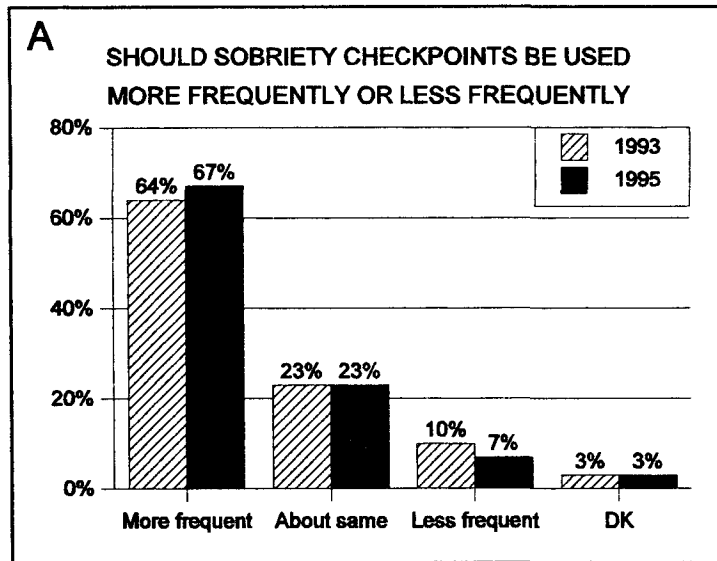
Total Population (Age 16-64)

Support for more frequent use of sobriety checkpoints has increased somewhat since 1993. About two thirds of the public (age 16-64) favor more frequent use of checkpoints [Figure 35-A].

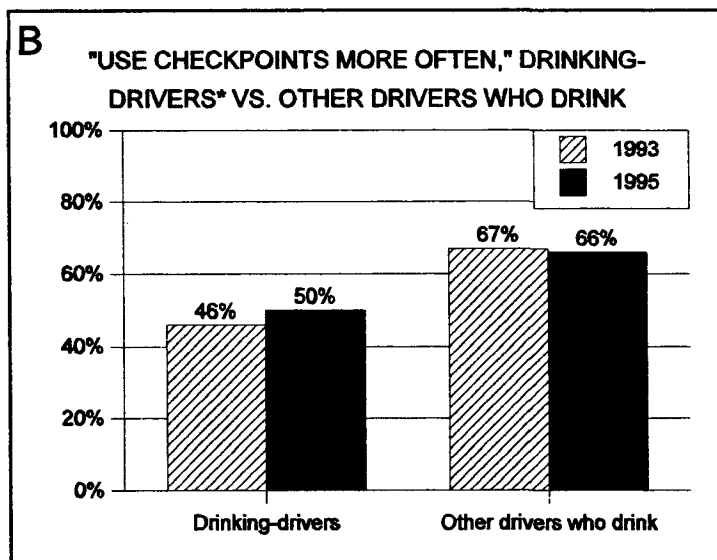
Drinking-Drivers

Among those who drove within two hours after drinking in the past year ("drinking-drivers"), a slightly higher percentage in 1995 than in 1993 say that checkpoints should be used more frequently [Figure 35-B].

FIGURE 35: CHANGES REGARDING SOBRIETY CHECKPOINTS



Qx: *Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently?* [Base: all respondents]



Qx: *Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently?* [Bases: specified in the chart]

* Drinking-drivers: Drove within two hours after drinking in the past year

CHANGES IN INDICATORS OF POTENTIAL PROBLEM DRINKING

This series of questions asks respondents who drink about four dimensions of past year experience that may indicate problem drinking, represented by the acronym "CAGE" (Ewing, 1984): "Have you felt you should cut down ("C" for "cut down") on your drinking?" "Have people annoyed ("A") you about your drinking?" "Have you felt bad or guilty ("G") about your drinking?" "Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover ("E" for "eye-opener")?" These questions were asked only in 1993 and 1995.

Should Cut Down on Drinking

On the first measure ("Have you felt you should cut down on your drinking?"), a higher percentage of those who drink in all age and gender categories believe they should cut down, compared with figures from the 1993 survey [Figure 36-A].

People Annoyed Me About Drinking

Changes in the percentage saying that people have annoyed them by criticizing their drinking are negligible [Figure 36-B].

Felt Bad or Guilty About Drinking

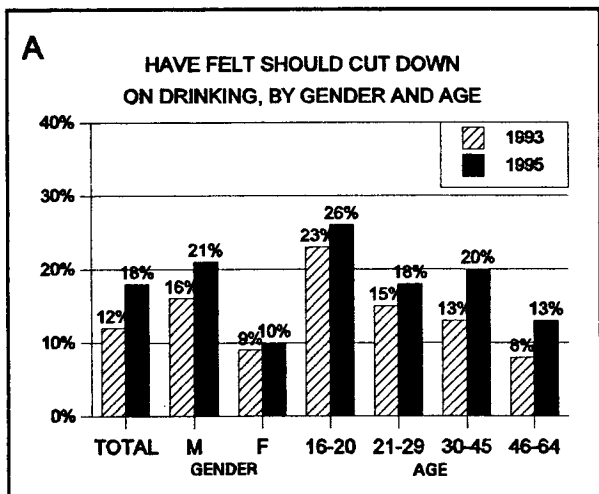
Changes on this measure are also negligible, although the apparent increase among 16-20 year olds bears watching in future surveys [Figure 36-C].

Had a Drink First Thing in the Morning

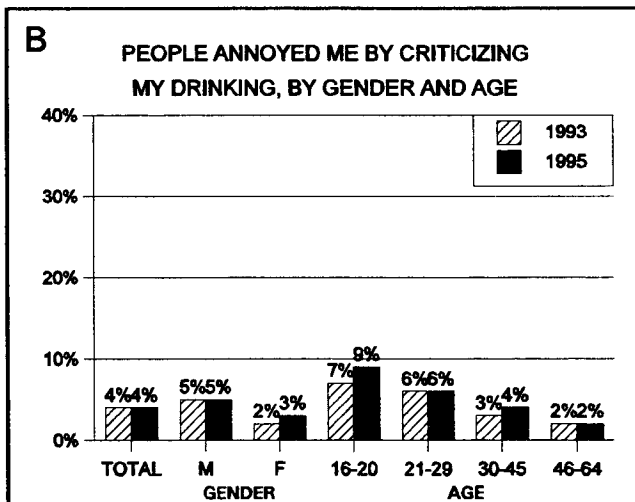
The pattern on this measure resembles that for the guilt measure: negligible change with a small increase among 16-20 year olds that bears watching [Figure 36-D].

FIGURE 36: CHANGES IN INDICATORS OF POTENTIAL PROBLEM DRINKING

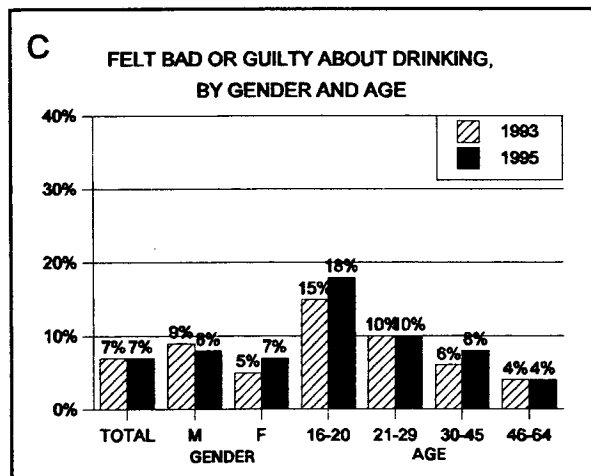
Qx: "In the past 12 months. . ."



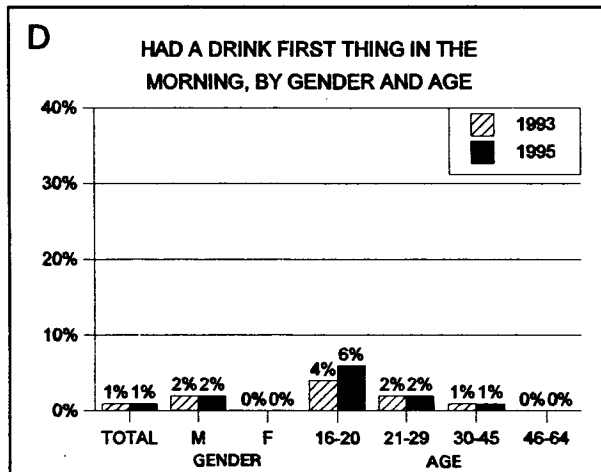
Qx: . . .have you felt you should cut down on your drinking? [Base: Drank alcohol, past year]



Qx: . . .have people ever annoyed you by criticizing your drinking? [Base: Drank alcohol, past year]



Qx: . . .have you felt bad or guilty about your drinking? [Base: Drank alcohol, past year]



Qx: . . .have you had a drink first thing in the morning to steady your nerves or get rid of a hangover? [Base: Drank alcohol, past year]

CONCLUSIONS

The findings from the 1995 survey show that positive changes have taken place since the first drinking and driving survey conducted by NHTSA in 1991. The percentage who drank and drove in the past year has declined from 28% to 24%, and those who do drink and drive are doing so less frequently (drinking-driving trips declined from an average of 2.3 trips per to month to 1.5 trips per month). Also, fewer people of driving age rode with a driver who had consumed too much alcohol to be safe (15% in 1991 vs. 11% in 1995).

The public views drinking and driving as a very important problem and their continuing concern is reflected in the fact that more people (46% in 1995 vs. 37% in 1993) think that penalties for drinking and driving should be much more severe than they are now. Despite a slight decline from 1991, the overwhelming majority (86%) still think it is "very important" to do something to reduce drinking and driving, and 79% see drinking and driving as a threat to the personal safety of themselves or their family.

The survey results clearly point to the conclusion that, while substantial progress has been made, the public is strongly supportive of continuing efforts to further reduce this preventable highway safety threat.

APPENDIX A: METHODS

Sample Design

Since the Statement of Work called for this population survey to be conducted by telephone, the study procedures called for the construction of a national sampling frame of telephone households from which an unbiased population sample could be derived. The general procedure in developing a population-based sample for telephone surveys -- whether at the national, state or community level -- involved four steps. The first stage sample involved a population based sample allocation, which was distributed in proportion to the geographic distribution of the target population according to the most recent Census estimates. The second stage of the sampling process employed a systematic selection of assigned telephone banks within the geographically stratified first stage sample design. The third stage in the sampling procedure was to conduct a random digit dialing (RDD) sampling of telephone households within the telephone banks selected in the second stage. The fourth stage of sample construction required the identification and selection of one eligible respondent within each sampled household so that the household sampling frame yielded a population sample of the eligible population. These procedures yielded a relatively unbiased sample of the target population from which valid generalizations can be made to the general public, within specified limits of expected sampling variability.

