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# THE GALLUP ORGANIZATION

**National Survey of Distracted and Drowsy Driving  
Attitudes and Behaviors: 2002**

## **VOLUME I – FINDINGS REPORT**

Submitted to:

National Highway Traffic Safety Administration

400 7<sup>th</sup> Street, SW  
Room 5119  
Washington, D.C. 20590

Final Report – March 2003

Submitted by:

Dawn Royal, Senior Managing Consultant

**THE GALLUP ORGANIZATION**

901 F Street, NW  
Washington, D.C. 20004



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# Executive Summary

## Background

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The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries, and reduce traffic-related healthcare and other economic costs. While much focus has been placed in recent years on alcohol-related driving and speeding, less focus has been paid to other forms of potentially unsafe driving behaviors that draw drivers' attention away from the primary task of driving such as distracted and drowsy driving. However, a recent surge in legislation meant to curb cell phone use while driving has increased interest in these and other forms of potentially distracting activities for drivers.

NHTSA undertook this nationally representative survey of drivers in order to collect data on the nature and scope of the distracted driving problem with the intent of understanding how serious the problem is in the public's eyes, and what countermeasures the public may accept to control distracted driving.

Telephone interviews were conducted with a nationally representative sample of 4,010 drivers (age 16 or older) in the United States between February 4 and April 14, 2002. The data presented in this document are based on the self-reported responses from these surveyed drivers.

## Key Findings

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### Engaging in Potentially Distracting Behaviors While Driving

We considered 12 potentially distracting behaviors in this study and asked drivers how often they personally engaged in each behavior while driving.

The vast majority of *drivers* engage in two of the behaviors on *at least some driving trips*, including:

- Talking with other passengers (81%)
- Changing radio stations or looking for CDs or tapes (66%)

Nearly half (49%) eat or drink while driving at least some of the time, while the following three activities are performed by about one in four drivers (at least some of the time):

- Making outgoing calls on a cell phone (25%)
- Taking incoming calls on a cell phone (26%)
- Dealing with children riding in the rear seat (24%)

The other six activities are undertaken by about one in ten or fewer drivers on at least some driving trips:

- Reading a map or directions while driving (12%)
- Personal grooming (8%)
- Reading printed material (4%)
- Responding to a beeper or pager (3%)
- Using wireless remote Internet access (2%)
- Using telematics such as in-car navigation or crash avoidance systems (2%)

## Frequency of Engaging in Potentially Distracting Behaviors While Driving

Based on projections from the sampled drivers, drivers report making an estimated 4.2 billion one-way driving trips in a typical week. The preliminary estimate from the 2001 National Household Travel Survey (NHHTS<sup>1</sup>), which acquired personal travel data between March 2001 and May 2002, reported that drivers made about 6.0 billion one-way trips each week. The higher NHHTS figure is likely due to interviewing differences and questionnaire design (eg. this study did not undertake to acquire extensive data on trip detail or segment definition as did the NHHTS). The measurement in this survey is intended to obtain *relative* estimates of engagement in potentially distracting behaviors in relation to other behaviors. Consequently, compared to the NHHTS, the actual estimates of trips could be *underestimated* by as much as 30%.

To provide estimates of weekly trips involving each behavior, the reported proportion of trips in which the driver engages in a given behavior — such as “on all or most trips” or “on about three-quarters of driving trips” — was applied to the number of total reported weekly driving trips. The formula used in these calculations can be found on page 24 of the report.

Drivers make the following *estimated number of driving trips* each week while engaging in a potentially distracting behavior on at least some portion of a driving trip:

- 2.38 billion trips while talking to passengers (56% of all trips)
- 1.92 billion trips while changing the radio station or looking for CDs or tapes (45% of all trips)
- 1.25 billion trips while eating or drinking (30% of all trips)
- 792 million trips while taking incoming cell phone calls (19% of all trips)
- 776 million trips while making outgoing cell phone calls (18% of all trips)
- 776 million trips while dealing with children in the back seat (18% of all trips)
- 414 million trips while looking at maps or directions (10% of all trips)
- 349 million trips while undertaking personal grooming (8% of all trips)
- 131 million trips while responding to a beeper or pager (3% of all trips)
- 116 million trips while using wireless Internet access (3% of all trips)
- 59 million trips while using navigation or crash avoidance systems (1% of all trips)

## Wireless Cell Phone Use

While six in ten (60%) drivers report having a cellular or wireless phone, more than half of those with cell phones say they never or rarely use the cell phone while driving to make outgoing or take incoming calls (58% and 56% respectively). While a small proportion of drivers use cell phones only for outbound (5%) or only for inbound (4%) calls, 21% use them for both inbound and outbound calls at least occasionally. Thus about 30% of all drivers use a cell phone while driving to make outgoing OR incoming calls on at least some of their driving trips.

Wireless phone use is currently receiving a great deal of legislative attention with several municipalities recently having passed (or considering passing) laws that prohibit or limit cell phone use (or hand-held cell phone use) while driving. Some of the legislation seems to be based on the belief that the use of hands-free devices is less distracting and may be preferable to hand-held phones. However, others believe that any activity involving mental (such as conversation)

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<sup>1</sup> 2001 National Household Travel Survey. User’s Guide, Version 1 (preliminary release). U.S. DOT: BTS & FHWA, January 2003.



or physical (such as eating or playing with the radio) involvement distracts drivers, and that hands-free phones simply offer convenience to drivers.

The current study finds that about one-third (34%) of drivers who do use a cell phone while driving use a hands-free model with speakerphone or head phones (32% of those using cell phones for outbound calls and 36% using them for inbound calls). About 263 million of the 776 million weekly trips made using a cell phone for outgoing calls are made using a hands-free phone. While approximately 291 million of the 792 weekly trips using a cell phone for incoming calls are made using a hands-free phone.

Cell phone using drivers estimate that they spend an average of 4.5 minutes per call while driving. However, 13% of drivers typically spend 10 minutes or more per call.

### **Involvement in Crash as a Result of Wireless Phone Use**

Approximately one in four (26%) drivers report involvement in a motor vehicle crash in the past five years. One tenth of one percent (0.1%) of all drivers (0.5% of drivers who use a cell phone while driving) attribute a crash they've had to cell phone use. This equates to an *estimated* 292,000 drivers who report involvement in a crash they attribute to cell phone use in the past five years.

### **Involvement in a Crash as a Result of Distracted Driving**

While cell phones are reported to contribute to some automobile crashes, other forms of distracted driving appear to play a much more significant role. Several behaviors reportedly account for many more crashes than do cell phones.

About 3.5% of all drivers have been involved in a crash in the past five years they attribute to their being distracted — equating to an estimated 6.0 million to 8.3 million drivers.

Drivers involved in a distracted-related crash attribute their distraction to the following activities:

- Looking for something outside of the car (building, street sign, etc.) (23% of drivers in a distracted related crash; 0.8% of all drivers)
- Dealing with children or other passengers (19%; 0.7% of all drivers)
- Looking for something inside the car (14%; 0.5% of all drivers)
- Another driver (11%; 0.4% of all drivers)
- Personal thoughts/thinking (5%; 0.2% of all drivers)
- Looking at an animal outside of the car (3%; 0.1% of all drivers)
- Dealing with technology (primarily radio) (2%; 0.1% of all drivers)
- Other distractions (23%; 0.8% of all drivers)

### **Perceptions of Actions That Distract Drivers**

We asked drivers to rate 12 potentially distracting behaviors that may make driving more dangerous. Drivers perceive the following four behaviors to be the most distracting:

- Reading printed materials such as a book, newspaper, or mail (80% feel it makes driving much more dangerous)
- Using wireless remote Internet equipment (such as a PDA or wireless e-mail) (63%)
- Personal grooming (61%)
- Looking at maps or directions (55%)

Slightly less than half of all drivers feel that engaging in the following behaviors while driving make driving “much more dangerous”:

- Making outgoing cell phone calls (48%)
- Taking incoming cell phone calls (44%)
- Answering or checking a pager or beeper (43%)
- Dealing with children in the back seat (40%)

One in four or fewer drivers perceive the following activities to be distracting while driving and make driving “much more dangerous”:

- Using navigation or crash avoidance systems (23%)
- Changing the radio station or looking for CDs or tapes (18%)
- Eating or drinking (17%)
- Talking to other passengers (4%)

Not surprisingly, drivers who themselves engage in each behavior are less likely to feel it makes driving more dangerous than those who do not engage in the behavior.

### **Perceived Severity of the Threat of Others' Behavior**

Not only do drivers perceive distracting behaviors as more dangerous, but drivers also feel some actions are a major threat to their personal safety. Seven out of ten (70%) drivers feel it is a major threat to their safety when other drivers look at maps or directions while driving. Fifty-two percent (52%) feel that others' use of cell phones while driving is a major threat to their personal safety. These relative perceptions of reading and using a cell phone while driving as major threats to one's personal safety are similar to those reported earlier on overall perceptions of how dangerous these activities are (70% and 48% respectively).

Drivers who do not use cell phones while driving are three times as likely as drivers who use them to feel such behavior by others is a major personal safety threat.

### **Support for Initiatives to Curtail Cell Phone Use While Driving**

The majority of drivers support the five potential actions measured in the survey to reduce cell phone use while driving. Specifically, they support:

- Increased public awareness of the risk of wireless phone use while driving (88% support)
- A restriction on hand-held phones while driving — only allowing hands-free or voice-activated car-mounted phones (71%)
- Insurance penalties for being involved in a crash while using a cell phone (67%)
- Double or triple fines for traffic violations involving cell phone use (61%)
- A ban on all wireless phone use while a car is moving (except for 911 calls) (57%)

While drivers who use cell phones are as likely as non-users to support initiatives involving increased awareness of the risks of cell phone use while driving, and a majority support restrictions on hand held phone use while driving, they generally do not support the use of increased traffic fines or a ban on wireless phones. Specifically, cell phone-using drivers show much lower support than non-users for:

- Increased fines for traffic violations when a cell phone is involved (only about 40% of drivers using cell phones support increased fines compared to 70% support by drivers who do not use cell phones while driving).
- A ban on all wireless phone use in a moving car (about a quarter support such an action as compared to 69% support for drivers who don't use cell phones)

### **Drowsy Driving**

This study also examined prevalence and conditions of drowsy driving. While the issue of drowsy driving is not currently receiving the attention in the media or among the general public as is the use of cell phones while driving, a significant number of drivers have experienced drowsy driving. Specifically:

- Thirty-seven percent (37%) of drivers have nodded off for at least a moment or fallen asleep while driving at least once in their driving career
- Eight percent (8%) have done so in the past six months

Nodding off or falling asleep recently is most prevalent among drivers age 21-29 (13%) and males (11%) and least prevalent among drivers over age 64 (4%) and females (5%).

### **Characteristics of Drowsy Driving Trips**

The average drowsy driving experience is associated with the following characteristics:

- Driver averaged 6.0 hours of sleep the previous night (and 24% had slept fewer than five hours)
- Driver had been driving for an average of 2.9 hours (but 22% had been driving for more than four hours)
- Occurred while driving on an interstate type highway with posted speeds of 55 mph or higher (59%)
- Nearly half (48%) nodded off between 9 p.m. and 6 a.m.

### **Involvement in a Crash as a Result of Drowsy Driving**

In the past five years, about 0.7% of drivers have been involved in a crash that they attribute to drowsy driving — amounting to an estimated 800,000 to 1.88 million drivers.

### **Preventative Actions for Drowsy Driving**

When asked what actions they take when they feel sleepy while driving, 43% of drivers report they pull over and rest or nap. While drivers may feel a social desirability to offer this response, it may also depend on the level of sleepiness experienced. The severity of a driver's drowsiness was not accounted for in this study.

Other key behaviors reported by drivers to combat sleepiness while driving include:

- Open the window (26%)
- Get coffee, soda, or caffeine (17%)
- Pull over/get off the road (15%)
- Play the radio loudly (14%)



# Introduction

## Background and Objectives

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While distracted driving has been around since the advent of automobile travel, recently it has become a focus of increasing interest. Some of this interest is attributable to the increased use of cell phones and to a recent surge in state legislation to curb cell phone use while driving, possibly because cell phones are among the newer and more visible array of driver distractions. Drowsiness is another condition that takes drivers' attention away from the road.

Despite the growing concern over these behaviors, little information is available on the specific conditions under which drivers engage in various distracted and drowsy driving behaviors. In addition, little information exists on the characteristics of the drivers who exhibit these behaviors.

To help answer these and other questions surrounding distracted and drowsy driving, the National Highway Traffic Safety Administration (NHTSA) has undertaken a national survey of the driving public's attitudes and experiences related to distracted and fatigued driving behaviors. NHTSA contracted with The Gallup Organization to conduct two surveys of the driving public's attitudes and behaviors regarding speeding, and a second dealing with unsafe driving. Both surveys covered aggressive driving, driver distraction and fatigued driving.

Similar methods were used to field the two surveys and many of the questions were asked on both surveys to provide more robust estimates. The data collected in the two surveys resulted in two separate reports: this report on Distracted and Drowsy Driving and a second report on Speeding and Aggressive Behaviors, which is published under a separate cover.

## Methods

### *Sampling Objective*

The sampling requirement of the two studies was the same: acquire a representative national sample of drivers age 16 and older in the 50 U.S. states and Washington, D.C.

In order to accommodate the need to acquire data on topics of speeding, aggressive and unsafe driving, distracted and fatigued driving, two separate surveys were undertaken. The first survey focused on speeding behaviors, while the second survey focused on aggressive driving and other unsafe driving behaviors. Both versions measured distracted driving and drowsy driving. In addition, split-sample procedures were used within each version to extend the number of questions that could be asked within the 18-minute telephone survey.

Each survey instrument was fielded as an independent national sample and was constructed in an identical manner. Gallup used a three-stage procedure to meet the sampling objective:

1. Gallup first identified the universe of residential telephone listings within each of the eight U.S. Census Regions.

2. Second, Gallup drew a systematic sample of telephone 100-number blocks within each region. Gallup then randomly generated the last two numbers for a full 10-digit phone number within each valid block selected in the previous stage. This procedure provides for an equal probability of selection for each working residential telephone number in the United States (both listed and unlisted residential telephone households).
3. Next, a single driver age 16 or older was randomly selected (using the “most recent birthday” method described in the Methods report) for inclusion from all eligible members of the driving public residing in that household.

Up to 14 attempts were made to reach each randomly selected respondent. Seven attempts were made to reach the household, and once a respondent in the household was identified, Gallup made up to seven additional attempts to reach that person.

Using the two surveys, Gallup completed a total of 4,010 telephone interviews with vehicle drivers age 16 and older between February 4, 2002 and April 14, 2002. Interviews were completed in both English and Spanish, using a computer-assisted telephone interviewing (CATI) system.

***Sample Weighting***

While the two samples were weighted separately, similar sample weighting was carried out for each sample. The final telephone samples of drivers age 16 and older were weighted to equalize selection probabilities (at both the household and the individual levels — particularly since we excluded non-drivers), and to adjust for non-response bias by demographics. In the last stage of the weighting process, the adjusted results were projected to the number of drivers age 16 or older in the United States. A detailed description of the weighting procedures can be found in *Volume II: Methods*.

The final number of weighted and unweighted interviews by age and gender appear below:

	<u><b>TOTAL</b></u>	<u><b>Gender</b></u>		<u><b>Age</b></u>				
		<u><b>Male</b></u>	<u><b>Female</b></u>	<u><b>16-20</b></u>	<u><b>21-29</b></u>	<u><b>30-45</b></u>	<u><b>46-64</b></u>	<u><b>65+</b></u>
Total Unweighted	4010	1798	2212	214	530	1298	1242	697
Weighted	4010	1970	2040	352	610	1303	1115	610
Estimated sampling error range	±1.5%	±2.3%	±2.1%	±6.7%	±4.3%	±2.3%	±2.8%	±3.7%

***Precision of Sample Estimates***

All sample surveys are subject to sampling error in that results may differ from what would be obtained if the whole population had been interviewed. The size of such sampling error depends largely on the number of interviews. For the main sample of 4,010 telephone interviews, the expected maximum sampling error range is approximately +/- 1.5% at the 95% level of confidence. The table above shows the sampling error ranges by age and gender at the 95% level of confidence. Due to the stratification and other complexities of the sample design, in some cases (particularly among smaller sub-groups of the population) the error ranges will be slightly larger than those shown in the table. This information is provided to offer the reader a **general** sense of the range of the true estimates. The report *Volume II: Methods*, presents a table showing the expected sampling error ranges for sub-group sizes in the sample.

## Data Presented

It should be noted that this is a top-line report on survey data and includes responses from more than 4,000 persons of driving age on more than 200 survey questions. The report is not intended to provide in-depth analyses of any one topic, but rather to give the reader a general overview of the data. Additional analyses may be done at the reader's discretion.

The data in this report are based on driver responses from two separate surveys conducted concurrently. The questions on distracted and drowsy driving were common to both surveys while questions on speeding and other unsafe driving actions were distributed among the two surveys. The two surveys were referred to as "Speed" and "Unsafe" to identify their primary topic differences. Figures in the report identify from which of the two surveys (Speed or Unsafe) the data are based. In addition, within each survey version some questions were asked of a random half-sample of drivers, rather than the entire survey base. These items are noted with an "(A)" or "(B)" marker in the figure.

The sample bases for most figures can be found in reference tables below. For figures based on other populations, the sample base appears at the bottom of the figure page. A definition of the NHTSA Regions 1-10 can be found in Appendix A.

### SAMPLE BASES

	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>16-20</u>	<u>21-29</u>	<u>30-45</u>	<u>46-64</u>	<u>65+</u>
Speed and Unsafe*	4010	1798	2212	214	530	1298	1242	697
Speed	2004	927	1077	105	273	660	633	321
Unsafe	2006	871	1135	109	257	638	609	376

<u>Race</u>	<u>White</u>	<u>Black</u>	<u>Other</u>	<u>Asian</u>	<u>Hispanic</u>
Speed and Unsafe*	3442	319	55	92	298
Speed	1717	165	30	53	155
Unsafe	1725	154	25	39	143

<u>Region</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
Speed and Unsafe*	234	364	446	786	699	394	200	154	52	206
Speed	114	189	225	382	348	201	101	83	25	105
Unsafe	120	175	221	404	351	193	99	71	27	101

\*Total base for distracted and drowsy driving questions.





# 2002 Survey Administration Findings

## **Chapter 1: General Driving Characteristics and Road Use**

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This section provides information on the driving age public's general driving characteristics and road use. Specifically it covers the following topics:

- Frequency of driving by gender and age
- Presence of valid driver's license and commercial license
- Number of years driving
- Personal use of radar detectors
- Use of various road types
- Urbanicity of roads
- Weekly driving trips

## General Driving Characteristics

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### Frequency of Driving

To qualify for this study of Distracted and Drowsy Driving, persons age 16 or older must drive a motor vehicle at least occasionally, regardless of holding a valid driver's license. About eight out of ten (82%) drivers report that they usually drive a car or other motor vehicle every day. An additional 14% drive several days a week. Male drivers (86%) are more likely than female drivers (78%) to report daily driving. Middle age drivers (those in their 30s through 64) report the greatest frequency of driving (86% daily), while just 63% of those over 64 drives on a daily basis. [Figure 1-A] Not surprisingly, driving frequency is impacted by employment status, with 92% of those employed full time reporting daily driving, as compared to just 66% of those who are not currently employed.

### Driver's License

Approximately 2% of drivers report driving a motor vehicle without the benefit of a valid driver's license. Male drivers (3%) and those ages 16-20 (8%) are most likely to report not having a valid driver's license. [Figure 1-B]

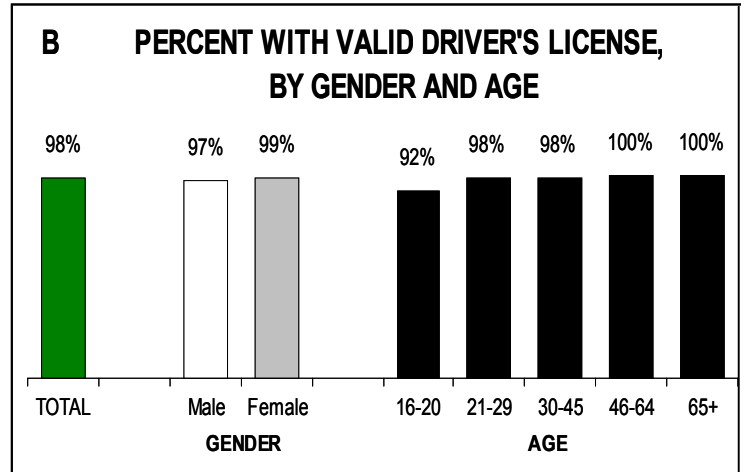
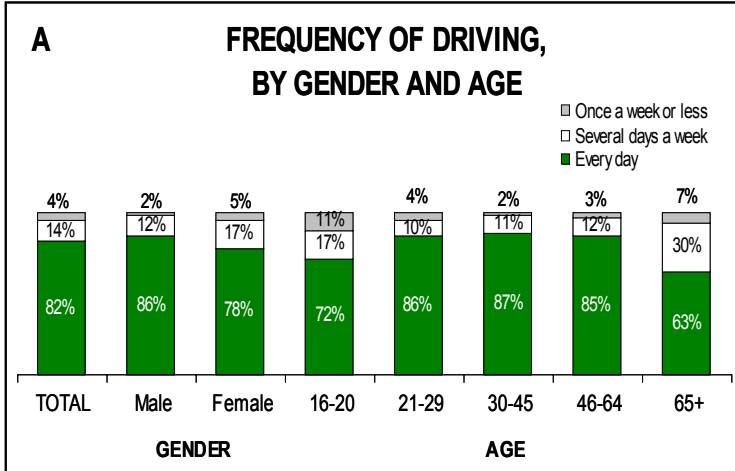
### Commercial License

About fourteen percent (14%) of drivers report having a commercial driver's license. It is likely that there was some misunderstanding of the meaning of a "commercial driver's license" among youth age 16-20, as 19% of these drivers report this type of license. Male drivers are more likely to hold this type of license than are their female counterparts (18% vs. 11%). [Figure 1-C]

### Radar Detector

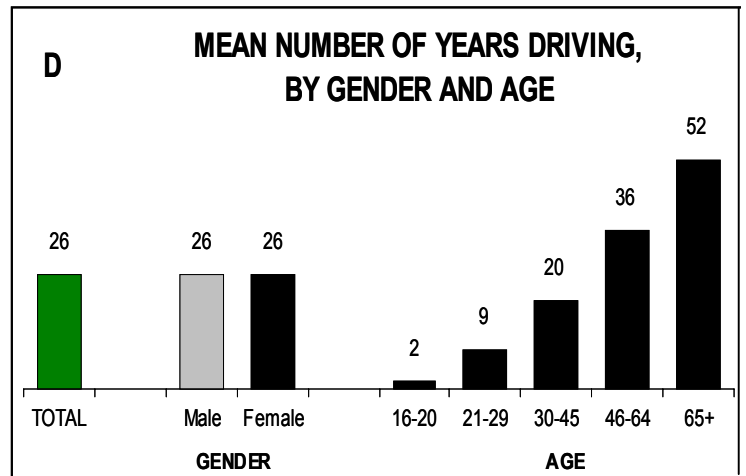
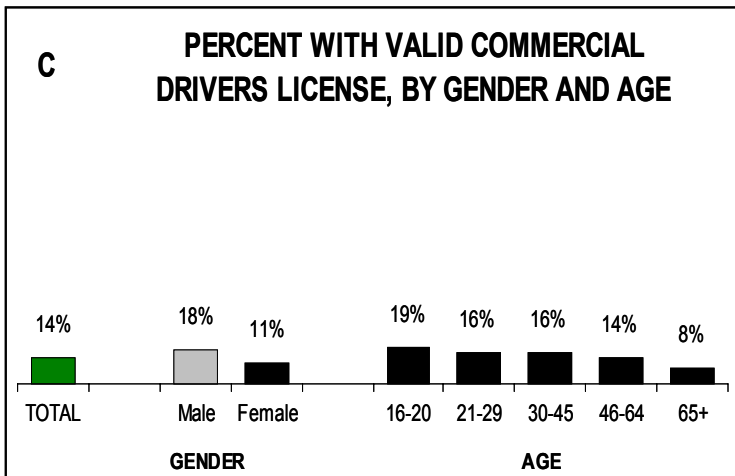
About four percent (4%) of drivers report that they *usually* drive with a radar detector in their vehicle, with males (6%) and younger drivers (9% of 16-20 year olds) more likely than others to do so. Use of a radar detector may indicate a propensity for speeding or other types of unsafe driving behaviors. [Figure 1-E]

**FIGURE 1: GENERAL DRIVER CHARACTERISTICS**



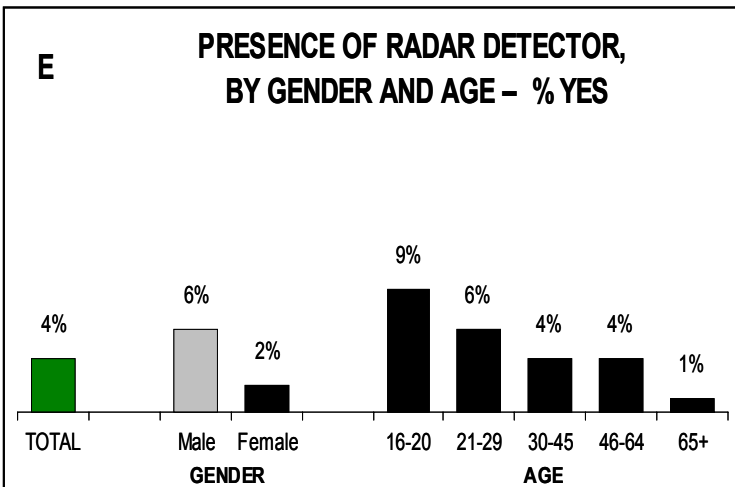
Q1: How often do you usually drive a car or other motor vehicle?  
 [Base: total respondents speed and unsafe; n=4010]

Q2a: Do you have a valid driver's license?  
 [Base: total respondents speed and unsafe; n=4010]



Q2b: Is that a commercial license?  
 [Base: Total respondents speed and unsafe; n=4010]

Q3: How many years have you been driving?  
 [Base: Total respondents speed and unsafe; n=4010]



Q85: Do you usually drive with a radar detector in your vehicle?  
 [Base: total respondents speed and unsafe; n=4010]

## Roadway Use by Type

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### Road Types Driven

More than eight out of ten (83%) drivers say they frequently drive on city, town, or neighborhood roads, with an additional 13% driving on these types of roads sometimes. More than two-thirds (68%) frequently drive on two-lane roads with speed limits of 45 MPH or more. Multi-lane interstate highways with speed limits of 55 MPH or higher (55%) and non-interstate multi-lane roads with 40-55 MPH are driven on less, with just 55% and 45% of drivers frequently using these roads. [Figure 2-A]

### Urbanicity of Roads Used

Fifty-six percent (56%) of drivers report that the roads they normally drive are more urban than rural while about one-third (35%) drive on roads that are more rural. Drivers in their 20s report the heaviest travel on urban roads (63%), while those age 46-64 are slightly more likely to say their preferred roads are more rural in nature (39%). [Figure 2C] Drivers living in NHTSA Regions 3, 4, 5, and 7 are most likely to say they primarily drive on more rural roads (at least 40% do). [Figure 2-D] (A definition of the states within each Region can be found in Appendix A).