Sample Construction

Most of the statistical formulas associated with sampling theories are based upon the assumption of simple random sampling. Specifically, the statistical formulas for specifying the sampling precision (estimates of sampling variance), given particular sample sizes, are premised on simple random sampling. Unfortunately, random sampling requires that all of the elements in the population have an equal chance of being selected. Since no enumeration of the total population of the United States (or its subdivisions) is available, all social surveys of the general public are based upon an approximation of the actual population and survey samples are generated by a process closely resembling true random sampling.

The best known sampling strategy for telephone surveys of the general population is based upon a technique known as random digit dialing (RDD). Since this technique was introduced in 1974, it has gained widespread acceptance. It is estimated that RDD provides sampling coverage of more than 95% of the

non-institutionalized population of the United States. Virtually all of the telephone surveys conducted by Schulman, Ronca, and Bucuvalas, Inc. (SRBI), each year are based on a modified stratified random digit dialing method. SRBI samples are based on an area probability/RDD sample rather than on a single-stage/RDD sample. There are several important advantages to using an area probability base, including:

- 1) It draws the sample proportionate to the geographic distribution of the target population, rather than the geographic distribution of telephone households which is vital to constructing unbiased population estimates from telephone surveys.
- 2) It allows greater geographic stratification of the sample to control for known geographic differences in non-response rates.
- 3) It facilitates the use of Census estimates of population characteristics to weight the completed sample to correct for other forms of sampling bias.

Hence, the telephone sample for this survey was developed from a multi-stage sampling process. The initial stage of sample construction required the development of an area probability sample based upon the distribution of the target population. The target population specified for this study was the adult (age 16 and older) population of the United States. Consequently, the initial stage in the construction of this sample required the development of a national area probability sample of the non-institutionalized adult population of the United States.

As noted earlier, the precision of sample estimates are generally improved by stratification. Hence, the adult household population of the United States was stratified by Census region. Specifically, the regional stratification of the sample was divided into the nine Census regions as follows:

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Middle Atlantic: New York, New Jersey, and Pennsylvania.

East North Central: Ohio, Indiana, Illinois, Michigan, and Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

South Atlantic: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida .

East South Central: Kentucky, Tennessee, Alabama, and Mississippi.

West South Central Arkansas, Louisiana, Oklahoma, and Texas.

Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.

Pacific: Washington, Oregon, California, Alaska, and Hawaii.

The estimated distribution of the population by stratum was calculated on the basis of the Projections of the Population of States by Age, Sex and Race: 1988 to 2010 (Current Population Reports, P-25, No. 1017). The population estimates were taken from the Middle Series estimates for the year nearest to the start of the field period. Based on these Census estimates of the geographic distribution of the target population, the total sample was proportionately allocated by stratum. Assuming a total sample size of 3,250 households for the adult cross-sectional sample and 750 households for a young adult oversample using the Census estimates of population distribution, the geographic allocation of the cross-sectional sample for the Drinking and Driving Behavior and Attitudes III survey is presented in Figure A-1, on the next page. Figure A-2, on the following page, presents the projected population distribution by age and gender.

Once the sample had been geographically stratified with sample allocation proportionate to population distribution, a sample of assigned telephone banks were randomly selected from an enumeration of the Working Residential Hundred Blocks within the active telephone exchanges within the region. The Working Hundreds Blocks were defined as each block of 100 potential telephone numbers within an exchange that included 3 or more residential listings. (Exchanges with one or two listings were excluded because in most cases such listings represent errors in the published listings.) This second stage sampling frame included more than 96.5% of all U.S. telephone households.

**FIGURE A-1: PROJECTION OF THE POPULATION
OF REGIONS - AGE 16 AND OLDER: 1995**

Region	Population	Proportion	X-Section Sample	Over- Sample
Total U.S.	193,446	100%	3,250	750
New England	10,302	5.3%	173	40
Middle Atlantic	28,827	14.9%	484	112
East North Central	31,088	16.0%	520	120
West North Central	13,160	6.8%	221	51
South Atlantic	35,772	18.5%	602	139
East South Central	11,846	6.1%	199	45
West South Central	21,197	11.0%	358	83
Mountain	10,821	5.6%	182	42
Pacific	30,433	15.7%	511	118

Projections of the Population of States by Age, Sex and Race: 1988 to 2010 (Current Population Reports, P-25, No. 1017).

FIGURE A-2: POPULATION AND SAMPLE DISTRIBUTION: 1995*

	Total Population (Thousands)	%	Cross- sectional Sample	Young Adult Sample	Total
Total (16+)	201,018		3,250	750	4,000
Males (16+)	96,834	48.2	1,567	362	1,929
16 - 20	8,821	4.4	143	362	505
21 - 29	16,612	8.3	268	-	268
30 - 44	32,157	16.0	520	-	520
45 - 64	25,441	12.7	412	-	412
65 +	13,803	6.9	224	-	224
Females (16+)	104,185	51.8	1,683	388	2,071
16 - 20	8,463	4.2	137	388	525
21 - 29	16,404	8.2	266	-	266
30 - 44	32,177	16.0	520	-	520
45 - 64	27,180	13.5	439	-	439
65 +	19,961	9.9	321	-	321

* Source: Projections of the Population of the United States by Age, Sex, and Race: 1988 to 2080, Current Population Reports, Series P-25, No. 1018, Bureau of the Census, p. 48-49.

In the third stage sample, a two digit number was randomly generated by computer for each Working Residential Hundreds block selected in the second stage sample. This third stage sampling technique is known as random digit dialing (RDD). Every telephone number within the Hundreds Block has an equal probability of selection, regardless of whether it was listed or unlisted.

The use of RDD sampling eliminates the otherwise serious problem of unlisted telephone numbers. Nationwide, approximately 20% of all phone subscribers have unlisted phones. Moreover, significant variation occurs among demographic groups, with the number of unlisted phones reaching a high of 26% in the West, 29% in large metropolitan areas, 25% among those earning \$5,000 - \$10,000, and 32% among non-whites. Thus, as directories grow out of date, non-inclusion rates in cities like New York and Chicago may exceed 40% among some demographic groups. For these reasons, using published phone listings as the universe is inadequate for telephone surveys and inferior to using random digit dialing.

The third stage RDD sample of telephone numbers was then dialed by SRBI interviewers to determine which were currently working residential household phone numbers. Non-working numbers and non-residential numbers were immediately replaced by other RDD numbers selected within the same stratum in the same fashion as the initial number. Ineligible households (e.g., no adult in the household, language barriers) were also immediately replaced. Non-answering numbers were not replaced until the research protocol (i.e., in this study a five call protocol) was exceeded. However, one or more open numbers per case may have been permitted in order to permit the replicate to be completed within a reasonable period.

Screening to Determine Household Eligibility

The sample construction described in the previous section yielded a population-based, random-digit dialing sample of telephone numbers. The systematic dialing of those numbers to obtain a residential contact yielded an unbiased sample of telephone households. The next step was to select eligible households within the total sample of working numbers.

An adult respondent at each number drawn into the sampling frame was contacted about the composition of the household. Telephone numbers that yielded non-residential contacts, e.g. businesses, churches, college dormitories, etc., were screened out. Only households, i.e., residences at which any number of related individuals or no more than five unrelated persons living together, were eligible for inclusion in the sample.

This minimal screening was only to ascertain that the sample of telephone numbers reached by interviewers are residential households.

Selection of Respondent within Households

The multi-stage sampling process described in the previous sections yielded an unbiased national sample of household with telephones, drawn proportionate to the population distribution. This represents an unbiased sample of households. The final stage required the selection of one respondent per household for the interview.

A systematic selection procedure was used to select one designated respondent for each household sampled. The "most recent/next birthday method" was used for within household selection among multiple eligibles. The birthday selection method was first proposed by Salmon and Nichols (1983) as a less intrusive method of selection than the traditional grid selections of Kish, et al. In theory, birthday selection methods represent true random selection (Lavrakas, 1987). Empirical studies indicate that the birthday method produces shorter interviews with higher response rates than grid selection (Tarnai, Rosa and Scott, 1987). The Within Household Selection Procedure is presented in Figure A-3. The CATI system alternated the "most recent" and "next" birthday specification for the selected respondent to avoid a temporal bias for birthdays before (or after) the field period.

Young Adult Oversample

The Statement of Work specified an oversample of 16-20 year olds in the achieved sample to permit more detailed analysis of this subset of the population. A random sample of all persons age 16 and over in a RDD sample of 4,000 households yielded too few individuals in this range to allow this close examination.

Therefore, to increase the subsample sizes of the 16-20 year olds, within a projectable national sample, an independent national sample was conducted of that population. The allocation of sample by region for the young adult oversample is proportional to the regional distribution of that population. The household selection procedures through Random Digit Dialing is identical to the procedures used in the 16+ cross-section.

However, the screening criteria for the oversample was different than the simple cross-section. In the oversample, households were screened for persons age 16 to 20. This systematic screening of a national probability sample of households for a subset of the total household population should have yielded an unbiased sample of that population.

**FIGURE A-3:
 WITHIN HOUSEHOLD SELECTION PROCEDURE:
 ADULT CROSS-SECTION**

RESPONDENT SELECTION GROUP C

TIME START: _____ TIME END: _____
 DATE: _____ BATCH #: _____ CATI RESP. #: _____
 SAMPLE POINT #: _____ GENDER OF RESP.: MALE [] FEMALE []
 RESP PHONE NUMBER: _____
 RESP POSITION IN HOUSEHOLD: _____
 INTERVIEWER NAME: _____
 THIS INTERVIEW IS A: COMPLETE [] CALLBACK FOR COMPLETION []
 TERMINATE AT Q. _____ []

INTRODUCTION TO BE ADMINISTERED TO ANY ADULT HOUSEHOLD MEMBER:

Hello, I'm _____ from SRBI, the national research organization. We are conducting a study for the U.S. Department of Transportation about Americans' driving habits and concerns, and their attitudes about current driving laws. The interview is completely confidential. It takes fifteen to twenty minutes.

C1. In order to select just one person to interview, could I speak to the person in your household, age 16 and older, who has had the most recent birthday?

Respondent is that person [CONTINUE WITH CATI AND ENTER Q.1 AS C1].....1

Other respondent came to phone [CONTINUE WITH CATI AND ENTER Q.1 AS C1].....2

Respondent is not available [ARRANGE CALLBACK AND RECORD IT, ALONG WITH THE RESPONDENT'S FIRST NAME OR HH POSITION, ON THE SAMPLE SHEET. ATTACH THIS SHEET TO SAMPLE AFTER FILLING OUT APPLICABLE RESPONDENT INFO AT THE TOP. WHEN THE NEXT INTERVIEWER REACHES THIS PERSON, THEY WILL ENTER Q.1 AS C1].....3

As in the case of the simple cross-sectional sample, if there were only one eligible respondent in the household then he or she was selected with certainty. If there were more than one eligible respondent, then the "most recent/next birthday" method of selection was used. An example of the oversample screener script is presented in Figure A-4.