### Number of One-Way Trips Weekly

On average, drivers report about 21 one-way trips in the past week. Male drivers report about two more trips a week on average than do females. Drivers age 21-45 report the most one-way trips, while those age 64 or older report only about two-thirds of the trips on average. [Figure 2-E]

### Estimated Number of Total One-Way Weekly Trips

An estimate was made to determine the total number of driving trips in an average week. The number of one-way weekly trips reported by study respondents was projected to the total U.S. driving population. Using this method, it is estimated that drivers make about 4.23 billion one-way driving trips in a typical week. Males make approximately 2.2 billion trips, while females report about 2.0 billion trips. [Figure 2-F]

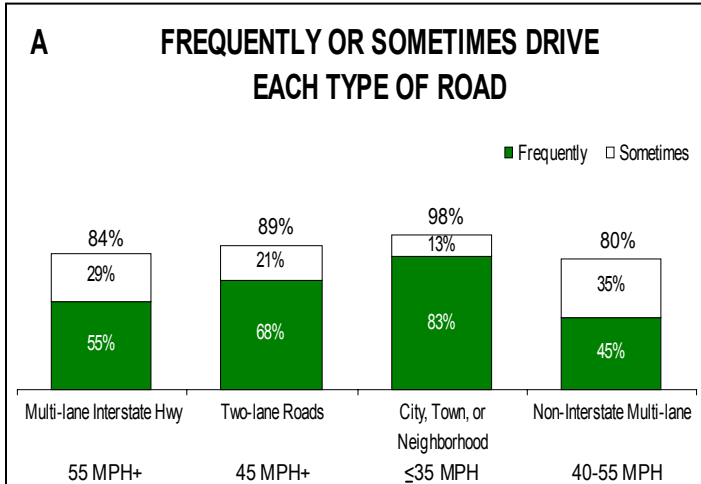
It should be noted that this estimate is based on respondents' understanding of "one-way driving trips" and their recall of the number of trips they made in the previous seven days. In addition, the study was fielded in the first quarter of 2002, and driving trips during this time period may not be reflective of other times of the year. This estimate is not expected to be a completely accurate estimate of the number of weekly driving trips, but is meant to provide an approximation of the magnitude of driving trips and relative comparisons among sub-groups of the driving population.

In comparison, the figure of total driving trips is lower than the preliminarily estimated 6.0 billion weekly vehicle trips reported in the 2001 National Household Travel Survey (NHHTS<sup>2</sup>). The higher NHHTS figure is likely due to interviewing differences and questionnaire design (e.g. this study did not undertake to acquire extensive data on trip detail or segment definition as did the NHHTS). Again, the measurement in this survey is intended to obtain *relative* estimates of engagement in potentially distracting behaviors in relation to other behaviors. Consequently, compared to the NPTS, the actual estimates of trips may be underestimated by as much as 30%.

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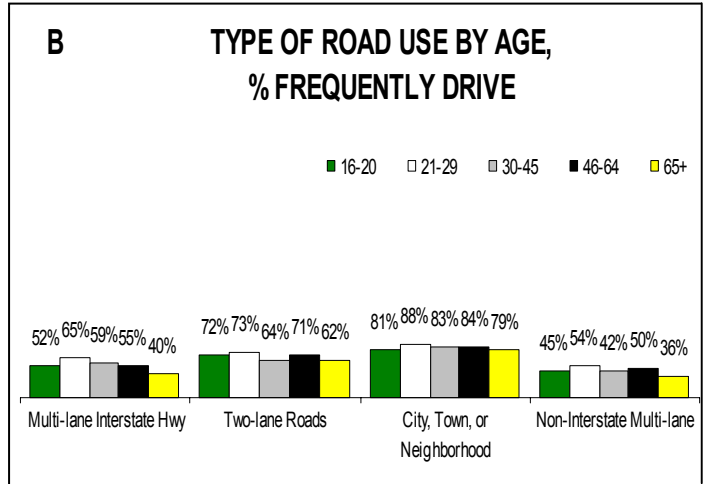
<sup>2</sup> 2001 National Household Travel Survey. User's Guide, Version 1 (preliminary release). U.S. DOT: BTS & FHWA, January 2003.

**FIGURE 2: ROADWAY USE**



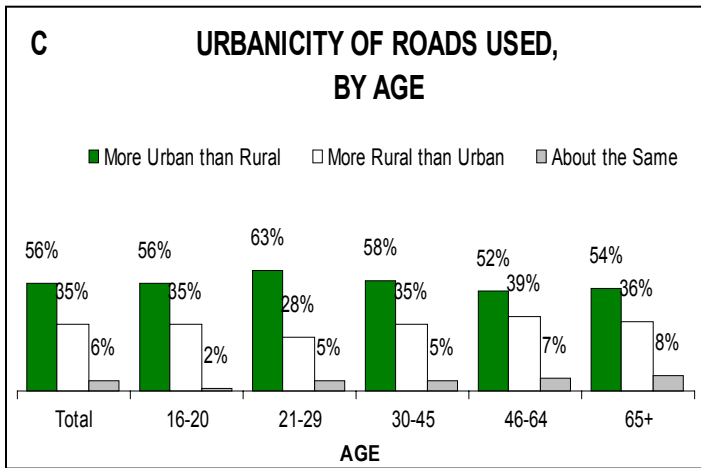
Q8: Thinking of a typical week, how often do you drive on the following roads?

[Base: total respondents, speed; n=2004]



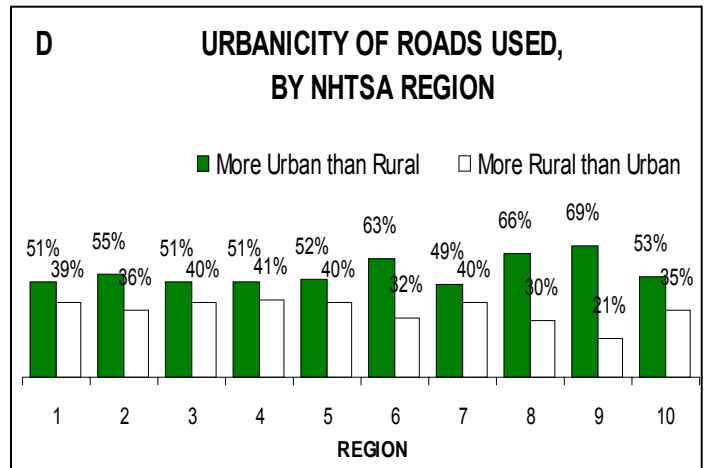
Q8a: Thinking about the roads you normally drive on, would you say that these roads are \_\_\_\_\_?

[Base: total respondents, speed; n=2004]



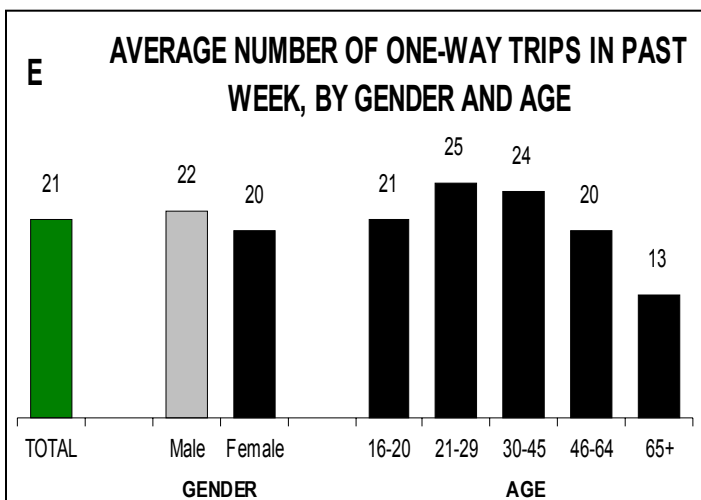
Q8a: Thinking about the roads you normally drive on, would you say that these roads are \_\_\_\_\_?

[Base: total respondents, speed; n=2004]



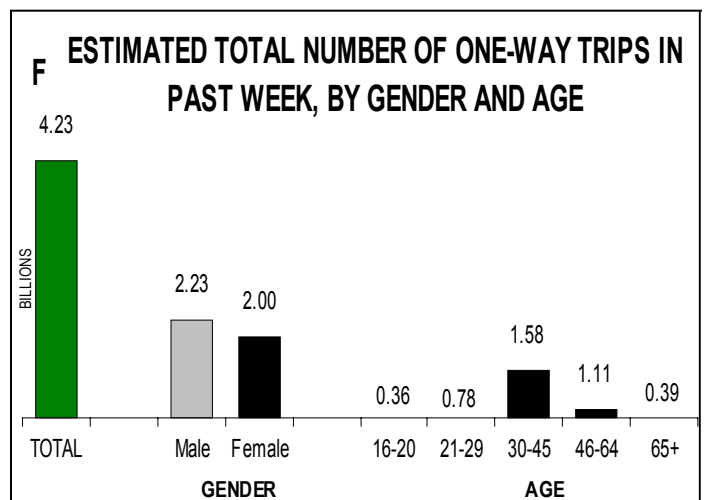
Q8a: Thinking about the roads you normally drive on, would you say that these roads are \_\_\_\_\_?

[Base: total respondents, speed; n=2004]



Q9: Please estimate how many total one-way driving trips you made in the past seven days?

[Base: total respondents, speed and unsafe; n=4010]



Q9: Please estimate how many total one-way driving trips you made in the past seven days?

[Base: total respondents, speed and unsafe; n=4010]



## **Chapter 2: Distracted Driving Behaviors**

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This section assesses drivers' participation in potentially distracting behaviors while behind the wheel. Specifically it covers the following topics:

- Presence of devices that may be distracting
- Frequency of participating in potentially distracting behaviors involving technology
- Frequency of participating in potentially distracting behaviors not involving technology
- Estimated weekly trips made while engaged in potentially distracting behaviors
- Wireless phone use

# Ownership of Devices That May Distract Drivers

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## Ownership of Devices That May Be Distracting if Used While Driving

Wireless or cellular phones are the most common potentially distracting devices owned by drivers. Six out of ten (60%) drivers in the United States report that they have a wireless or cellular phone. Slightly less than one in seven (15%) drivers have wireless remote Internet or e-mail access, while one in eight (12%) report having a beeper or pager. Fewer than one in ten drivers reports having a Personal Data Assistant (PDA) (8%). While the types of in-car telematic systems vary, reported ownership of **either** an in-car navigation system or crash avoidance safety system is quite low at 5%. [Figure 3-A]

## Ownership of Devices That May Be Distracting – by Gender

While male and female drivers are equally likely to report having a wireless or cellular phone, male drivers are more likely to have a beeper or pager (16% as compared to 9% of females), or a PDA (10% vs. 7%). [Figure 3-B]

## Ownership of Devices That May Be Distracting – by Age

While technological devices are often adopted more heavily by the young with use dwindling off as one ages, two thirds (66%) of those age 16-45 report wireless phone ownership, and 60% of those age 46-64 do. Wireless phone use is lower among those over age 64, but 39% of drivers this age report having a wireless or cell phone. [Figure 3-C]

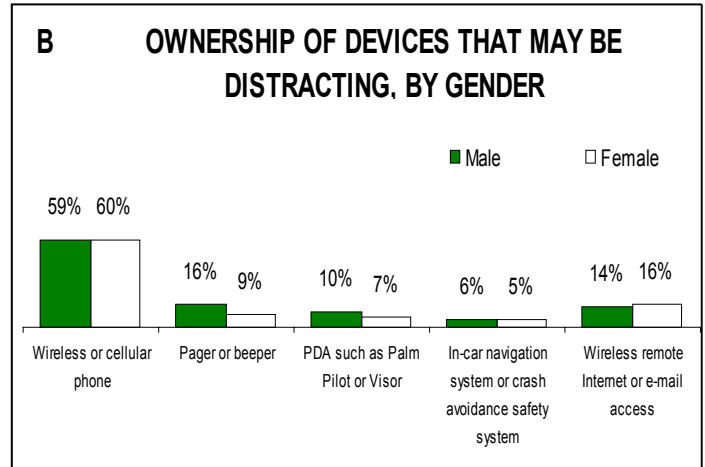
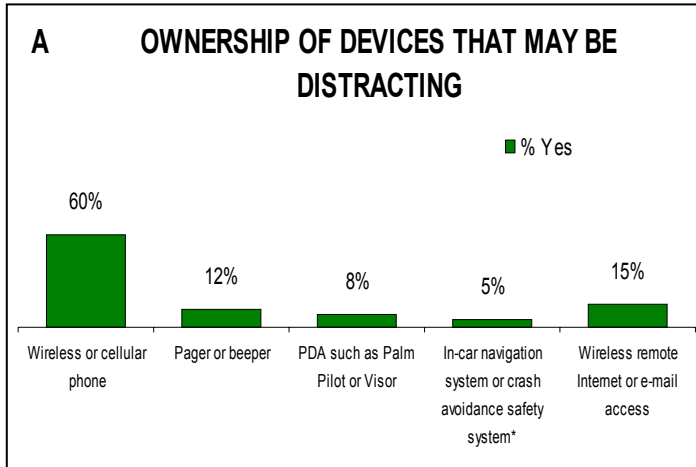
About one in ten drivers between the ages of 16-45 report having a PDA, with use dropping to 6% among 46-64 year olds and to 3% among those age 65 and older. Wireless remote Internet or e-mail access shows a similar trend, with those under age 30 reporting the highest use (21%), falling to about one in six among those age 30-64, and dropping considerably to just 6% among those over age 64.

With the exception of drivers age 16-20, among whom reported use is slightly higher (9%), use of in-car navigation or crash avoidance systems is similar across age groups (about 5%).

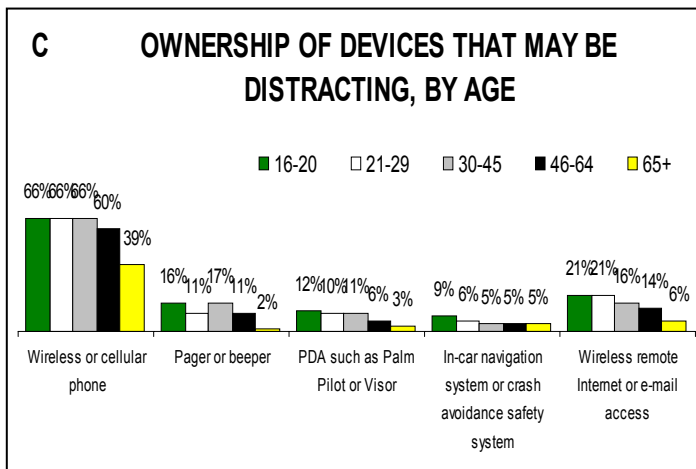
While nearly one out of six (16%) drivers under age 21 report having a pager or beeper, presence of these devices drops to 11% among drivers in their 20s. Beeper or pager ownership jumps again among those in their 30s and early 40s to 17%, while just 11% of those 46-64 have one. As is true of the other technologies measured, only a small proportion of those age 65 or older report having one of these devices (2%).



**FIGURE 3: OWNERSHIP OF DEVICES THAT MAY DISTRACT DRIVERS**



Q44: Do you have any of the following devices? (Percent Yes) [Base: total respondents, speed and unsafe; n=4010]



Q44: Do you have any of the following devices? (Percent "Yes") [Base: total respondents, speed and unsafe; n=4010]

\*Full question wording specified: In-car advanced technology such as a navigation system (like OnStar or Wngcast) or an advanced crash avoidance safety system.

# Frequency of Engaging in Potentially Distracting Behaviors Involving Technology

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## Use of Wireless/Cellular Phone While Driving

While six in ten (60%) drivers say they have a wireless/cellular phone, 58% of those with a wireless phone say they rarely or never use it to make outgoing calls while driving and 56% say they rarely or never take incoming calls on their cell phone while driving. This amounts to about one in three of all drivers using a cell phone for outgoing or incoming calls while driving.

Of drivers with a cell phone, about 13% say they use their phone for outgoing or incoming calls on three-quarters or more of their driving. This relates to about 8% of all drivers using a cell phone on the majority of their driving trips. About three in ten drivers with cell phones say they use them on about one-quarter to one-half of their driving trips for outgoing (28%) or incoming (31%) calls. [Figure 4-A]

Male drivers with cell phones are more likely than their female counterparts to both make outgoing (46%) and accept incoming (50%) calls while driving (as compared to 39% of females doing each behavior). [Figure 4-B]

While drivers age 21 or older with cell phones are about equally likely to use their cell phones for outgoing calls as they are to take incoming calls, cell phone-using drivers age 16-20 are more likely to use their cell phones to take incoming calls (63%) than they are to make outgoing calls while driving (40%). Use of a cell phone while driving decreases significantly with age. About six in ten cell phone owners age 21-29 use their phone for inbound or outbound calls while driving, compared to about one-half of those age 30-45, one-third of those age 46-64, and less than 10% of those age 65 or older. [Figure 4-C]

## Use of Navigation System or Crash Avoidance System While Driving

Of the 5% of drivers who report having a navigational or crash avoidance system, just 30% (or about 1.5% of all drivers) say they use a navigational system or respond to a crash avoidance system while driving. About 15% of owners say they use them for more than three quarters of their trips, while 15% use them for only about one-quarter to one-half of their driving trips. [Figure 4-A]

## Use of Wireless Equipment – PDA or E-mail Access While Driving

Few drivers with wireless equipment such as a PDA or e-mail access actually use this equipment while driving. Of the 15% of drivers who have remote Internet access, just 14% say they use this equipment while driving (or about 2% of all drivers). [Figure 4-A]

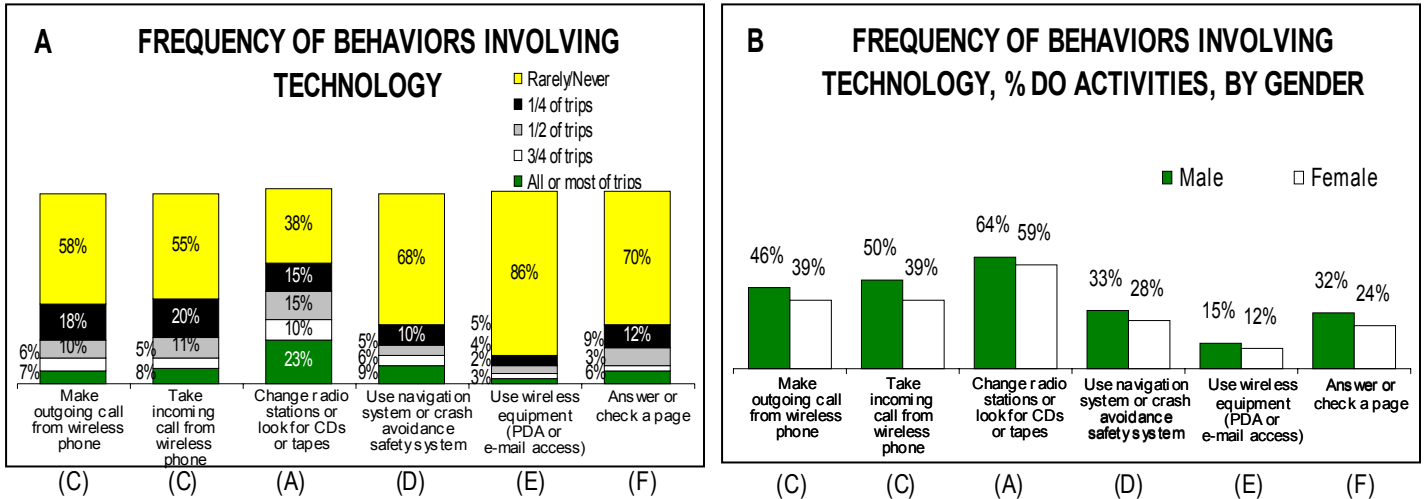
There is little difference in use by gender, but reported use of remote wireless access is highest among younger drivers and decreases with age. [Figure 4-C]

## Answering or Checking Pages While Driving

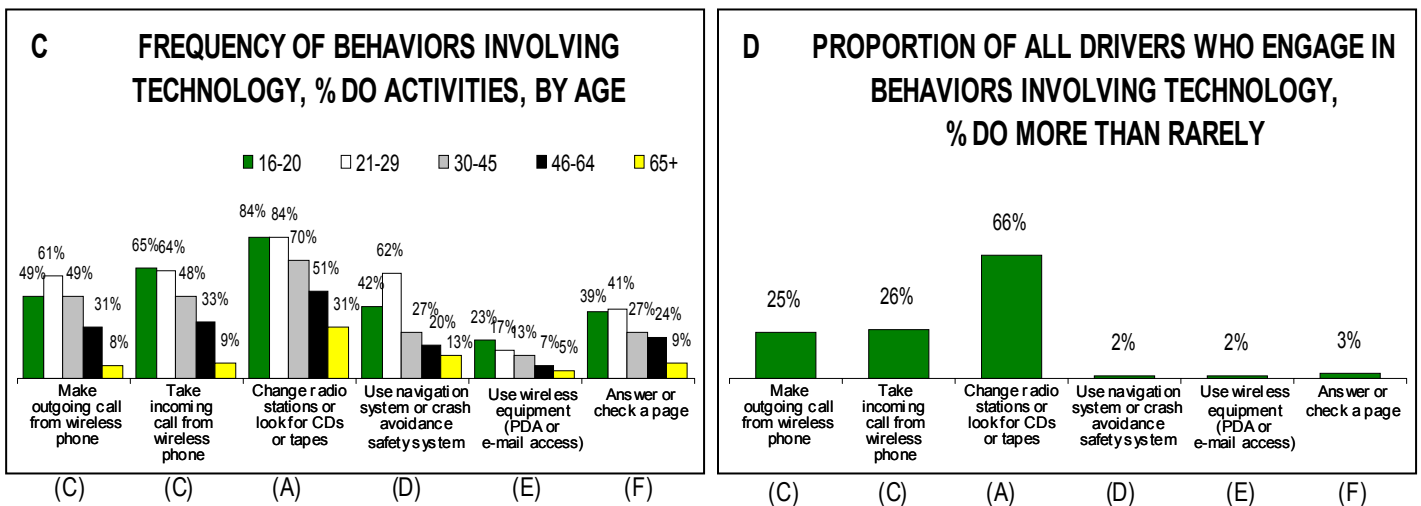
About three in ten (29%) drivers with a pager or beeper say they answer or check their beeper/pager while driving, with 8% doing so on three-quarters or more of their trips. This relates to about 3% of all drivers ever accessing a beeper or pager while driving. Males (32%) and those under 30 (40%) are most likely to check or answer the page. [Figure 4-A]

Figure 19 in Appendix B presents a comparison of the proportion of the population who reported a specific frequency of behavior and the corresponding mean number of trips these drivers make undertaking the behavior.

**FIGURE 4: FREQUENCY OF BEHAVIORS INVOLVING POTENTIALLY DISTRACTING TECHNOLOGY**



Q45: How often, if ever, do you do the following activities while driving? [Base: See sample bases chart]\*



Q45: How often, if ever, do you do the following activities while driving? [Base: See sample bases chart]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
A. Split Sample A	2016	908	1108	110	273	643	624	350
B. Split Sample B	1994	890	1104	104	257	655	618	347
C. Own cell phone	2412	1089	1323	146	359	862	751	278
D. Have advanced in-car technology	214	111	103	21	32	67	52	39
E. Have wireless remote internet or PDA	822	391	431	63	146	316	231	61
F. Have pager or beeper	455	276	179	37	62	205	131	15

## Frequency of Potentially Distracting Behaviors Not Involving Technology

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While driver behaviors involving technology such as cell phones, pagers, and Internet accessing devices have come into the forefront recently as important driver distractions, drivers continue to engage in many potentially distracting behaviors that do not involve these types of equipment.

### Frequency of Conversing with Passengers

The overwhelming majority (81%) of drivers talk to other passengers while driving, with 47% doing so on about three-quarters or more of all driving trips and an additional 34% conversing with other passengers on about one-quarter to one-half of their trips. [Figure 5-A]

Male and female drivers are equally likely to talk with passengers while driving. [Figure 5-B]

While older drivers are slightly less likely to talk to passengers while driving than younger drivers, about three-quarters of those over age 45 still engage in this activity. [Figure 5-C]

### Frequency of Other Behaviors Not Involving Technology

Nearly one in four (24%) drivers deal with children in the back seat of the car while driving. One in ten (10%) say they engage in this action on the majority of their trips, while an additional 14% do so on about one-quarter to one-half of their driving trips. [Figure 5-A] This behavior can be especially distracting if the driver actually turns around to adjust the occupants or pick up a lost toy or offer food. Female drivers are more likely to address the needs of children in the back seat while driving (29% as compared to 20% of males). [Figure 5-B] While participation in most potentially distracting behaviors is highest among younger cohorts and decreases with age, dealing with small children is highest among drivers in their 30s and early 40s and drops off significantly among those age 45 or older. [Figure 5-C]

While one in four drivers engage in this behavior, more than six in ten (62%) drivers who are parents or guardians of children 12 or younger display this behavior, with 30% doing so on a majority of their trips, and 32% doing so on about one-quarter to one-half of their driving trips. Slightly less than one in ten (9%) drivers who are not parents or guardians of young children also engage in this behavior at least occasionally. These drivers may be addressing the needs of grandchildren, children under their supervision, or others' children. [Figure 5-D]

### Frequency of Other Behaviors Not Involving Technology

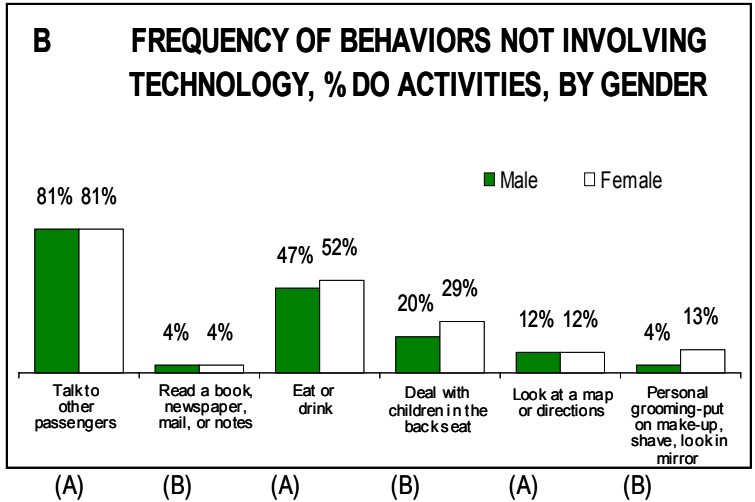
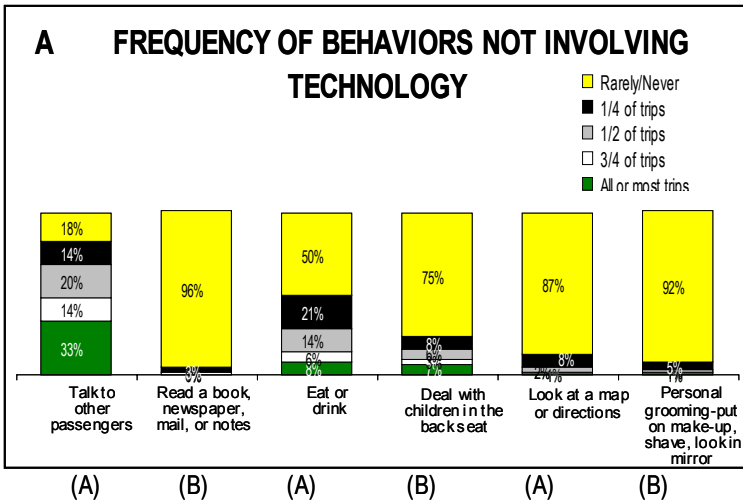
Half of all drivers (49%) report eating or drinking at least occasionally while driving, with 14% doing so on three-quarters or more of their driving trips. Relatively fewer drivers report engaging in the other behaviors measured, with 8% engaging in personal grooming (such as putting on make-up, shaving, or looking in the mirror), 12% looking at maps or directions, and 4% reading printed material (such as a book, newspaper, or mail).