Telephone Interviewing Center

All telephone interviewing on the project was conducted by SRBI's staff of experienced telephone interviewers from SRBI's telephone research center in New York City. The interviewers used SRBI's Computer Assisted Telephone Interviewing (CATI) system and all interviewing was continuously monitored by interviewing supervisors.

The SRBI telephone interviewing staff consists of approximately 300 telephone interviewers, who are employed on a full or part-time basis. The interviewing staff is drawn from professionals with communications skills -- college-educated actors and actresses pursuing careers in New York's stage and broadcast industries. Their voice and diction training, as well as their ability to repeat lines accurately and with interest -- time after time -- makes them an invaluable interviewing resource.

All aspects of interviewer recruitment, scheduling and training are directed by the administrative staff of the telephone research center. The telephone administrative staff direct operations according to the specifications of the project director and analytic staff. The administrative staff maintains detailed records throughout the field process so that the progress of the survey can be monitored by the project director and documented for the client.

SRBI draws upon a staff of experienced telephone supervisors for its projects. All supervisors participate in the project training session and they undergo an additional review on interview editing instructions, refusal prevention and conversion, and study issues.

The line supervisors or monitors are responsible for the direct oversight of individual interviewers. They audio-monitor the interviews being conducted and they are responsible for evaluating the performance of the interviewers on a set of criteria established by the Operations Director. These criteria include the accuracy of interviewer recording, as well as interviewing technique.

**FIGURE A-4:
WITHIN HOUSEHOLD SELECTION PROCEDURE:
YOUNG ADULT OVERSAMPLE**

RESPONDENT SELECTION GROUP D [USE ONLY WITH REPLICATE 9]

TIME START: _____ **TIME END:** _____

DATE: _____ **BATCH #:** _____ **CATI RESP. #:** _____

SAMPLE POINT #: _____ **GENDER OF RESP.:** MALE FEMALE

RESP PHONE NUMBER: _____

RESP POSITION IN HOUSEHOLD: _____

INTERVIEWER NAME: _____

THIS INTERVIEW IS A: COMPLETE CALLBACK FOR COMPLETION

TERMINATE AT Q. _____

INTRODUCTION TO BE ADMINISTERED TO ANY ADULT HOUSEHOLD MEMBER:

Hello, I'm _____ from SRBI, the national research organization. We are conducting a study for the U.S. Department of Transportation about Americans' driving habits and concerns, and their attitudes about current driving laws. The interview is completely confidential. It takes fifteen to twenty minutes.

D1. Is there anyone age 16 to 20 years old living in your household?

| _____ Yes [ASK Q.D2].....1

| _____ No [SCREEN OUT - D1 AGE].....2

D2. Could I speak to the person in your household, age 16 to 20, who has had the most recent birthday?

Respondent is that person [CONTINUE WITH CATI AND ENTER Q.1 AS D2].....1

Other respondent came to phone [CONTINUE WITH CATI AND ENTER Q.1 AS D2].....2

Respondent is not available [ARRANGE CALLBACK AND RECORD IT, ALONG WITH THE RESPONDENT'S FIRST NAME OR HH POSITION, ON THE SAMPLE SHEET. ATTACH THIS SHEET TO SAMPLE AFTER FILLING OUT APPLICABLE RESPONDENT INFO AT THE TOP. WHEN THE NEXT INTERVIEWER REACHES THIS PERSON, THEY WILL ENTER Q.1 AS D2].....3

Each interviewer typically is silently monitored by a line monitor at least twice each interviewing shift. The line monitor sits at a CRT which emulates the interviewer's computer so that the monitor can see what the interviewer has recorded, while audio-monitoring the interview. This allows the monitor to evaluate the interviewer on his or her performance.

Initial Contact

Initial telephone contact was attempted during the hours of the day and days of the week which have the greatest probability of respondent contact. This means that the primary interviewing period was conducted between 5:30 p.m. and 10:00 p.m. on weekdays; between 9:00 a.m. and 10:00 p.m. on Saturdays; and between 10:00 a.m. and 10:00 p.m. on Sundays. Since interviewing was conducted across time zones, the interviewing shift lasted until 1:00 a.m.

If the interview was not conducted at the time of initial contact, the interviewer rescheduled the interview at a time convenient to the respondent. Although initial contact attempts were made on evenings and weekends, daytime interviews were scheduled when necessary. If four telephone contacts on the night and weekend shifts did not elicit a respondent contact, the fifth contact was attempted on a weekday.

Interviewers attempted a minimum of five calls to each telephone number. When the household was reached, the interviewer asked to speak to an adult to screen the household for eligibility and to determine the designated respondent. When the designated respondent was reached but an interview at that time was inconvenient or inappropriate, interviewers set up appointments with respondents. When contact was made with the household, but not the designated respondent(s), interviewers probed for appropriate callback times and attempted to set up an appointment.

General Interviewing Specifications

The interviewer's job is to collect accurate information by using the questionnaire according to certain standard rules. All interviewers were instructed to strictly follow certain rules in all instances. These general rules include:

1. Ask all questions exactly as they are written;
2. Ask the questions in the order in which they appear in the questionnaire;

3. Ask EVERY question specified in the questionnaire; unless an instruction tells you to do so, do not skip any questions;
4. Don't offer any explanations or interpretations unless specifically instructed to do so;
5. Don't suggest answers; help your respondent to answer within the categories -- do not even imply which category he/she should pick; and
6. Don't paraphrase or interpret a respondent's answer -- probe to get the respondent to clarify what he/she means.

Interviewers were trained to be careful to avoid giving any clues, either verbal or non-verbal, that might affect a respondent's answer to a question. Interviewers were instructed to be neutral while still maintaining a friendly, professional rapport with a respondent.

SRBI's CATI System

The Drinking and Driving Attitudes and Behavior III Survey was conducted by interviewers using Computer Assisted Telephone Interviewing (CATI). The CATI provides a number of benefits over traditional telephone interviewing, including a smoother flowing interview when the questionnaire contains interview branching to different questions series depending on the answer to previous questions, because the computer program moves the interviewer to the next appropriate question automatically. In addition, the use of CATI helps to minimize recording error because the acceptable range of responses can be programmed into the data entry program, which will not permit the interviewer to accidentally enter an out-of-range punch. Since the interviewer actually records each response to survey questions through the on-line data entry program, the risk of data processing errors arising from keypunch errors is eliminated in CATI interviews. The CATI software for the SRBI system is known as ACS-QUERY.

Entering Responses

Each question in the interview is shown on the screen one at a time. Interviewers see the question to be asked and the response categories that can be entered. The bottom of the screen tells them if the question was a multi-response question (i.e., more than one response could be entered) or not.

There are three safeguards built into the system to ensure that respondent answers are correctly recorded. First, the key entry of a response does not move the interviewer to the next question. Rather, the screen shows the interviewer what answer he has entered. Second, the interviewer must confirm that answer before the computer will proceed to the next screen. Third, if the entered code does not meet the range specifications for the question, the program will not accept that entry. If after all of these safeguards the interviewer enters the wrong answer, the computer will let him back up to the previous screen. The interviewer can correct the error by entering the valid code. If more than one response needs to be changed after several additional questions have been answered, a line supervisor is called immediately so that the interview could be taken back to the appropriate point. However, if only one remote item is affected, interviewers take note of this response on a Study Action Form so it can be corrected after completion of the interview.

The computer rotated some questions according to the study design. Therefore, we include the full stem of the question on the screen for each sub-item so that if the respondent asks the interviewer to reread the first part of the question he/she can do it. In the case of rotated question series, the "all other" categories are not rotated so that they are always last.

Most of the replies to the survey questions have pre-coded response categories on the screen. In some cases, interviewers read the categories to the survey respondent and he or she selects one of them. Interviewers then enter the code that correspond to the category selected by the respondent.

In some cases, interviewers are not supposed to read the categories. For these questions, they have pre-coded categories on the screen that are selected to represent the most common responses to the question. The interviewers enter the code(s) that most nearly corresponds to the respondent's answer. For other questions, interviewers enter the numerical response.

Entry of Open-Ended Responses

Some questions in the Drinking and Driving Attitudes and Behavior III Survey required verbatim recording. The direct entry of the verbatim answers by the interviewer into the CATI program is the appropriate method for this survey. After each open-ended question, there were closed-ended codes for "No response" and "Not Sure," as well as "Response" code. The entry of the "Yes, response" code branched the interview to a data entry field for the key entry of the verbatim response to the question. Similarly, the "Other" code branched the interview to a data field

where the verbatim response can be key entered. A prelisting of some response categories to the open-ended questions can sometimes be helpful in reducing the amount of unnecessary key-entry and subsequent coding.

Spanish Language Interviews

A Spanish language version of the survey instrument was developed in order to eliminate language barriers for a small proportion of the U.S. adult population. If the interviewer encountered a language barrier at a telephone number, either with the person answering the phone or with the designated respondent, the interviewer thanked the person and ended the call. If case was designated as Spanish language, it was turned over to the next available Spanish-speaking interviewer. These bilingual interviewers recontacted the Spanish-speaking households to screen for eligibility and conduct interviews with eligible respondents.

Refusal Conversion

The process of converting terminations and refusals, once they occurred, involved four steps. First, there was a diagnostic period when refusals and terminations were reported on a daily basis and the Project Director and Operations Manager reviewed them after each shift to see if anything unusual was occurring. Second, after enough time passed to see a large enough sample of refusals and terminations, the Project Director and his staff worked out a refusal conversion script. Third, the refusal conversion effort was fielded with reinterview attempts scheduled about a week after the initial refusal. Fourth, the Project Director and Operations Manager received the outcomes of the refusal conversion efforts on a daily basis. Revisions of the script or the procedures were made, if indicated by the ongoing results of the conversion effort. Figure A-5 presents the refusal conversion script used on this survey.

Field Outcomes

The field interviewing for the study commenced on September 25, 1995, following training of the field interviewers. It was completed on November 27, 1995. A total of 4,008 interviews were completed.

A total of 12,526 random digit telephone numbers were sampled within a geographically stratified national sampling frame for the cross-sectional sample. Eighteen percent of these numbers were non-residential, including 820 not-in-service numbers; 1,222 business numbers; and 230 numbers with computer or fax tones. Another 19.5% percent of the numbers were no answers, despite repeated attempts.

Answering machines were encountered in 3.6% of the numbers attempted.

There were 256 households in which the designated respondent was not interviewable. These cases included the respondent being away for an extended period, being incapacitated, or being deaf. As a result of the Spanish language translation of the questionnaire, there were only 198 cases of households or individuals not reached due to language barriers. At the close of the field period, there were only 207 cases in callback status.

The participation rate represents one of the most critical measures of potential sample bias because it indicates the degree of self-selection by potential respondents into or out of the survey. In the calculation of participation rate, the contractor followed the industry standard of the Council of Applied Survey Research Organizations (CASRO). The participation rate is calculated as the number of completed interviews, including respondents that screen out as ineligible, divided by the total number of completed interviews, terminated interviews, and refusals to interview. It should be noted that the inclusion of screen outs in the numerator and denominator is mathematically equivalent to discounting the refusals by the estimated rate of non-eligibility among refusals.