Female drivers are three times more likely to engage in personal grooming (13% as compared to 4% of males), and are slightly more likely to eat or drink while driving. [Figure 5-B]

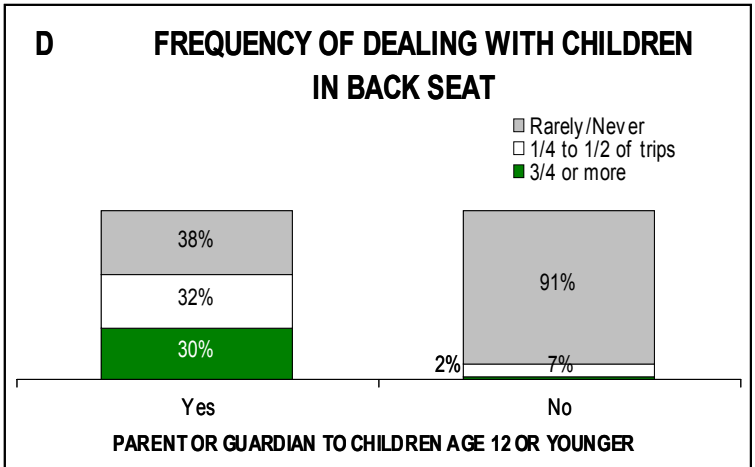
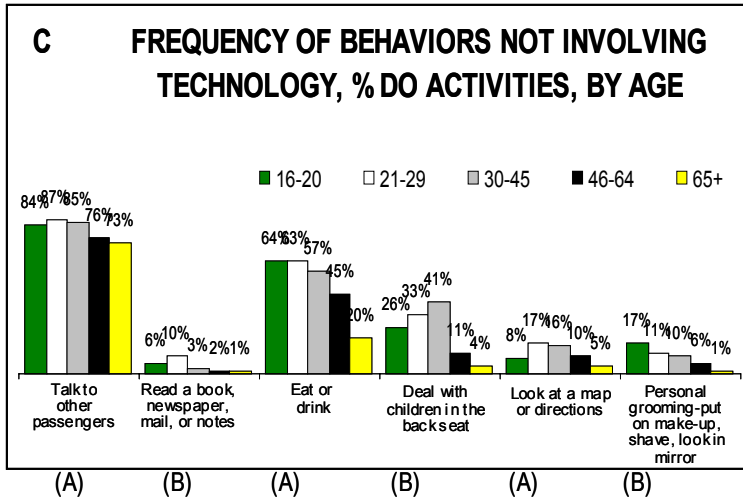
Participation in these behaviors is generally highest among younger drivers and tapers off with age, with very few drivers over 64 engaging in these behaviors. [Figure 5-C]

Figure 20 in Appendix B presents a comparison of the proportion of the population who reported a specific frequency of behavior and the corresponding mean number of trips these drivers make undertaking the behavior.

**FIGURE 5: FREQUENCY OF POTENTIALLY DISTRACTING BEHAVIORS NOT INVOLVING TECHNOLOGY**



Q45: How often, if ever, do you do the following activities while driving? [Base: See sample bases chart]\* B: Percent do more than "rarely or never."



Q45: How often, if ever, do you do the following activities while driving? [Base: See sample bases chart]\* B: % Do more than "rarely or never."

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
A. Split Sample A	2016	908	1108	110	273	643	624	350
B. Split Sample B	1994	890	1104	104	257	655	618	347
C. Own cell phone	2412	1089	1323	146	359	862	751	278
D. Have advanced in-car technology	214	111	103	21	32	67	52	39
E. Have wireless remote internet or PDA	822	391	431	63	146	316	231	61
F. Have pager or beeper	455	276	179	37	62	205	131	15
Parent/guardian to kids ≤12	1236							
Not parent/guardian	2766							

## Estimated Weekly Trips Made While Engaged in Potentially Distracting Behaviors

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This section attempts to estimate the number of trips made by drivers who are engaged in potentially distracting behaviors. The estimates were made by applying the reported frequency of trips respondents engaged in the various behaviors to the reported number of one-way weekly driving trips. It is important to note that the frequency of engaging in the behaviors was asked in very broad categories. *The following percentages values were assigned to the reported responses:*

“rarely or never”	5%
“about one quarter of driving trips”	25%
“about one-half of driving trips”	50%
“about three-quarters of driving trips”	75%
“all or most driving trips”	90%

While we recognize that the scale uses broad categories for frequency of behavior, and may not discriminate all levels of frequency, these estimates are intended only to provide very rough estimates of the magnitude of distracted-related trips, and also to offer a relative comparison of the frequency of different types of potentially distracting behaviors. These trip estimates do not take into account the length of the trip or, the level of engagement in or time spent involved in the reported behavior. The number of trips may total to more than the 4.3 billion estimated total weekly trips as drivers may engage in more than one behavior on a trip.

### Estimated Weekly Trips Engaging in Technology-based Behaviors

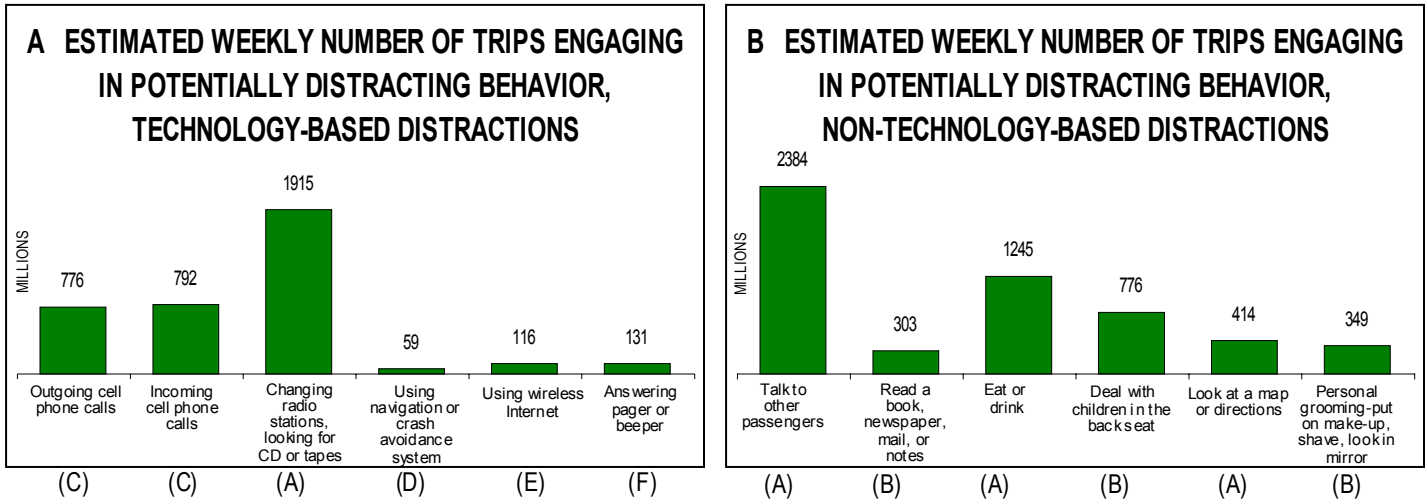
Drivers make an estimated 1.9 billion trips a week in which they change the radio or look for CDs or tapes. An estimated 776 million trips (18% of all weekly trips) are made in an average week in which an outgoing wireless call was placed. About 792 million trips (19% of all trips) are made each week in which an incoming wireless call is accepted. While significantly fewer trips are made by drivers using other types of devices, a large number of trips are made each week by drivers who drive while accessing the wireless Internet (116 million or 3% of all trips), answering a pager or beeper (131 million or 3% of trips), and using navigation or crash avoidance systems (59 million or 1% of all weekly trips). [Figure 6-A]

### Estimated Weekly Trips Engaging in Non-Technology-Based Behaviors

Driving trips involving non-technology-based behaviors are even more pervasive. Close to an estimated 2.4 billion driving trips (about 56% of all trips) are made weekly by drivers who are conversing with other occupants, while more than 1.2 billion trips (29% of all trips) are made while the driver is eating or drinking.

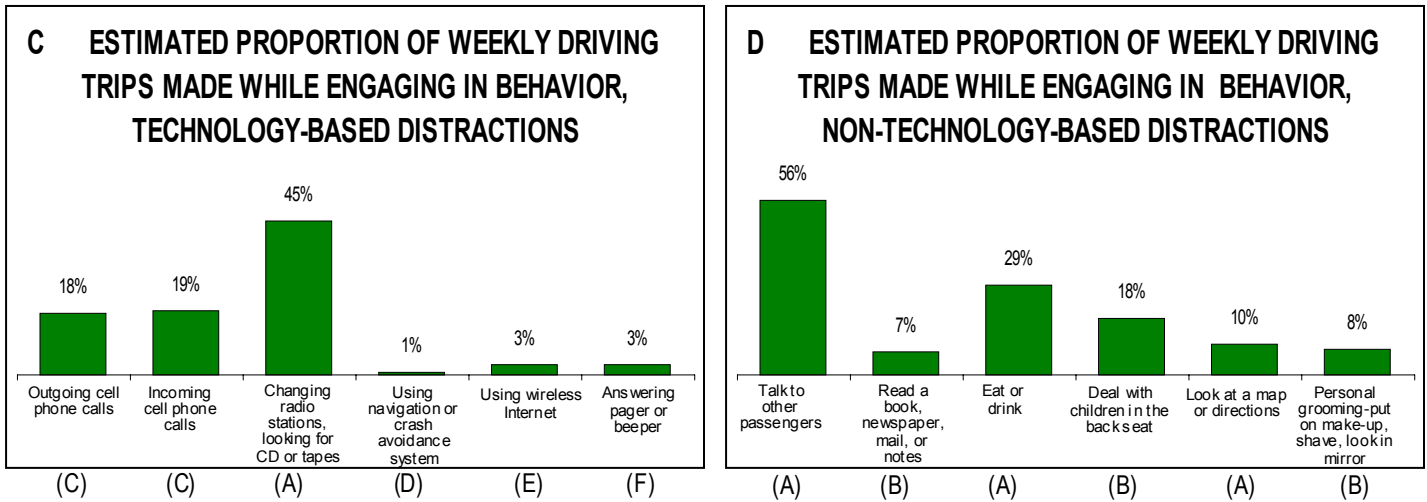
Drivers make approximately 776 million trips weekly (18% of trips) while dealing with children in the back seat. More than 300 million weekly trips are made by drivers who are looking at maps or directions (414 million or 10% of trips), engaging in personal grooming (349 million or 8% of trips) or reading printed materials (303 million or 7% of trips). [Figure 6-B]

**FIGURE 6: ESTIMATED WEEKLY TRIPS\*\* MADE WHILE ENGAGED IN POTENTIALLY DISTRACTING BEHAVIOR**



Q45: How often, if ever, do you do the following activities while driving?

Q9. Please estimate how many total one-way driving trips you made in the past seven days? [Base: See sample bases chart]\*



Q45: How often, if ever, do you do the following activities while driving?

Q9. Please estimate how many total one-way driving trips you made in the past seven days? [Base: See sample bases chart]\*

\*\*Estimates of total weekly trips were made by applying the proportions of reported trips made engaging in the behavior (as reported on the verbal scale) to total weekly number trips reported earlier in the survey using the following percentages of trips: “rarely or never” = 5% of trips; “about one quarter” = 25%; “about half” = 50%; “all or almost all” = 90% of trips.

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
A. Split Sample A	2016	908	1108	110	273	643	624	350
B. Split Sample B	1994	890	1104	104	257	655	618	347
C. Own cell phone	2412	1089	1323	146	359	862	751	278
D. Have advanced in-car technology	214	111	103	21	32	67	52	39
E. Have wireless remote internet or PDA	822	391	431	63	146	316	231	61
F. Have pager or beeper	455	276	179	37	62	205	131	15

## **Wireless Phone Use**

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### **Use for Outbound vs. Inbound Calls**

About half (49%) of drivers who own cell phones say they rarely or never use their cell phones while driving for any reason. Of drivers who use their cell phones on at least some driving trips, nearly two out of ten (18%) use their cell phone only to make outgoing calls, about one of ten (12%) use their cell phone only for incoming calls while driving, and 70% use them for both incoming and outgoing calls. [Figure 7-A]

### **Method of Wireless Phone Use**

More than six out of ten (63%) drivers who use cell phones while driving say they usually use a hand-held model phone, while about one in three (34%) usually use a hands-free model. Males (38%) are more likely to use a hands-free phone while driving than females (30%). Use of a hands-free phone while driving is more prevalent among younger drivers (38% of those under age 30) and declines with age to just 26% of those over age 64. [Figure 7-B]

### **Average Time Spent on Phone Per Call**

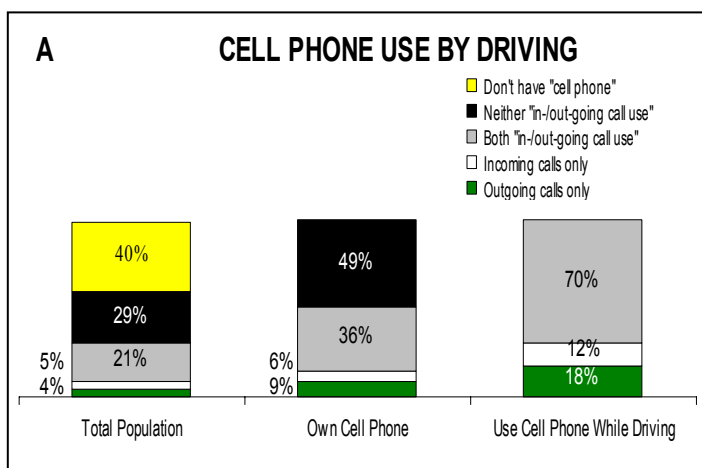
Drivers who use cell phones while driving average about 4.5 minutes per call. However, 50% say they typically spend approximately 2.0 minutes or less per call while driving. Only about 13% report spending more than 10 minutes on average, per call while driving. Younger drivers average longer call times (6.8 minutes for drivers under 21 and 5.5 minutes for those in their 20s), with time decreasing with age to averages of less than two minutes for drivers over age 64 (1.8 minutes on average). Female drivers average slightly longer phone conversations while driving than do their male counterparts (4.9 minutes and 4.2 minutes respectively). [Figure 7-C and 7-D]

### **Driving Situations Would Not Use Cell Phone**

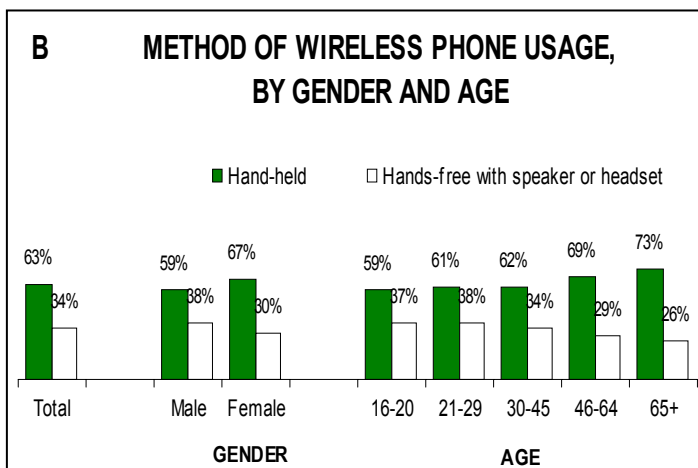
While half of drivers with cell phones use their cell phone on at least some of their driving trips, there are instances where these cell phone-using drivers would not use their phones. Only 7% say there are no driving situations where they would refrain from using their cell phones. Nearly half (47%) say they would not use a cell phone while driving in bumper-to-bumper traffic or city driving and about four in ten (43%) would not use their cell phone in bad weather. About one in ten (11%) won't use their phone in fast-moving freeway traffic.