A total of 3,253 interviews were completed with designated respondents in the main cross-sectional sample. There were an additional 958 cases in which the household completed the household screen, but were determined to be ineligible for the full interview. By contrast, there were 1,053 refusals to be interviewed (700 were second refusals). There were also 147 terminated interviews among the main cross-sectional sample. Based on the standard calculations of participation rate, the participation rate for the main cross-section was 77.8%.

A total of 1,763 interviews were completed with designated respondents in the young adult oversample. Screening interviews were completed with another 12,015 respondents for whom there was no one in the household who met the age criteria for the oversample. There were 36 terminated interviews and 976 refusals to conduct either a screening or follow-up interview in the young adult oversample. Based on the standard calculations of participation rate, the participation rate for the young adult oversample was 92.7%. (This unusually high rate is due principally to the large number of age-related screen-outs). The combined participation rate for the two samples was 88.5%.

The categories used in the sample disposition tables are presented in Figure A-6. The Final Summary Disposition of the sample is given in Figure A-7. Also presented are the calculations of survey participation rates.

FIGURE A-5: REFUSAL CONVERSION SCRIPT

Hello, my name is _____. I am a field supervisor with SRBI, a national research organization in New York. I believe that someone in your household may have been contacted by one of our interviewers concerning a public policy study that we are conducting for the U.S. Department of Transportation in Washington, D.C.

Yes, respondent.....1 Yes, other.....2 No, don't recall.....3

1. In order to assess the effectiveness of current traffic laws, the Congress has asked the U.S. Department of Transportation to conduct a study of American's driving habits and concerns, and their attitudes about current driving laws. It is a public opinion study that will help the government to consider traffic laws in light of what the public really wants and does. It only takes about fifteen minutes and it's strictly confidential.

Willing to proceed.....1 GO TO SELECTION GRID Refuses.....2

2. I understand. My job as a field supervisor is to find out if there are any problems with our surveys or interviewers that are discouraging people from participating. Could you tell me if we have done something wrong or is there something about the interview that concerns you?

IF: I don't do surveys. ANSWER: I understand, but this is the first survey to really examine whether our traffic laws are realistic and appropriate in terms of what people really want and really do. The results will be presented to Congress and may affect laws in your state. It is really important.

IF: I don't have time. ANSWER: It doesn't take very long and we can schedule it at a time convenient to you. We need to represent the opinion of busy people like you, as well as people who have more time, if we are to present an accurate picture to Congress of what the public thinks and wants.

IF: I don't know if you are who you say you are. ANSWER: I can give you our 800 number to call and confirm the authenticity of the study.

IF: I don't know how the results will be used. ANSWER: The Department of Transportation has been charged by the Congress to report to them about public opinion and behavior related to traffic laws, in order to assist them in determining whether certain laws should be changed or not. That's why we need to talk to you.

IF: I don't drive. ANSWER: Then the interview should only take a few minutes. Even if you don't drive, we need to get your opinion about some traffic laws that may affect you as a pedestrian. We also need a little background about non-drivers, but it won't take long at all.

IF: Don't know enough. ANSWER: This is an opinion survey about driving, traffic safety and traffic laws based on your experience. We need to talk to all kinds of people to get a true picture of what ordinary Americans think, not just what "experts" say.

IF: I don't want the government to know about me/ what I do. ANSWER: The interview is strictly confidential. Your telephone number was selected at random. As soon as we complete the interview and verify it, we destroy the phone number. No one will ever know who you are. We do this so that you can be comfortable in telling us what you really think, not what you think the government wants to hear.

IF: It's a bad time. ANSWER: We can schedule a callback for a time that would be good for you.

IF STILL HESITANT SAY: It is really important that we represent the views and experience of people like yourself so that the findings will be fair and accurate. You don't often get a chance to participate in studies that may affect the laws in your community. It's really important and we really want to represent your household in the study. If now is a bad time, we can schedule interview during the day, in the evening, or on the weekend whenever is better for you. (If suggests a time more than two weeks hence: We are supposed to finish the study by the end of July. Could we find some time this week (or next) to do the interview?)

IF AGREEABLE, GO TO THE SELECTION GRID. IF STILL REFUSES, THANK AND COMPLETE.

FIGURE A-6
SAMPLE DISPOSITION CATEGORIES

NIS/Dis/change #	The number was not in service, had been disconnected, or yielded a recording indicating that it was no longer an active number
Non-residential	The number yielded a contact with a business, government agency, pay telephone, or other non-residential unit
Computer/fax	The number yielded an electronic tone indicating a fax machine or data line
No answer	The number rang, but no one answered
Busy	A busy signal was encountered
Answering machine	An answering machine was reached at the telephone number
Language	The interview could not be completed because of language barriers
Away for duration	The designated respondent was out of the area for the entire field period
Callback	Contact was made with the household, but not necessarily the designated respondent. By the end of the field period, the case had neither yielded a refusal or completed interview
Callback to complete	The interview was interrupted, but not terminated. The field period ended before the full interview could be completed
Refusal -- Initial	Someone in the household refused to participate in the study
Refusal -- Second	During a refusal conversion attempt, a second refusal to participate in the study was encountered

**FIGURE A-7:
SAMPLE DISPOSITION**

	CROSS SECTION			OVER SAMPLE		
	ENGLISH	SPANISH	TOTAL	ENGLISH	SPANISH	TOTAL
NIS/DIS	816	4	820	1657	1	1658
NON-RESIDENTIAL	1219	3	1222	2357	1	2358
COMPUTER	230	0	230	542	0	542
LANGUAGE	191	7	198	136	17	153
HEALTH/DEAF	230	4	234	78	1	79
AWAY DURATION	18	4	22	29	0	29
OTHER	33	0	33	27	0	27
QUOTA OUT REGION	1209	1	1210	858	0	858
OVER 5 ATTEMPTS	1045	0	1045	0	0	0
NO ANSWER	1387	6	1393	2922	3	2925
ANS. MACHINE	450	0	450	936	2	938
BUSY	31	0	31	59	1	60
CALLBACK	194	13	207	181	9	190
CB FOR DESIG RESP	20	0	20	38	0	38
REFUSAL	80	4	84	64	0	64
INITIAL REFUSAL	269	0	269	845	0	845
SECOND REFUSAL	689	11	700	66	1	67
TERMINATES	147	0	147	35	1	36
S/O NO ADULT	36	12	48	71	4	75
S/O GENDER	910	0	910	0	0	0
S/O NO 16-20	0	0	0	11904	111	12015
COMPLETES	3198	55	3253	752	11	763
	12402	124	12526	23557	163	23720
TOTAL REFUSALS	1185	15	1200	1010	2	1012
TOTAL COMPLETE	4144	67	4211	12727	126	12853
TOTAL CONTACTS	5329	82	5411	13737	128	13865
PARTICIP RATE	77.8%	81.7%	77.8%	92.6%	98.4%	92.7%

Sample Weighting

The characteristics of a perfectly drawn sample of a population will vary from true population characteristics only within certain limits of sample variability (i.e., sampling error). Unfortunately, social surveys do not permit perfect samples. The absence of perfect cooperation from sampled units means that the completed sample will differ from the drawn sample. In order to correct these known problems of sample bias, the achieved sample is weighted to certain characteristics of the total population.

The weighting plan for the 1995 Survey of Drinking and Driving Attitudes and Behaviors involved a multi-stage sequential process of weighting the achieved sample to correct for sampling and non-sampling biases expected in the final sample. The first stage in the sample weighting procedures was designed to correct the cases in the completed sample for known selection biases in the sampling procedures. At the household selection stage, a random digit dialing process will give households with more than one telephone number an unequal likelihood of selection. Nationally, about ten percent of households selected by random digit dialing will have more than one telephone number. This selection bias was corrected by giving each household a first stage weight that was equal to the inverse of the number of different telephone numbers in the household.

The second step in the weighting process was to correct for selection procedures that yielded unequal probability of selection within sampled households. Although the survey was designed as a population survey, only one eligible person per household could be interviewed (because multiple interviews per household are burdensome and introduce additional design effects into the survey estimates). A respondent's probability for selection is inverse to the size (number of other eligible adults) of the household. Hence, the second stage weight was equal to the number of eligible respondents within the household.

The next step in the weighting process was to correct the study design for deliberate disproportionate selection of population subsets in the sample design and for differential participation rates of demographic subpopulations. The survey included both a cross-sectional sample of 3,250 respondents, aged 16 and older, and an oversample of 750 persons, aged 16 to 20 years old. Hence, the total achieved sample yielded a disproportionate sample distribution by age. A third weighting procedure which would weight the (weighted) sample to the cell distribution of the population by age and gender, using the Census Population Projections for Age, Sex and Race for 1995 (Figure A-2) was introduced.

The total number of cases generated by this procedure in the weighted sample

was larger than the unweighted sample size because of the use of the number of eligibles weight. In order to avoid misinterpretation of sample size, the total number of cases in the unweighted sample was divided by the total number of cases in the weighted sample to yield a sample size weight. The weight adjusts the 4008 completed interviews in the achieved sample to correct for known sampling and participation biases. Figure A-8 presents the SPSS program used to perform the sample weighting.

Precision of Sample Estimates

The objective of the sampling procedures used on this study was to produce an unbiased sample of the target population. An unbiased sample shares the same properties and characteristics of the total population from which it is drawn, subject to a certain level of sampling error. This means that with a properly drawn sample we can make statements about the properties and characteristics of the total population within certain specified limits of certainty and sampling variability.

The confidence interval for sample estimates of population proportions, using simple random sampling without replacement, is calculated by means of the following formula:

$$\text{var (x)} = z \sqrt{\frac{p (q)}{n - 1}}$$

Where:

- var (x) = the expected sampling error of the mean of some variable, expressed as a proportion
- p = some proportion of the sample displaying a certain characteristic or attribute
- q = (1 - p)
- z = the standardized normal variable, given a specified confidence level (1.96 for samples of this size).
- n = the size of the sample

FIGURE A-8: SPSS PROGRAM FOR SAMPLE WEIGHTING

```
compute nminors=(d7a + d7b).
compute nadults=(d7c + d7d + d7e + d7f).
compute ntotal=(nminors + nadults).
compute catage = age.
recode catage (16 thru 20 = 1)(21 thru 29 = 2)(30 thru 45 = 3)
(46 thru 64 = 4)(65 thru 97 = 5).
if (catage eq 99) catage = agecat.
recode catage (98 = 6).
missing value catage (6).
compute weight1 = numtel.
recode weight1 (3 = 1)(2 = .5).
compute weight2 = 1.
if (samtype1 eq 1) weight2 = nadults.
if (samtype1 eq 2) weight2 = d7c.
compute weight3 = (weight1 * weight2).
compute weight4 = 1.
if (gender eq 1 and catage eq 1) weight4 = .428.
if (gender eq 1 and catage eq 2) weight4 = .982.
if (gender eq 1 and catage eq 3) weight4 = 1.086.
if (gender eq 1 and catage eq 4) weight4 = .931.
if (gender eq 1 and catage eq 5) weight4 = 1.362.
if (gender eq 2 and catage eq 1) weight4 = .485.
if (gender eq 2 and catage eq 2) weight4 = 1.266.
if (gender eq 2 and catage eq 3) weight4 = 1.073.
if (gender eq 2 and catage eq 4) weight4 = 1.137.
if (gender eq 2 and catage eq 5) weight4 = 1.709.
compute weight5 = (weight3 * weight4).
recode weight5 (sysmis = 1).
compute weight6 = (weight5 * .5306).
weight by weight6.
```

The sample sizes for the surveys were large enough to permit estimates for subsamples of particular interest if the reader should care to perform them. Figure A-9 presents the expected size of the sampling error for specified sample sizes of 4,000 and less, at different response distributions on a categorical variable. Larger samples produce smaller expected sampling variances, but there is a constantly declining marginal utility of variance reduction per sample size increase.

The sampling design included a separate, concurrently administered oversample of the youth population (individuals aged 16-20). Both the cross-sectional sample of the driving age population and the oversample of the youth population were drawn as simple random samples. However, the disproportionate sampling of the youth population introduces a design effect that would make it inappropriate to assume that the sampling error for total sample estimates will be identical to those associated with a simple random sample.

To assess the design effect for sample estimates, we calculated the sampling errors for the disproportionate sample for thirteen of the most important behavioral variables. These estimates were then compared to the sampling errors for the same variables, assuming a simple random sample of the same size. The net design effect of the disproportionate sample is zero across the thirteen measures. Given an average design effect of zero, the table of expected sampling based on simple random samples is a useful guide to approximate the precision of sample estimates.

The appropriate statistical formula for calculating the allowance for sampling error (at a 95% confidence interval) in a stratified sample is:

$$ASE = 1.96 \sqrt{\frac{g}{h=1} \sum W^2 \{(1-f_h) (s_h^2/n_h - 1)\}}$$

where:

- ASE = allowance for sampling error at the 95% confidence level;
- h = a sample stratum;
- g = number of sample strata;
- w_h = stratum h as a proportion of total population;
- f_h = the sampling fraction for group h -- the number in the sample divided by the number in the universe;
- s_h² = the variance in the stratum h -- for proportions this is equal to p_h (1.0 - p_h);
- n_h = the sample size for the stratum h.

FIGURE A-9

**EXPECTED SAMPLING ERROR (Plus or Minus)
AT THE 95% CONFIDENCE LEVEL
(SIMPLE RANDOM SAMPLE)**

Percentage of the Sample or Subsample Giving
A Certain Response or Displaying a Certain
Characteristic for Percentages Near:

Size of Sample or Subsample	10 or 90	20 or 80	30 or 70	40 or 60	50
4,000	0.9	1.2	1.4	1.5	1.5
3,000	1.1	1.4	1.6	1.8	1.8
2,000	1.3	1.8	2.0	2.1	2.2
1,500	1.5	2.0	2.3	2.5	2.5
1,300	1.6	2.2	2.5	2.7	2.7
1,200	1.7	2.3	2.6	2.8	2.8
1,100	1.8	2.4	2.7	2.9	3.0
1,000	1.9	2.5	2.8	3.0	3.1
900	2.0	2.6	3.0	3.2	3.3
800	2.1	2.8	3.2	3.4	3.5
700	2.2	3.0	3.4	3.6	3.7
600	2.4	3.2	3.7	3.9	4.0
500	2.6	3.5	4.0	4.3	4.4
400	2.9	3.9	4.5	4.8	4.9
300	3.4	4.5	5.2	5.6	5.7
200	4.2	5.6	6.4	6.8	6.9
150	4.8	6.4	7.4	7.9	8.0
100	5.9	7.9	9.0	9.7	9.8
75	6.8	9.1	10.4	11.2	11.4
50	8.4	11.2	12.8	13.7	14.0

NOTE: Entries are expressed as percentage points (+ or -).

While the earlier table provides a useful approximation to the magnitude of expected sampling error, precise calculation of allowances for sampling error requires the use of this formula.

Estimating Statistical Significance

The estimates of sampling precision presented in the previous section yield confidence bands around the sample estimates, within which the true population value should lie. This type of sampling estimate is appropriate when the goal of the research is to estimate a population distribution parameter. However, the purpose of some surveys is to provide a comparison of population parameters estimated from independent samples (e.g. annual tracking surveys) or between subsets of the same sample. In such instances, the question is not simply whether or not there is any difference in the sample statistics which estimate the population parameter, but rather is the difference between the sample estimates statistically significant (i.e., beyond the expected limits of sampling error for both sample estimates).

To test whether or not a difference between two sample proportions is statistically significant, a rather simple calculation can be made. Call the total sampling error (i.e., var (x) in the previous formula) of the first sample s_1 and the total sampling error of the second sample s_2 . Then, the sampling error of the difference between these estimates is sd which is calculated as:

$$sd = \sqrt{s_1^2 + s_2^2}$$

Any difference between observed proportions that exceeds sd is a statistically significant difference at the specified confidence interval. Note that this technique is mathematically equivalent to generating standardized tests of the difference between proportions.

An illustration of the pooled sampling error between subsamples for various sizes is presented in Figure A-10. This table can be used to indicate the size of difference in proportions between owners and non-owners or other subsamples that would be statistically significant.

FIGURE A-10

**POOLED SAMPLING ERROR EXPRESSED AS PERCENTAGES
FOR GIVEN SAMPLE SIZES (Assuming $p = q$)**

Sample Size

2,000	10.0	7.2	6.1	5.4	4.9	4.6	4.3	4.1	4.0	3.8	3.1
1,000	10.3	7.6	6.5	5.8	5.4	5.1	4.9	4.7	4.5	4.4	
900	10.3	7.6	6.6	5.9	5.5	5.2	5.0	4.8	4.7		
800	10.4	7.7	6.7	6.0	5.6	5.3	5.1	5.0			
700	10.5	7.8	6.8	6.1	5.8	5.4	5.2				
600	10.6	8.0	7.0	6.3	5.9	5.7					
500	10.7	8.2	7.2	6.6	6.2						
400	11.0	8.5	7.5	6.9							
300	11.3	9.0	8.1								
200	12.0	9.8									
100	13.9										

Sample

Size 100 200 300 400 500 600 700 800 900 1000 2000

Trend Analysis

Because of the limited number of data points (three), statistical analysis of changes from year-to-year have been deferred until completion of the fourth survey in 1997. Figure A-11, on the following page, presents the trend indicator variables for the three surveys (1991, 1993, and 1995).

FIGURE A-11: TREND INDICATOR VARIABLES

VARIABLE	1991	1993	1995
Driving Frequency	x	x	x
Drinking and Driving as Threat to Personal Safety of Respondent and Family	x	x	x
Importance of Reducing Drinking and Driving	x	x	x
Most Impaired Drivers Are Problem Drinkers	x	x	x
Non-Problem Drinkers Are a DWI Risk	x	x	x
Frequency of Alcohol Use	x	x	x
Type of Alcohol Usually Consumed	x	x	x
Number of Alcoholic Beverages Per Sitting	x	x	x
Consumption of Alcohol in the Past Month	x	x	x
Driving after Drinking Within Past 12 Months	x	x	x
Driving after Drinking Within Past 30 Days	x	x	x
"CAGE" Measures of Potential Problem Drinking		x	x
Experience as Designated Driver, Past Year		x	x
Frequency of Being a Designated Driver, Past Month		x	x
Experience Riding With Designated Driver, Past Year		x	x
No Drinking Before Driving Should Be Permitted	x	x	x
Past Year Experience as Passenger of Impaired Driver	x	x	x
When Passenger Decided Driver Consumed Too Much Alcohol to Drive Safely	x	x	x
Perceived Effectiveness of Laws/Penalties for Drinking/Driving		x	x
Attitude about Current Penalties for Drinking and Driving	x	x	x
Attitude about Penalty for First Time Drinking/Driving Offenders	x	x	x
Attitude about Penalty for Repeat Drinking/Driving Offenders		x	x
Likelihood of Impaired Driver Being Stopped by a Police Officer	x	x	x
Likely Punishment for First Time Drunk Driving Offender		x	x
Likelihood of Impaired Driver Being Punished for Drinking and Driving	x	x	x
Likely Severity of Punishment for Drinking and Driving	x	x	x
Comparative Risk of Drinking and Driving Outcomes	x	x	x
Avoided Driving after Drinking Too Much to Drive Safely		x	x
Attitude about Frequency of Use of Sobriety Checkpoints		x	x

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APPENDIX B: QUESTIONNAIRE

Sample Point Number: _____
 Questionnaire No. _____
 Interviewer: _____
 Date: _____
 Telephone Number: _____
 Time Start: _____
 Time End: _____
 TOTAL TIME: _____

[INTERVIEWER NOTE: Pre-coded response categories are not to be read unless specific instructions to do so are given. Also, do not read pre-coded response categories indicated as volunteered (VOL) responses.]

SAMPLE READ-INS: Cross-section/Oversample
 Replicate FIPS code
 Metro/Non-metro State
 Census division

Hello, I'm _____ calling for the U.S. Department of Transportation. We are conducting a study of American's opinions about current driving laws. The interview is completely confidential. It only takes about fifteen minutes.
 [IF ASKED: My company, SRBI, has been commissioned by the US Department of Transportation to conduct these interviews.]

A. In order to select just one person to interview, could I speak to the person in the household, aged 16 or older, who [has had the most recent/will have the next] birthday?

Same respondent. 1 SKIP TO Q.1
 New respondent. 2 REPEAT INTRO

1. How often do you usually drive a car or other motor vehicle? Would you say that you usually drive. [READ LIST]?

Every day. 1
 Several days a week. 2
 Once a week or less. 3
 Only certain times a year 4
 Never. 5
 Not sure (VOL). 6
 Refused (VOL). 7

4. The following questions deal with drinking alcoholic beverages and driving. For each of the following statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree.

STRONGLY SOMEWHAT SOMEWHAT STRONGLY NOT
 ROTATE AGREE AGREE DISAGREE DISAGREE SURE REF

5. Most people who drive after drinking too much alcohol are alcoholics or problem drinkers. 1 2 3 4 5 6

6. Drinking and driving by people who are NOT alcoholics or problem drinkers is a serious highway safety problem. 1 2 3 4 5 6

7. People should not be allowed to drive if they have been drinking any alcohol at all. 1 2 3 4 5 6

9. I feel I should prevent someone I know from driving when I see they have had too much to drink. 1 2 3 4 5 6

Now I'd like to ask you some questions about YOUR OWN behavior.