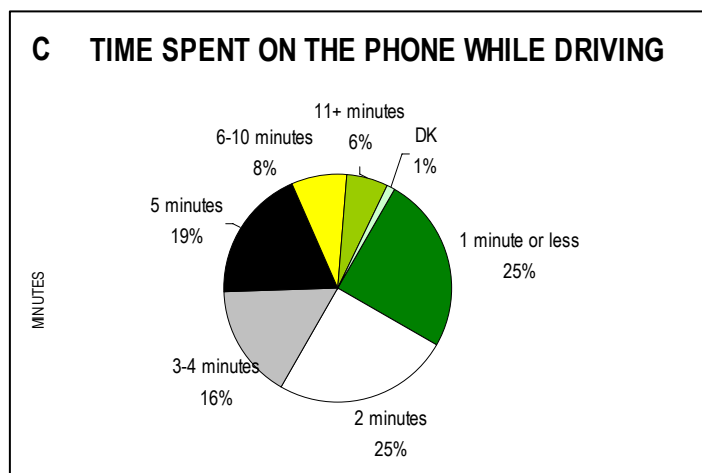
**FIGURE 7: WIRELESS PHONE USE**



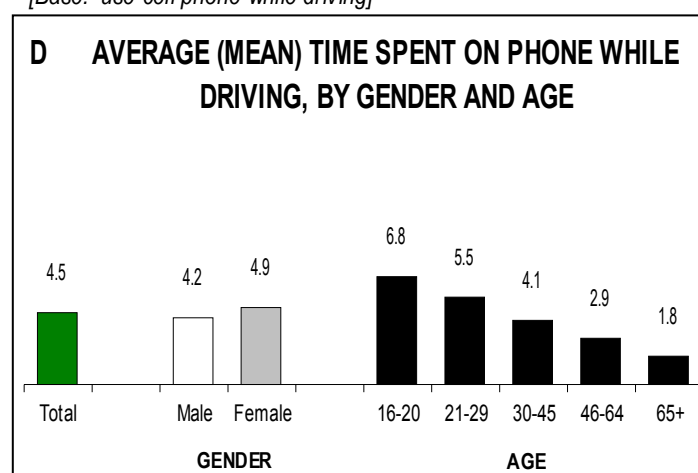
Q45: How often, if ever, do you do the following activities while driving? Use cell phone for incoming calls? Use a cell phone to make outgoing calls? [Base: As noted in chart]\*



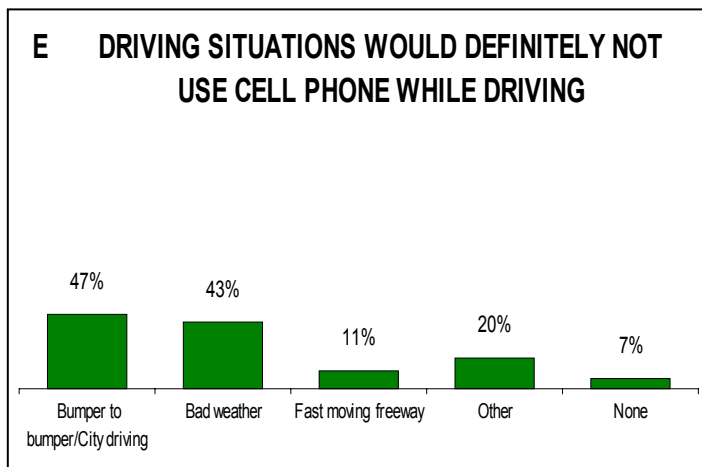
Q47: When using a wireless phone in the car to make or receive calls, do you USUALLY use a hand-held phone, or do you use a hands-free phone that has a speaker or a headset? [Base: use cell phone while driving]\*



Q51: How many minutes do you typically spend, per call, on your wireless phone while driving? [Base: use cell phone while driving]\*



Q51: How many minutes do you typically spend, per call, on your wireless phone while driving? [Base: use cell phone while driving]\*



Q53: In what, if any driving situations, would you definitely not use your wireless phone to make or answer a call? (Three responses allowed) [Base: use cell phone while driving]

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Use cell while driving	1194	596	598	101	252	508	291	35

## **Crash Experience Related to Cell Phone Use or Other Distracted Driving**

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### **Involvement in a Crash as a Result of Wireless Phone Use**

About one quarter (26%) of drivers have been involved in a crash in the past five years where there was damage to a vehicle. Slightly less than one percent (.6%) of those involved in a crash (.1% of all drivers) attribute the crash to wireless phone use. Drivers under age 30 are more likely to have been involved in such a crash, with .3% of all drivers this age having been in a crash they attribute to wireless phone use. [Figure 8-A]

Though the proportion of drivers involved in a crash they attribute to wireless phone use is very small, it relates to an estimated 292,000 drivers over the past five years. Female drivers report about two-thirds of these crash experiences (about 197,000). [Figure 8-B]

### **Involvement in a Crash as a Result of Distracted Driving**

A larger proportion of drivers have been involved in a crash as a result of other distracted driving activities. About 14% of drivers involved in a crash in the past five years (3.5% of all drivers) attribute the crash to distracted driving. Male drivers (4.7%) were about twice as likely as female drivers (2.3%) to have done so. [Figure 8-A]

Drivers under age 30 were significantly more likely to have been in a crash they attribute to distracted driving (about 6%), with involvement in such a crash decreasing directly with age to less than 2% of drivers 65 or older.

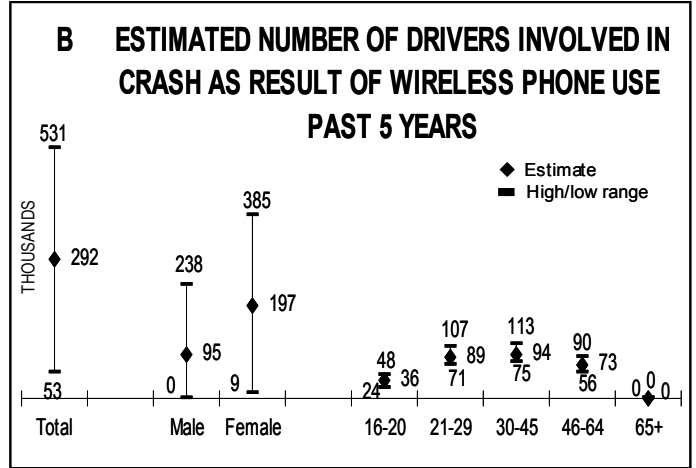
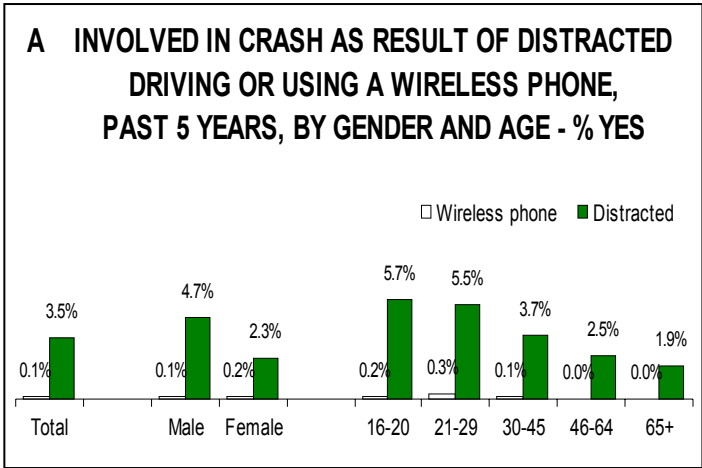
Figure 8-C shows the estimated number of drivers involved in a crash they attribute to distracted driving in the past five years along with likely high and low ranges of the estimates. It is important to keep in mind that these are self-reported data and are subject to potential recall errors, particularly as they cover a large time frame.

Over the past five years an estimated 7.2 million drivers have been in a crash while driving which they attribute to being distracted. About 4.7 million, or two-thirds, of these drivers, were male. Youth drivers make up a disproportionately large number of these drivers. About 985,000 drivers under age 21 were involved in a distracted-driving crash. This is 13% of all drivers involved in a crash, yet youth drivers make up just 6% of the driving population. Similarly, about 1.7 million drivers in their 20s had a distracted-related crash, which is 23% of all involved drivers. However, drivers in their 20s account for just 13% of the driving population. Conversely, just 592,000 drivers over age 64 report a crash. This is 8% of drivers in a crash, while these older drivers make up 17% of the population. [Figure 8-C]

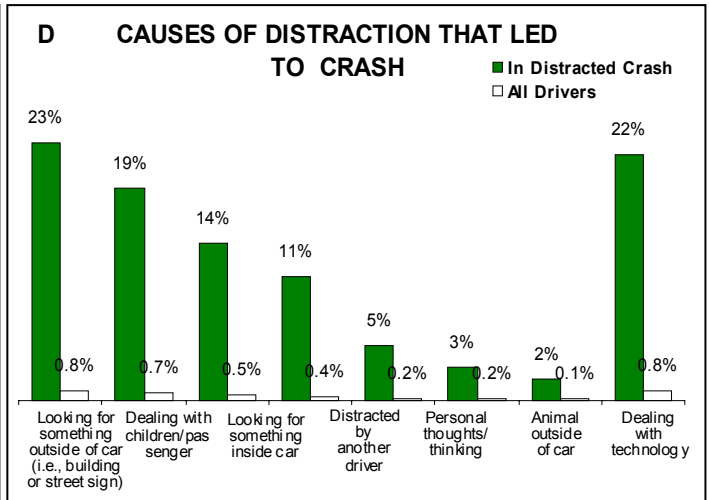
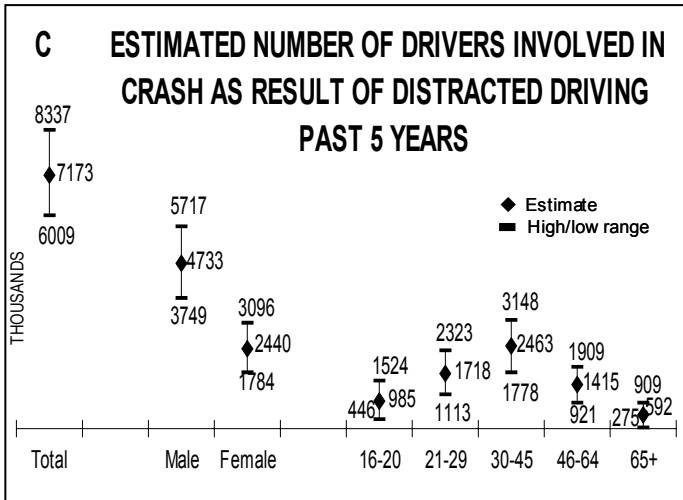
### **Cause of the Distraction That Led to a Crash**

Of the approximately 7.2 million drivers involved in a distracted-related crash within the past five years, nearly one-quarter (23%) say they were distracted by looking for something outside the vehicle, (0.8% of all drivers) such as a building or street sign, while an additional 11% were distracted by another driver (0.4% of drivers), and 3% were distracted by an animal outside of the car. About one of five (19%) drivers involved in a distracted-related crash (0.7% of all drivers) were dealing with a child or other passenger. One in seven (14% or 0.5% of all drivers) were looking for something inside the vehicle. An additional one in five were distracted by some other distraction. [Figure 8-D]

**FIGURE 8: CRASH RELATED TO DISTRACTED DRIVING**



Q71/73: In the past five years, have you been in a crash while driving a motor vehicle in which there was damage to your vehicle or another vehicle? Were any of these crashes a result of \_\_\_\_\_?  
 [Base: total respondents, speed and unsafe; n=4010]



Q71/73: In the past five years, have you been in a crash while driving a motor vehicle in which there was damage to your vehicle or another vehicle? Were any of these crashes a result of \_\_\_\_\_?  
 [Base: total respondents, speed and unsafe; n=4010]

Q75: What caused you to be distracted?  
 [Base: in crash caused by distraction; n=130; total respondents, speed and unsafe n=4010]



## **Chapter 3: Perception of Impacts of Distracted Driving**

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While some groups would like to see a reduction of the potentially distracting behaviors measured in this study, if drivers do not perceive the actions to be distracting or to make driving more dangerous, it is unlikely that they will make changes in their driving behavior either voluntarily or as a result of legislation. This section provides information on the driving public's attitudes regarding potentially distracting driving behaviors. Specifically it covers the following topics:

- Perceived impacts of technology-based behaviors
- Perceived impacts of non-technology-based behaviors
- Perceived threat of distracted driving
- Support of initiatives to reduce cell phone use while driving

# Perceptions of Actions That Distract Drivers – Technology-Based Behaviors

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## Impact of Technology-Based Behaviors on Driving Safety

Although most drivers say they change radio stations or look for CDs or tapes while driving, just over one in three (36%) perceive this action to make driving more dangerous. Just 18% think it makes driving *much* more dangerous. [Figure 9-A]

While about one in four drivers drive while talking on a wireless phone, the majority of drivers perceive this activity as making driving more dangerous (a “4” or “5” on the 1 to 5 scale of “no impact” to “much more dangerous”). Two-thirds (66%) feel that taking incoming cell phone calls makes driving more dangerous, with 44% feeling it makes it much more dangerous. Drivers are even more likely to feel that making outgoing calls makes driving more dangerous, with seven in ten (70%) seeing this as at least somewhat dangerous and 48% seeing it as making driving much more dangerous.