15. During the last 12 months, how often did you usually drink any alcoholic beverages, including beer, light beer, wine, wine coolers or liquor? Would you say you usually drank alcoholic beverages: [READ LIST]

Every day. 1
 Nearly every day. 2
 Three or four days a week. 3
 One or two days a week. 4
 Two or three days a month. 5
 Once a month or less. 6
 Never drank in last 12 months 7 \ (VOL) Not sure. 8 > SKIP (VOL) Refused. 9 / TO Q57

16. How many days in the past 30 days have you consumed any alcoholic beverages?

NUMBER OF DAYS
 CONSUMED ALCOHOLIC BEVERAGES

00 = None
 31 = Not sure
 32 = Refused

17. When you drink alcoholic beverages, which ONE of the following beverages do you drink MOST OFTEN? Do you usually drink. [READ LIST]

Beer.	1
Light beer.	2
Wine.	3
Wine coolers.	4
Hard liquor or mixed drinks.	5
Something else.	11
(SPECIFY: _____)	
Not sure (VOL).	12
Refused (VOL).	13

18. When you drink [READ TYPE OF BEVERAGE FROM Q.17] about how many (12 ounce REGULAR BEERS/12 ounce LIGHT BEERS/12 ounce WINE COOLERS/5 ounce glasses of WINE/drinks or shots of HARD LIQUOR) do you usually drink per sitting?

_____ Number of drinks	
Not sure (VOL).	98
Refused (VOL).	99

[ALCOHOL CONSUMPTION (TYPICAL 4 week period)]

19. People often drink different amounts of alcohol depending on the time, place or occasion. On some days they may drink small amounts, on some days they may drink medium amounts, and on other days they may drink large amounts. Think about the days when you drank alcohol during a typical four-week period (28 days) in the past six months.

**DO NOT READ [INTERVIEWER NOTE: ONE STANDARD DRINK IS APPROXIMATELY:
12 oz. (341ml) BOTTLE OF BEER (5% ALCOHOL)
1 1/2 oz. (43ml) SHOT OF LIQUOR (40% ALCOHOL)
5 oz. (142ml) GLASS OF WINE (11% ALCOHOL)
3 oz. (85ml) GLASS OF SHERRY, PORT OR VERMOUTH (18% ALCOHOL)]**

Interviewer note: WHEN DAYS SUM TO 28, STOP ASKING.

20. On how many days in this typical 4 week period did you not have any alcoholic beverages to drink?

_____ a _____ DAYS	
(VOL) Not sure.	98
(VOL) Refused.	99

21. [Of those remaining (28-a) days that you did drink] on how many days did you have 1 or 2 drinks?

_____ b _____ DAYS	
(VOL) Not sure.	98
(VOL) Refused.	99

22. [Of the ((28-a) - (b)) remaining days] on how many did you have 3 or 4 drinks?

_____ c _____ DAYS	
(VOL) Not sure.	98
(VOL) Refused.	99

23. [Of the (28-a) -(b) -(c) remaining days,] on how many did you have 5 or more drinks?

_____ d _____ DAYS	
(VOL) Not sure.	98
(VOL) Refused.	99

[SHOULD TOTAL 28 DAYS]

IF ANSWERED ONE OR MORE DAYS TO Q.23, ASK Q.24; OTHERWISE SKIP TO Q.26

24. On the days when you had 5 or more drinks, how many drinks did you usually have on that day?

_____ DRINKS	
(VOL) Not sure.	98
(VOL) Refused.	99

25. What was the MAXIMUM number of drinks you had in any one day?

_____ DRINKS	
(VOL) Not sure.	98
(VOL) Refused.	99

[ASK ALL PAST YEAR DRINKERS]

During the past twelve months, (READ ITEM)?

	YES	NO
26. Have you felt you should cut down on your drinking.	1	2
27. Have people annoyed you by criticizing your drinking.	1	2
28. Have you felt bad or guilty about your drinking.	1	2
29. Have you had a drink first thing in the morning to steady your nerves or get rid of a hangover.	1	2

[CONDITIONAL: IF NO PAST YEAR DRIVING IN Q1, SKIP TO Q57.]

[ASK FOR TYPE OF ALCOHOLIC BEVERAGE SPECIFIED IN Q.17]

31. How many (12 oz Regular Beers/12 oz Light Beers/ 12 oz Wine Coolers/ 5 oz glasses of Wine/ mixed drinks or shots of Hard Liquor) could YOU drink in two hours before you should NOT DRIVE? (Your best estimate is fine.)

Less than one drink. 00
 97.(VOL) No limit. 97
 98.(VOL) Not sure. 98
 99.(VOL) Refused. 99

33. Now I'd like to ask a few questions about your own experience. In the past 12 months, have you ever driven a motor vehicle WITHIN TWO HOURS AFTER drinking alcoholic beverages?

Yes. 1
 No. 2 \
 Not sure (VOL). 3 > SKIP TO Q.54
 Refused (VOL). 4 /

34. About how many times in the PAST 12 MONTHS would you say that you have driven WITHIN TWO HOURS AFTER drinking any alcohol?

_____ NUMBER
 Not sure.366 Refused.367

[USE CATEGORIES BELOW IF RESPONDENT USES THEM INSTEAD OF NUMBER]

Daily. 1
 2 to 6 times a week. 2
 Once a week. 3
 Once every two weeks. 4
 About 6 to 11 times a year. 5
 About 2 to 5 times a year. 6
 Never (VOL). 13 \ SKIP
 Not sure (VOL). 14 > TO
 Refused (VOL). 15 / Q.36

35. In the PAST 30 DAYS, how many times have you driven a motor vehicle within two hours after drinking alcoholic beverages?

_____ NUMBER OF TIMES DRIVEN AFTER ANY DRINKING

00.None
 31.(VOL) Not sure
 32.(VOL) Refused

36. When was the most recent occasion that you drove within two hours of drinking alcoholic beverages?

RECORD NUMBER
 Today. 1
 Days ago. 2 _____
 Weeks ago 3 _____
 Months ago 4 _____
 Years ago. 5 _____ SKIP TO Q54
 Not sure (VOL) 6 SKIP TO Q54
 Refused (VOL). 7 SKIP TO Q54
 Never. 8 SKIP TO Q54

37. Where did you drink on that occasion?

Your home. 1
 Friend's home. 2
 Other residence. 3
 Bar/Tavern. 4
 Restaurant. 5
 Work. 6
 Other (Specify) _____ 12
 Not sure (VOL). 13
 Refused (VOL). 14

38. How many drinks did you have on that occasion?

_____ Number of DRINKS
 98.(VOL) Not sure
 99.(VOL) Refused

39. And over what length of time did you have those drinks? [RECORD NUMBER]

_____ HOURS
 Less than 1 hour. 00
 Not sure (VOL). 25
 Refused (VOL). 26

41. And how long after your last drink did you start driving? [RECORD NUMBER]

_____ HOURS
 Less than 1 hour. 00
 Not sure (VOL). 25
 Refused (VOL). 26

42. What was your destination on this most recent occasion?

Your home. 1
 Friend's home. 2
 Other residence. 3
 Bar/Tavern. 4
 Restaurant. 5
 Work. 6
 Other (Specify) _____ 12
 Not sure (REF). 13
 Refused (REF). 14

43. About how many miles did you drive on this occasion?

MILES _____
00.None
998.(VOL) Not sure
999.(VOL) Refused

49. On this most recent occasion, do you think you were well below the legal limit for drinking and driving, just below the limit, just over the limit, or well over the legal limit?

Well below the limit. 1
Just below the limit. 2
Just over the limit (VOL) 3 \ **SKIP TO**

Q.52 Well over the limit. 4 /
Not sure (VOL). 5
Refused (VOL). 6

50. When was the most recent occasion that you drove when you may have consumed enough alcohol to place you over the legal limit?

RECORD NUMBER
Today. 1
Days ago. 2 _____
Weeks ago 3 _____
Months ago 4 _____
Years ago. 5 _____ **SKIP TO Q54**
Not sure (VOL) 6 **SKIP TO Q54**
Refused (VOL). 7 **SKIP TO Q54**
Never. 8 **SKIP TO Q54**

51. How many drinks did you have on that occasion?

_____ NUMBER
98.(VOL) Not sure
99.(VOL) Refused

52. About how many times in the PAST 12 MONTHS did you drive when you thought you were over the legal limit for alcohol?

_____ NUMBER
NOT SURE.366 REFUSED.367

[USE CATEGORIES BELOW IF RESPONDENT USES THEM INSTEAD OF NUMBER]

Daily. 1
2 to 6 times a week. 2
Once a week. 3
Once every two weeks. 4
About 6 to 11 times a year. 5
About 2 to 5 times a year. 6
Never (VOL). 13 \ **SKIP**
Not sure (VOL). 14 > **TO**
Refused (VOL). 15 / **Q.54**

54. In the past 12 months, have you ever deliberately avoided driving a motor vehicle because you felt you probably had too much to drink to drive safely?

Yes. 1
No. 2 \
Not sure (VOL). 3 > **SKIP TO Q.57**
Refused (VOL). 4 /

56. On the most recent time that you deliberately avoided driving after drinking—how did you do it? **[DON'T READ LIST; SINGLE RESPONSE]?**

DONE
a. Called a cab or ride service. 1
b. Rode the bus or subway. 2
c. Rode with some other driver. 3
d. Stayed overnight as a guest. 4
e. Waited until after the effects of the alcohol wore off. 5
f. Walked to your destination. 6
g. Other (SPECIFY) _____ 17
NOT SURE. 18
REFUSED. 19

Now I'd like to ask about riding with others who have been drinking.

57. In the past 12 months, did you ever RIDE in a motor vehicle with a driver you thought might have consumed TOO MUCH alcohol to drive SAFELY?

Yes. 1
No. 2 \
Not sure (VOL). 3 - **SKIP TO Q.60**
Refused (VOL). 4 /

59. Please think back to the last time you RODE with a driver you thought might have consumed TOO MUCH alcohol to drive SAFELY. Did you decide the driver was unsafe BEFORE or AFTER you were riding in the motor vehicle?

Before. 1
After. 2
Not sure (VOL). 3
Refused (VOL). 4

Now I'd like to ask you about designated drivers.
60. In the past 12 months, have you RIDDEN ANYWHERE with someone else who had agreed to be the designated driver?

Yes. 1
No. 2 **SKIP TO Q.63**
Not sure (VOL). 3 **SKIP TO Q.63**
Refused (VOL). 4 **SKIP TO Q.63**

61. In the past year, how many times have you ridden anywhere with someone else who had agreed to be the designated driver?

NUMBER OF TIMES
RODE WITH A DESIGNATED
DRIVER
00.None
366.(VOL) Not sure
367.(VOL) Refused

62. On the most recent occasion that you RODE somewhere with a designated driver, how many drinks did the designated driver have before driving, if any?

NUMBER OF DRINKS
DESIGNATED DRIVER HAD
00.None
98.(VOL) Not sure
99.(VOL) Refused

63. In the past twelve months, have YOU ever been the designated driver when driving with others?

Yes. 1
No. 2 **SKIP TO Q.66**
Not sure (VOL). 3 **SKIP TO Q66**
Refused (VOL). 4 **SKIP TO Q66**

64a. In the past 30 days, how many times have you been the designated driver?

NUMBER OF TIMES BEEN THE
DESIGNATED DRIVER **SKIP TO Q.65**
00.None
31.(VOL) Not sure
32.(VOL) Refused

64b. How many times have you been a designated driver in the past year?

NUMBER OF DRINKS
DESIGNATED DRIVER HAD
00.None
366.(VOL) Not sure
367.(VOL) Refused

65. On the most recent occasion that you were the designated driver, how many drinks did you have before driving, if any?

NUMBER OF DRINKS
DESIGNATED DRIVER HAD
00.None
98.(VOL) Not sure
99.(VOL) Refused

66. What is the maximum number of drinks a person SHOULD HAVE if he or she is the designated driver?

NUMBER OF DRINKS IF
DESIGNATED DRIVER
00.None
98.(VOL) Not sure
99.(VOL) Refused

NON-DRINKERS AND NON-DRIVERS SKIP TO Q86 NORMS (PAST YEAR BEHAVIOR)

I'd like you to think about the occasions in the past year when you had an opportunity to go someplace where you knew alcohol would be available.

67. In the past year, did you ever decide NOT go someplace because you did not want to drive after drinking?

Yes. 1
No. 2 **SKIP TO Q.69**
Not sure (VOL). 3 **SKIP TO Q.69**
Refused (VOL). 4 **SKIP TO Q.69**

68. How many times in the past year did you decide NOT to go someplace because you did not want to drive after drinking?

NUMBER OF TIMES
00.None
366.(VOL) Not sure
367.(VOL) Refused

69. In the past year, did you ever go someplace where alcohol was present, but decide NOT TO DRINK any alcohol because you wanted to avoid driving after drinking?

Yes. 1
No. 2 **SKIP TO Q.71**
Not sure (VOL). 3 **SKIP TO Q.71**
Refused (VOL). 4 **SKIP TO Q.71**

70. How many times in the past year did you do that?

NUMBER OF TIMES
00.None
366.(VOL) Not sure
367.(VOL) Refused

71. In the past year, did you ever drive someplace, drink alcohol, and then NOT DRIVE afterward because you wanted to avoid driving after drinking?

Yes. 1
No. 2 **SKIP TO Q.73**
Not sure (VOL). 3 **SKIP TO Q.73**
Refused (VOL). 4 **SKIP TO Q.73**

72. How many times did you do this?

- _____ NUMBER OF TIMES
- 00. None
- 366.(VOL) Not sure
- 367.(VOL) Refused

73. In the past year, did you make arrangements ahead of time not to drive to a social event because you wanted to avoid driving after drinking?

- Yes. 1
- No. 2 **SKIP TO Q.75**
- Not sure (VOL). 3 **SKIP TO Q.75**
- Refused (VOL). 4 **SKIP TO Q.75**

74. How many times in the past year?

- _____ NUMBER OF TIMES
- 00. None
- 366.(VOL) Not sure
- 367.(VOL) Refused

NORMS (MOST RECENT OPPORTUNITY)

I'd like you to think back to the LAST TIME that you drank any alcohol when you were not at home. You might have been at a restaurant, a bar, a party, a sporting event, visiting friends, or somewhere else.

75. How long ago was the most recent time you had alcoholic beverages somewhere other than home?

- | | RECORD NUMBER | |
|-----------------|---------------|--------------------------|
| Today. | 1 | |
| Days ago. | 2 | _____ |
| Weeks ago | 3 | _____ |
| Months ago | 4 | _____ |
| Years ago. | 5 | _____ SKIP TO Q54 |
| Not sure (VOL). | 6 | SKIP TO Q54 |
| Refused (VOL). | 7 | SKIP TO Q54 |
| Never. | 8 | SKIP TO Q54 |

76. Before going to that place, had you expected that you would be drinking alcohol there?

- Yes. 1
- No. 2 **SKIP TO Q.83**
- Not sure (VOL). 3 **SKIP TO Q.83**
- Refused (VOL). 4 **SKIP TO Q.83**

77. Before going to that place, DID YOU THINK ABOUT OR CONSIDER DOING ANYTHING PRIOR TO going so that you could avoid drinking and driving?

- Yes. 1
- No. 2 **SKIP TO Q.81**
- Not sure (VOL). 3 **SKIP TO Q.81**
- Refused (VOL). 4 **SKIP TO Q.81**

78. What did you CONSIDER doing before going? [DO NOT READ - MULTIPLE RECORD IN ORDER GIVEN BY RESP.]

- Setting a limit on amount to drink. 1
- Riding with someone else. 2
- Designating a driver. 3
- Taking public transportation. 4
- Other. (SPECIFY: _____) 15
- Not sure (VOL). 16
- Refused (VOL). 17

79. What did you ACTUALLY do?

- Set a limit on amount to drink. 1 **SKIP TO Q.83**
- Rode with someone else. 2 **SKIP TO Q.83**
- Designated a driver. 3 **SKIP TO Q.83**
- Took public transportation. 4 **SKIP TO Q.83**
- Other. 15 **SKIP TO Q.83**
- Not sure. 16 **SKIP TO Q.83**
- Refused. 17 **SKIP TO Q.83**
- Nothing. 18

80. Why not?

_____ SKIP TO Q.83

81. Did you DO ANYTHING before going to avoid drinking and driving?

- Yes. 1
- No. 2 **SKIP TO Q.83**
- Not sure (VOL). 3 **SKIP TO Q.83**
- Refused (VOL). 4 **SKIP TO Q.83**

82. What did you do before going to avoid drinking and driving?

- Set a limit on amount to drink. 1
- Rode with someone else. 2
- Designated a driver. 3
- Took public transportation. 4
- Other (SPECIFY) _____ 15
- Not sure. 16
- Refused. 17
- Nothing. 18

83. Did you wind up driving after drinking on that occasion?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - **SKIP to Q.86**
- Refused (VOL). 4 /

84. Did you do anything to keep from becoming too impaired to drive safely?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - **SKIP to Q.86**
- Refused (VOL). 4 /

85. What did you do to keep from becoming too impaired?

ASK EVERYONE

Now I'd like to ask you about social situations IN GENERAL.

86. Have you hosted a social event in the past year for adults?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 — **SKIP to Q.96**
- Refused (VOL). 4 /

87. I'd like to ask you to think about the last time you hosted a social event for adults. Did you make alcoholic beverages available?

- Yes. 1 **SKIP TO Q.90**
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

88. Why not?

89. Was there another social event in the past year when you did make alcoholic beverages available?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 **SKIP to Q.96**
- Refused (VOL). 4 /

90. While you were planning that event, did you make any arrangements to keep guests who were going to DRINK from driving?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 **SKIP to Q.92**
- Refused (VOL). 4 /

91. What arrangements did you make?

- Have some else drive them home. 1
- Have a taxi or ride service drive them home. 2
- Drive them home. 3
- Have them spend the night. 4
- Take their keys. 5
- Other (SPECIFY) _____ 6
- Nothing. 7
- Not sure. 8
- Refused. 9

92. While you were planning the event, did you do anything to help guests who were going to DRIVE to refrain from drinking?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 **SKIP to Q.94**
- Refused (VOL). 4 /

93. What did you do to help guests who were going to drive?

- Serve food. 1
- Serve non-alcoholic drinks. 2
- Serve less alcohol/limit drink. 3
- Designate drivers. 4
- Collect keys. 5
- Provide sleeping accommodations. 6
- Drive them home. 7
- Limit serving hours. 8
- Other (SPEC) _____ 9
- Nothing. 10
- Not sure. 11
- Refused. 12

94. Did you do anything to keep guests who were going to both drink and drive, from becoming too impaired to drive?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 **SKIP to Q.96**
- Refused (VOL). 4 /

95. What did you do to keep guests from becoming too impaired?

- Have some else drive them home. 1
- Have a taxi or ride service drive them home. 2
- Drive them home. 3
- Have them spend the night. 4
- Take their keys. 5
- Serve food. 6
- Serve non-alcoholic drinks. 7
- Serve less alcohol/limit drink. 8
- Designate drivers. 9
- Collect keys. 10
- Provide sleeping accommodations. 11
- Drive them home. 12
- Limit serving hours. 13
- Other (SPEC) _____ 14
- Nothing. 15
- Not sure. 16
- Refused. 17

Now I'd like to ask you about situations where intervention may have been possible

96. In the last year, how many times were you in a situation where you were with a friend who had too much to drink to drive safely?

	Times	
None.	0	SKIP TO Q.103
Not sure.	366	SKIP TO Q.103
Refused.	367	SKIP TO Q.103

99. How many of those times did you do something to stop them from driving?

	Times	
None.	0	\
Not sure.	366	> SKIP TO Q.103
Refused.	367	/

100. Think of the MOST RECENT TIME you were in this situation. Did you do something to stop them from driving?

Yes.	1	SKIP TO Q.102
No.	2	
Not sure.	3	SKIP TO Q.103
Refused.	4	SKIP TO Q.103

101. Why didn't you do something? [open ended]

_____ **SKIP TO Q.103**

102. Did they drive anyhow?

Yes.	1
No.	2
Not sure.	3
Refused.	4

Now I'd like to ask you about how you view the general problem of drinking and driving.

103. In your opinion, how much is drinking and driving by other people a threat to the personal safety of you and your family? Would you say drinking and driving by others is. [READ LIST?]

A major threat.	1
A minor threat.	2
Not a threat.	3
Not sure (VOL).	4
Refused (VOL).	5

104. How important is it that something be done to reduce drinking and driving? Is it. [READ LIST?]

Very important.	1
Somewhat important.	2
Not important.	3
Not sure (VOL).	4
Refused (VOL).	5

105. In your community, if a person drinks too much before driving [and then drives], which do you think is more likely to happen to them – being stopped by the police or having an accident?

Being stopped by police.	1
Having an accident.	2
Neither.	3
Equally likely.	4
Not sure (VOL).	5
Refused (VOL).	6

Please tell me how likely each of the following events are to happen IF YOU DROVE AFTER HAVING TOO MUCH TO DRINK.

106. How likely are you to be stopped by a police officer for driving after you have had too much to drink? Is it. [READ LIST?]

Almost certain.	1
Very likely.	2
Somewhat likely.	3
Somewhat unlikely.	4
Very unlikely.	5
Not sure (VOL).	6
Refused (VOL).	7

108. If a police officer stops you and charges you with breaking the drinking and driving laws, how likely are you to receive some form of punishment such as a fine, a suspension of your driver's license, or something more severe? Is that. [READ LIST?]

Almost certain.	1
Very likely.	2
Somewhat likely.	3
Somewhat unlikely.	4
Very unlikely.	5
Not sure (VOL).	6
Refused (VOL).	7

109. If you were actually punished for drinking and driving, do you think the punishment would most likely be. [READ LIST?]