Navigational and crash avoidance systems are intended to make driving safer by allowing drivers to travel to unfamiliar locations without flipping through printed maps and by alerting drivers of potential crash hazards, yet two in five (39%) drivers feel that use of such systems actually makes driving more dangerous.

Nearly seven out of every eight (86%) drivers believe that using wireless remote equipment (such as PDA, or access to wireless remote email) while driving makes driving more dangerous, with 63% saying it makes driving much more dangerous. Two-thirds (66%) of drivers feel that answering or checking a pager makes driving more dangerous.

## By Gender and Age

Female drivers are more likely than males to believe that potentially distracting behaviors make driving more dangerous. Females are especially more likely to feel that answering or checking a beeper is distracting (74% as compared to 56% of males). Male drivers are much more likely to engage in these types of behaviors than are females. [Figure 9-B]

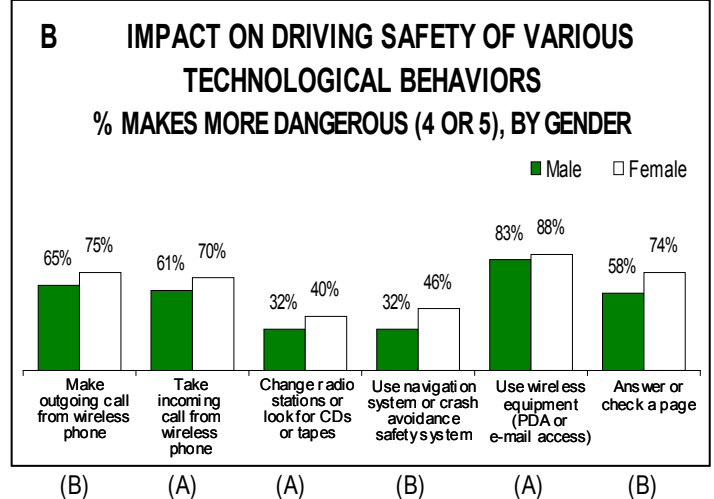
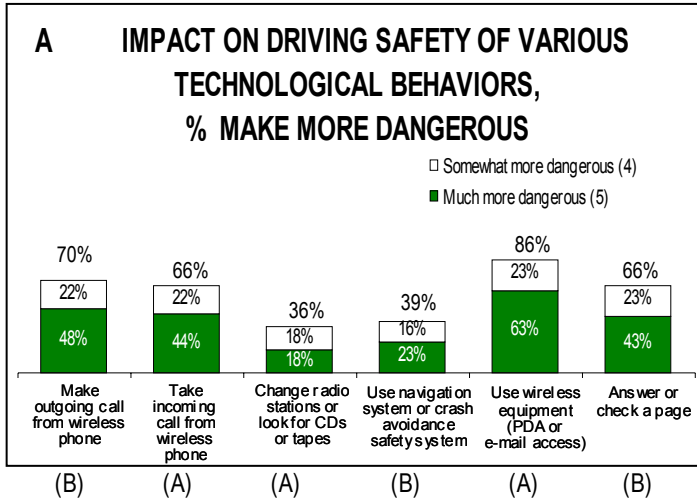
Younger drivers are least likely to believe these behaviors make driving more dangerous, with the perception of danger increasing with age, though at least eight in ten drivers of all ages perceive remote Internet access while driving as dangerous. Drivers over age 64 are much more likely than others to feel that adjusting music (58%) makes driving more dangerous (as compared to about one-third of younger drivers). [Figure 9-C]

## By Cell Phone Use

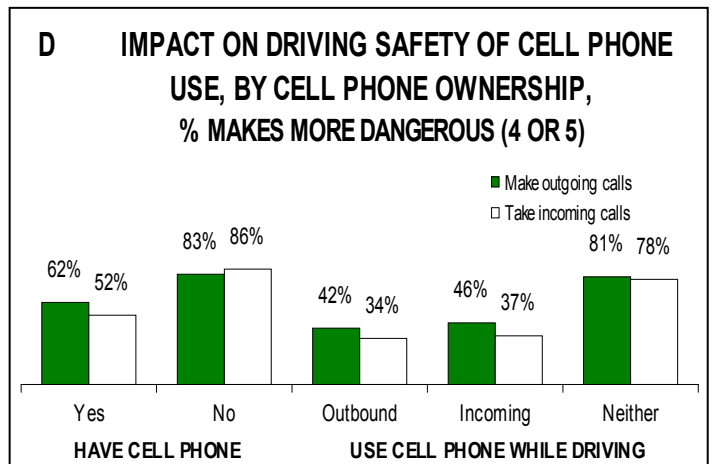
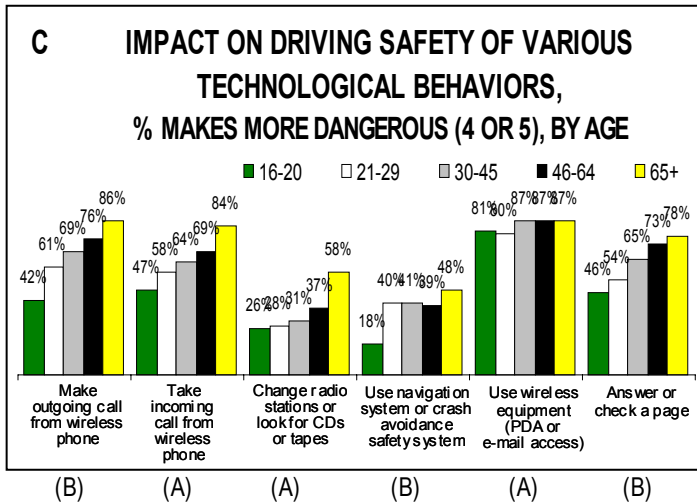
There is a substantial difference in the perception of the impact of cell phone use by cell phone ownership and use. While more than eight in ten drivers who do not have a cell phone believe making outgoing or taking incoming calls makes driving more dangerous (83% and 86% respectively), just half (52%) of those *with* cell phones (whether they use them while driving or not) feel that taking incoming calls is dangerous, and 62% feel that making outgoing calls makes driving more dangerous. [Figure 9-D]

Those who use cell phones while driving are even less likely to perceive the activity as dangerous, with just (37%) believing that taking incoming calls makes driving more dangerous, and 42% seeing outgoing calls as more dangerous.

**FIGURE 9: PERCEPTION OF ACTIONS THAT DISTRACT DRIVERS – TECHNOLOGY-BASED**



Q54: Please tell me how much, if at all, you think the following actions while driving distract drivers and make their driving less safe. Please use a scale from 1 to 5, where 1 means it has no impact on driving safety and 5 means it makes driving much more dangerous. [Base: total respondents, random half-sample]\*



Q54: Please tell me how much, if at all, you think the following actions while driving distract drivers and make their driving less safe. Please use a scale from 1 to 5, where 1 means it has no impact on driving safety and 5 means it makes driving much more dangerous. [Base: total respondents, random half-sample]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Split sample A	2016	908	1108	110	273	643	624	350
Split sample B	1994	890	1104	104	257	655	618	347
Cell Phone Owners								
Yes	1200							
No	800							
Cell Phone Users								
Outbound	500							
Inbound	520							
Neither	1400							

## **Perceptions of Actions That Distract Drivers – Non-Technology-Based**

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### **Impact of Non-Technology-Based Behaviors on Driving Safety**

Although the vast majority of drivers (81%) converse with passengers while driving, only 10% of drivers believe that this activity distracts drivers and makes their driving more dangerous. Similarly, while half of all drivers eat or drink while driving, just 31% feel that such behavior distracts drivers enough to make driving more dangerous. [Figure 10-A]

Nearly two-thirds (65%) of drivers believe that dealing with children in the back seat makes driving more dangerous, with the majority of these (40% overall) seeing it as making driving much more dangerous.

While fewer drivers report engaging in other distracting behaviors while driving, such as reading printed materials (4%), looking at maps or directions (12%), or personal grooming (8%) these behaviors are perceived to make driving much more dangerous than the other activities more commonly engaged in. Eight out of ten drivers feel that looking at a map or directions (79%) or personal grooming (81%) makes driving more dangerous, with a majority feeling that these behaviors makes driving much more dangerous.

Drivers perceive reading printed materials (such as a book, newspapers, mail, or notes) while driving as most distracting, with 80% feeling this behavior makes driving much more dangerous and an additional 12% seeing it as somewhat distracting.

### **By Gender**

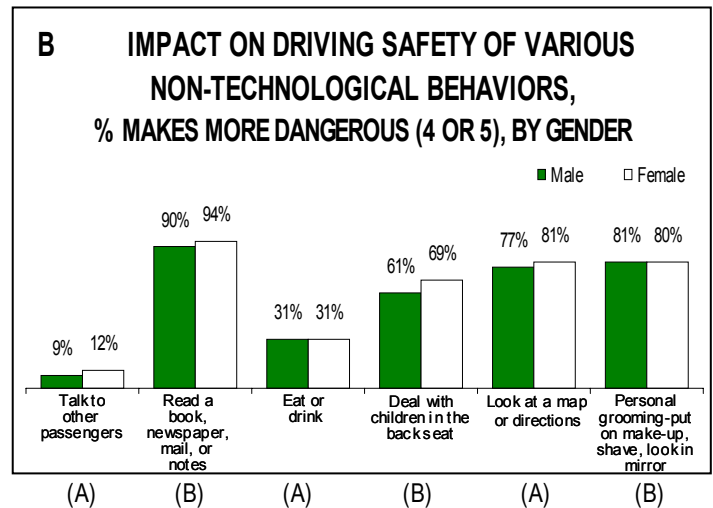
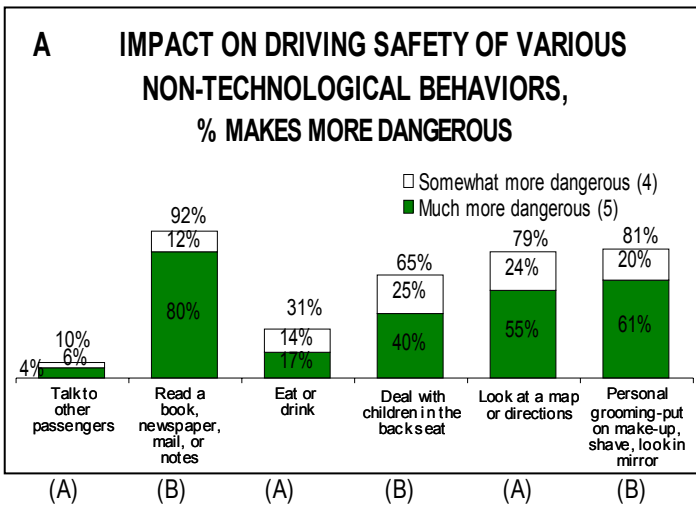
While there are no differences in the perceptions of the impact of eating/drinking or personal grooming between male and female drivers, females are slightly more likely than males to feel that the talking with other passengers (12% vs. 9% of males) and looking at maps or directions (81% vs. 77%) make driving more dangerous. Female drivers are especially more likely to see dealing with children in the back seat as dangerous (69% vs. 61% of males). [Figure 10-B]

### **By Age**

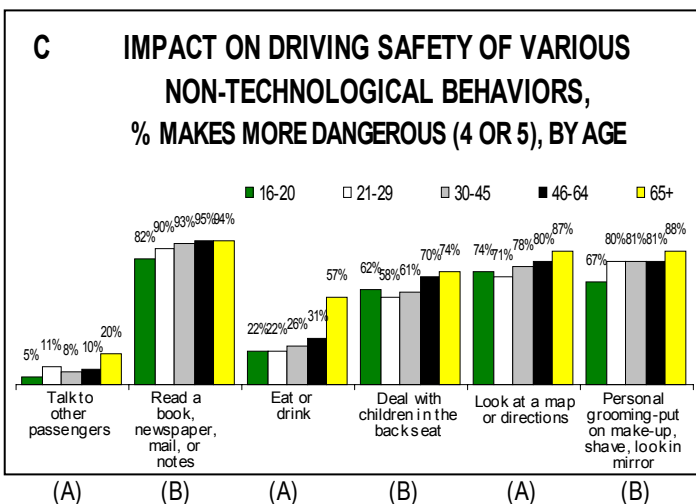
Younger drivers are generally less likely to feel that the behaviors make driving more dangerous, with perceptions of behaviors being distracting increasing with age. Drivers age 64 and older are twice as likely to feel that eating or drinking (57% compared to about one in four younger drivers) and talking with others (20% as compared to about 10% of others) make driving more dangerous. [Figure 10-C]



**FIGURE 10: PERCEPTION OF ACTIONS THAT DISTRACT DRIVERS  
NON-TECHNOLOGY-BASED**



Q54: Please tell me how much, if at all, you think the following actions while driving distract drivers and make their driving less safe. Please use a scale from 1 to 5, where 1 means it has no impact on driving safety and 5 means it makes driving much more dangerous. [Base: total respondents, random half-sample]\*



Q54: Please tell me how much, if at all, you think the following actions while driving distract drivers and make their driving less safe. Please use a scale from 1 to 5, where 1 means it has no impact on driving safety and 5 means it makes driving much more dangerous. [Base: total respondents, random half-sample]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Split sample A	2016	908	1108	110	273	643	624	350
Split sample B	1994	890	1104	104	257	655	618	347

# Perceived Threat of Distracted Driving

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## Perceived Threat of Wireless Phone Use While Driving to Personal Safety

While virtually all drivers feel that eating or drinking (94%), using a wireless phone (97%), and looking at maps or directions (99%) while driving are at least a minor threat to their and their family's personal safety, there are big differences in perceived level of the threat. [Figure 11-A]

Looking at maps or directions while driving is felt to be the greatest threat, with seven out of ten drivers (70%) seeing this behavior by others as a major threat to their personal safety. Slightly more than half (52%) of drivers feel that others' cell phone use while driving is a major threat to their or their family's personal safety. In contrast, just over one-quarter (28%) feel that eating or drinking by others while driving is a major threat. An additional two-thirds (66%) see this behavior as a minor threat to their safety.