Very severe.	1
Somewhat severe.	2
Not severe.	3
Not sure (VOL).	4
Refused (VOL).	5

110. What would most likely happen to a driver the first time he or she was punished for drunk driving? [DO NOT READ - MULTIPLE RECORD]

- Probation. 1
- License restricted. 2
- License suspended for a period. 3
- Being fined under \$500. 4
- Being fined over \$500. 5
- Going to jail. 6
- Placed in a treatment program. 7
- Community service. 8
- Other (SPECIFY: _____) 9
- NOTHING. 20
- Not sure (VOL). 21
- Refused (VOL). 22

111. In the past 12 months have you been stopped by a police officer who suspected you of drinking and driving?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - SKIP TO Q.116
- Refused (VOL). 4 /

112. How many times in the past 12 months have you been stopped for possible violation of drinking and driving laws?

- 98.(VOL) Not Sure
- 99.(VOL) Refused

113. Were you arrested for a drinking and driving violation in the past 12 months?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - SKIP TO Q.116
- Refused (VOL). 4 /

114. How many times in the past 12 months?

- 98.(VOL) Not sure
- 99.(VOL) Refused

116. In your opinion, should the penalties that are given out to drivers who violate the drinking and driving laws be. [READ LIST; SINGLE RECORD]?

- Much more severe. 1
- Somewhat more severe. 2
- Somewhat less severe. 3
- Much less severe. 4
- Stay the same as they are now. 5
- No penalties should be given. 6
- Not sure (VOL). 7
- Refused (VOL). 8

117. What do you think the penalty should be for driving under the influence of alcohol if it is the first time the driver has been convicted of that offense? [DO NOT READ LIST; MULTIPLE RECORD;]

- Suspension/revocation of driver's license. 1
- A fine (SPECIFY AMOUNT: _____). 2
- Jail time. 3
- Points on their license. 4
- AA/Rehabilitation program. 5
- Community service/Public service. 6
- Driving school/films on DWI. 7
- Impoundment of vehicle tags. 8
- Forfeiture of vehicle. 9
- Suspension of vehicle registration. 10
- Other (SPECIFY: _____). 21
- NOTHING. 22
- Not sure (VOL). 23
- Refused (VOL). 24

118. What do you think the penalty should be for persons who have been previously convicted for driving under the influence of alcohol? [DO NOT READ LIST; MULTIPLE RECORD; CIRCLE "YESES"]

- Suspension/revocation of driver's license. 1
- A fine (SPECIFY AMOUNT: _____). 2
- Jail time. 3
- Points on their license. 4
- AA/Rehabilitation program. 5
- Community service/Public service. 6
- Driving school/films on DWI. 7
- Impoundment of vehicle tags. 8
- Forfeiture of vehicle. 9
- Suspension of vehicle registration. 10
- Other (SPECIFY: _____). 21
- NOTHING. 22
- Not sure (VOL). 23
- Refused (VOL). 24

119. In your opinion, how effective are current laws and penalties at reducing drinking and driving. Would you say they are. [READ LIST]?

- Very effective. 1
- Somewhat effective. 2
- Not too effective. 3
- Not at all effective. 4
- Not sure (VOL). 5
- Refused (VOL). 6

SOBRIETY CHECKPOINT ITEMS

120. In the past 12 months have you seen a sobriety checkpoint - where drivers are stopped briefly by police to check for alcohol-impaired driving?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - SKIP TO Q.122
- Refused (VOL). 4 /

121. How many times have you been through a checkpoint in the last 12 months?

_____ times
 366.(VOL) Not sure
 367.(VOL) Refused

122. Do you think sobriety checkpoints should be used more frequently, about the same as they are now, or less frequently?

More frequently. 1
 About the same. 2
 Less frequently. 3
 Not sure. 4
 Refused. 5

LEGAL LIMIT ITEMS

123. The amount of alcohol in a person's body can be measured in terms of the "Blood Alcohol Concentration", which is often called the BAC level. Have you ever heard of blood alcohol concentration or BAC levels?

Yes. 1
 No. 2 \\
 Not sure (VOL). 3 - **SKIP TO Q.128**
 Refused (VOL). 4 /

124. Do you know the specific BAC limit for your state?

Yes. 1
 No. 2 \\
 Not sure (VOL). 3 - **SKIP TO Q.127**
 Refused (VOL). 4 /

125. What do you think the limit is?

.01. 1
 .02. 2
 .03. 3
 .04. 4
 .05. 5
 .06. 6
 .07. 7
 .08. 8
 .09. 9
 .10. 10
 Other (SPECIFY ____). 15
 Don't know. 16
 Refused. 17

126. How many beers would a person about your size have to drink in a two hour period to just reach the legal limit?

_____ NUMBER OF BEERS
 Not sure (VOL).98
 Refused (VOL).99

127. In your opinion, how many drivers would actually be dangerous drivers with a BAC at the legal limit? Would you say. [READ LIST]

All. 1
 Most. 2
 Some. 3
 Few. 4
 None. 5
 Not sure (VOL). 6
 Refused (VOL). 7

128. In some states, the average person will reach the legal limit after drinking 5 beers in 2 hours. In your opinion what percent of drivers would be dangerous after having 5 beers in 2 hours?

_____ RECORD percent
 Not sure (VOL).101
 Refused (VOL).102

129. Can a person be prosecuted for driving under the influence of alcohol if he or she is below the legal limit?

Yes. 1
 No. 2
 Not sure (VOL). 3
 Refused (VOL). 4

130x. In some states, the legal BAC limit for drivers under 21 is DIFFERENT than the limit for drivers over 21. In your state, is the legal limit the same for drivers under 21 as older drivers?

Different. 1
 Same. 2 \\
 (VOL) Not sure. 3 > **SKIP TO Q.130z**
 (VOL) Refused. 4 /

130y. What is the legal limit in your state for drivers under 21?

.01. 1
 .02. 2
 .03. 3
 .04. 4
 .05. 5
 .06. 6
 .07. 7
 .08. 8
 .09. 9
 .10. 10
 Other (SPECIFY ____). 15
 Don't know. 16
 Refused. 17

130z. Do you believe the BAC limit for drivers under 21 should be lower than for drivers over 21?

Yes. 1
 No. 2
 (VOL) Not sure. 3
 (VOL) Refused. 4

CRASH/INJURY ITEMS
[CONDITIONAL: IF NO PAST YEAR DRIVING IN Q1, SKIP TO Q135A.]

131a. In the past 12 months, have you had an accident while driving a motor vehicle?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - **SKIP TO Q.135**
- Refused (VOL). 4 /

131b. How many accidents have you had in the past year?

Not sure.366 Refused.367

132. Was anyone killed (in any of these accidents)?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

133. Was anyone injured (in any of these accidents)?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

CONDITIONAL: IF NEVER DRANK IN PAST 12 MONTHS IN Q85, SKIP TO Q135A

134. Had you consumed alcohol within 2 hours prior to the accident?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

135a. In the past 12 months, have you been in an accident where you were a passenger?

- Yes. 1
- No. 2 \
- Not sure (VOL). 3 - **SKIP TO Q.139**
- Refused (VOL). 4 /

135b. How many accidents have you been in as a passenger in the past year?

136. Was anyone killed (in any of these accidents)?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

137. Was anyone injured (in any of these accidents)?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

138. Had your driver consumed alcohol within 2 hours before getting behind the wheel?

- Yes. 1
- No. 2
- Not sure (VOL). 3
- Refused (VOL). 4

For each of the following statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree.

STRONGLY SOMEWHAT SOMEWHAT STRONGLY NOT
 AGREE AGREE DISAGREE DISAGREE SURE

REF

139. Scientific research shows that having only one drink will not impair driving. 1 2 3 4 5 6

140. Scientific evidence has shown that ANY amount of alcohol impairs driving. 1 2 3 4 5 6

DEMOGRAPHIC ITEMS

Now, a few last questions for statistical purposes.

D1. What is your age?

[97 = 97 or older; 98 = NS; 99 = REF]

INTERVIEWER: ASK D1a. ONLY IF RESPONDENT REFUSED TO GIVE 'AGE' IN D1

D1a. Could you please tell me in which of the following age categories you belong? [READ CATEGORIES]

- 16 - 20. 1
- 21 - 29. 2
- 30 - 45. 3
- 46 - 64. 4
- 65 and older. 5
- Refused. 6

D2. Are you currently employed full time, part time, unemployed and looking for work, retired, going to school, a homemaker or something else?

- Employed full time. 1
- Employed part time. 2
- Unemployed and looking for work. 3
- Retired. 4
- Going to school. 5
- Homemaker. 6
- Disabled (VOL). 7
- Other (SPECIFY): _____ 8
- Not sure (VOL). 9
- Refused (VOL). 10

D3. What is highest grade or year of regular school you have completed?
[DO NOT READ]

- No formal schooling. 1
- First through 7th grade. 2
- 8th grade. 3
- Some high school. 4
- High school graduate. 5
- Some college. 6
- Four-year college graduate. 7
- Some graduate school. 8
- Graduate degree. 9
- Refused (VOL). 10

D4. Are you currently married, divorced, separated, widowed, or single?

- Married. 1
- Divorced. 2
- Separated. 3
- Widowed. 4
- Single. 5
- Refused (VOL). 6

D5. Are you of Hispanic origin?

- Hispanic. 1
- Not Hispanic. 2
- Refused (VOL). 3

D6. Which of these categories best describes your racial background?

- White. 1
- Black or African American. 2
- Asian or Pacific Islander. 3
- Eskimo, Aleutian or American Indian. 4
- Other _____ 10
- Not sure (VOL). 11
- Refused (VOL). 12

D7. Including yourself, how many persons living in your household are. [READ CATEGORIES]?

- a. Under 10 years of age _____
- b. 10 to 15 years of age _____
- c. 16 to 20 years of age _____
- d. 21 to 29 years of age _____
- e. 30 to 64 years of age _____
- f. 65 + years of age _____

D8. Which of the following categories best describes your total household income before taxes in 1994? Your best estimate is fine.
[READ]

- Less than \$5,000. 1
- \$5,000 to \$14,999. 2
- \$15,000 to \$29,999. 3
- \$30,000 to \$49,999. 4
- \$50,000 to \$74,999. 5
- \$75,000 to \$99,999. 6
- \$100,000 or more. 7
- Not sure (VOL). 8
- Refused (VOL). 9

D9. Finally, the effects of alcohol on driving can vary from one person to another, depending on their body weight. For classification purposes, could you tell me your approximate weight?

_____ POUNDS
Not sure (VOL). 501
Refused (VOL). 502

[FROM OBSERVATION]

D10. Gender:

- Male. 1
- Female. 2

D11. Let me just confirm that the number I reached you at was: [READ NUMBER]

D12. Is this the only telephone number for this household?

- Yes, this is the only number. 1
- No, there is more than one number. 2

Thank you for your assistance. That completes our interview.

D13. RECORD WHETHER INTERVIEW WAS ADMINISTERED IN SPANISH.

- SPANISH. 1
- ENGLISH. 2