Figure 21 in Appendix B presents a comparison of the perceived threat of various driver distractions and other unsafe driving behaviors.

### By Cell Phone Use

Not surprisingly, drivers who use a cell phone while driving perceive cell phone use by others as less of a threat to their safety as do non-users, with one in five drivers who use a cell phone while driving seeing this activity as a major threat. This is compared to 65% of drivers who do not use a cell phone for either incoming or outgoing calls. [Figure 11-B]

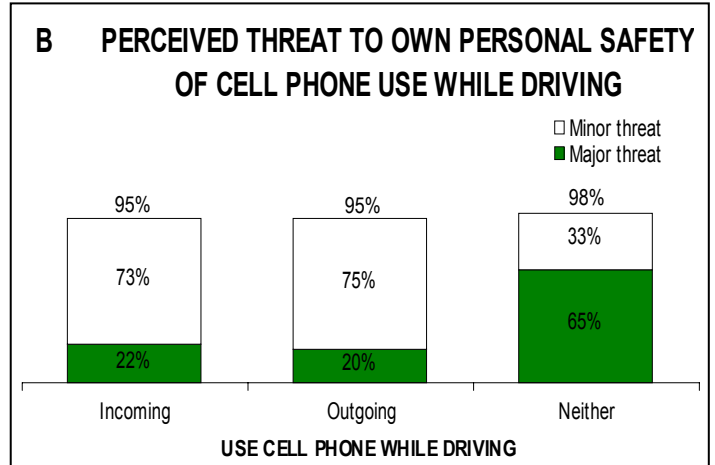
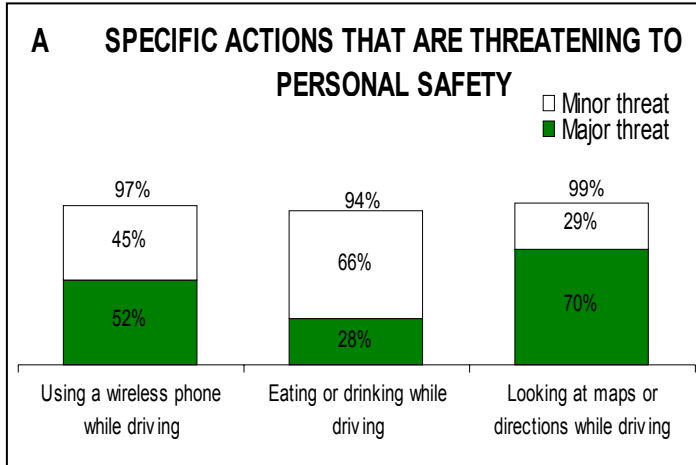
### By Gender

Female drivers are much more likely to feel that cell phone use while driving is a major threat to their personal safety as do male drivers (57% compared to 48%), and slightly more likely to see others' map use as a major threat (72% versus 68%). Males are slightly more likely to feel that others' eating or drinking behavior is a major threat (30% compared to 26% for females). [Figure 11-C]

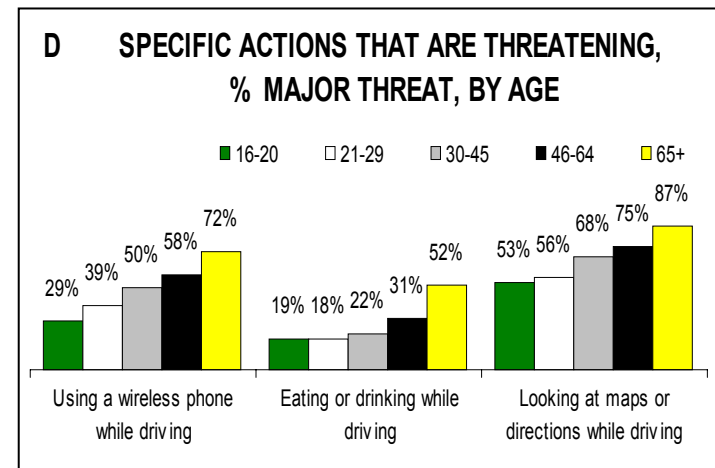
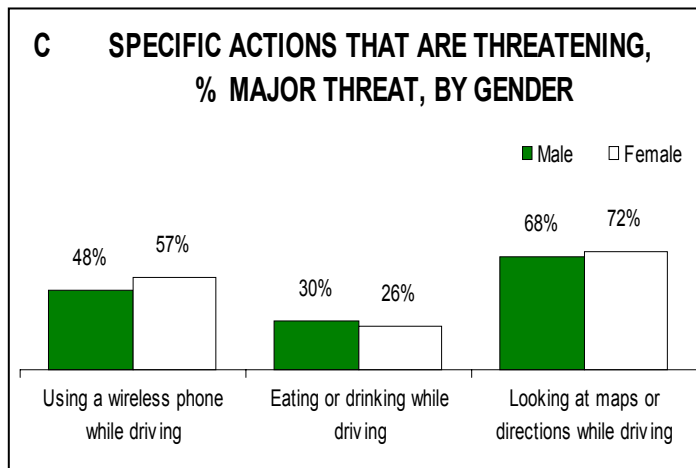
### By Age

Younger drivers are least likely to feel that all of the measured driving behaviors are a major threat to their safety, with the perception of threat generally increasing with age. Just three out of ten drivers under age 21 feel that wireless phone use by others while driving poses a major threat, as compared to half or more of those in their 30s to mid-40s and 72% of those over age 64. There is less difference in perception on the threat of eating or drinking, with about one in five drivers under age 45 seeing this behavior as a major threat, compared to three out of ten drivers ages 46-64 and 52% of those over age 64. [Figure 11-D]

**FIGURE 11: PERCEIVED THREAT OF DISTRACTED DRIVING**



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following? Is it a major threat, minor threat, or not a threat?  
 [Base: total respondents, speed and unsafe; n=4010]



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following? Is it a major threat, minor threat, or not a threat?  
 [Base: total respondents, speed and unsafe; n=4010]

Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following? Is it a major threat, minor threat, or not a threat?  
 [Base: total respondents, speed and unsafe; n=4010]

## **Views on Initiatives to Curtail Cell Phone Use While Driving**

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### **Support for Initiatives**

The study measured support for five potential initiatives to curtail cell phone use while driving. A majority of all drivers would support each of the five actions, and even a majority of those who use cell phones while driving support several of the initiatives. The greatest support is for increasing public awareness of the risks of wireless phone use while driving, with 88% supporting this initiative and just 12% saying they would oppose it. [Figure 12-A] Support is equally strong among in-car cell phone users and non-users. [Figure 12-D]

Strong support is also reported for a restriction on using hand-held phones while driving, allowing hands-free models only (71%), and for insurance penalties for drivers involved in a crash while using a wireless phone (67%).

While about six in ten drivers would support a ban on all wireless phone use while driving (57%), or double or triple fines for traffic violations involving cell phone use (61%), support for these last two initiatives is lower among drivers overall and generally not supported by those who currently use cell phones.

### **By Gender**

While female drivers are less likely to use a cell phone while driving, they are more likely than males to support all five of the measured potential initiatives to reduce cell phone use while driving. Female drivers are especially more likely to support a ban on all wireless phone use (61% compared to 52%) and higher fines for traffic violations where a cell phone was involved (65% compared to 57%). [Figure 12-B]

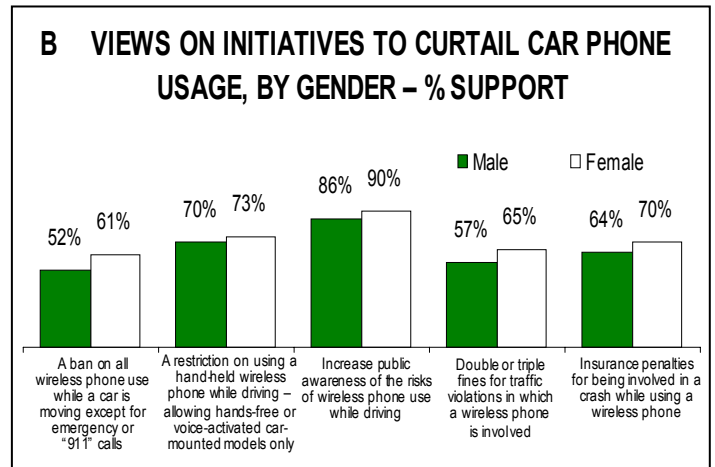
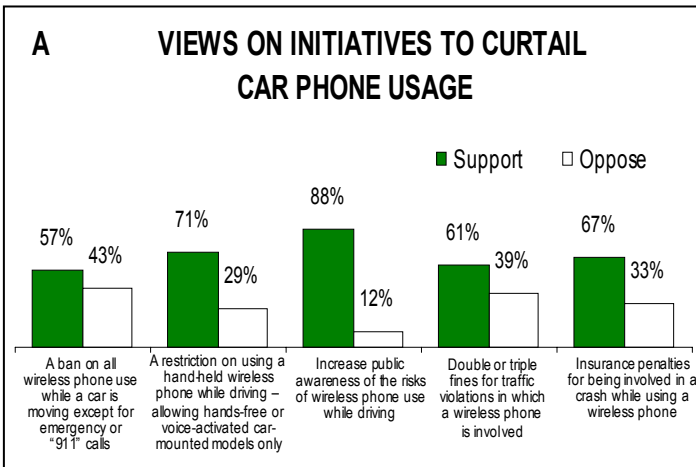
### **By Age**

Support for a ban on all cell phone use while driving and insurance penalties for being involved in a crash while using a cell phone increases significantly with age of the driver. Drivers under age 30 are also much less likely than drivers over 30 to support double or triple fines for traffic violations when a cell phone is involved (46% compared to about 66% of older drivers). There is not a substantial difference by age in support for increased public awareness or restrictions to using hands-free models only. [Figure 12-C]

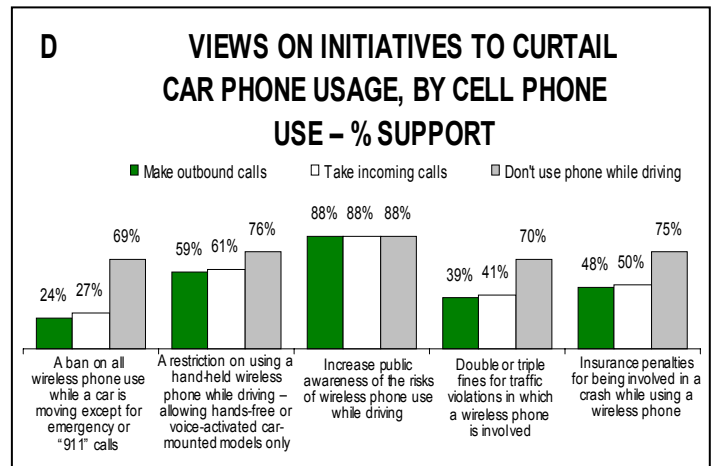
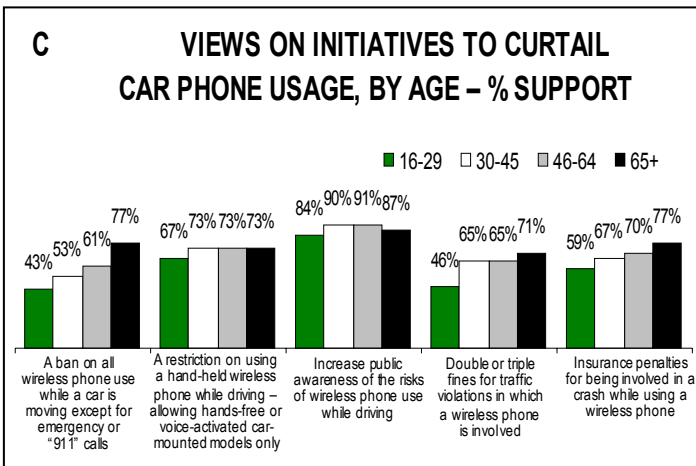
### **By Cell Phone Use**

While drivers who use cell phones while driving are equally likely to support *public awareness* initiatives as non-users, and a majority would support a hands-free restriction, only about 25% would support a total ban on cell phone use while driving (as compared to 69% of those who do not talk on phones while driving). Cell phone users are also significantly less likely than non-users to support monetary fines (about 40% do compared to 70% of non-users) and insurance penalties (about 49% do as compared to 75%). [Figure 12-D]

**FIGURE 12: VIEWS ON INITIATIVES TO CURTAIL CAR PHONE USAGE**



Q56: Now, I would like to know if you would support or oppose the following potential initiative regarding wireless phone use while driving. [Base: total respondents, speed and unsafe; n=4010]



Q56: Now, I would like to know if you would support or oppose the following potential initiative regarding wireless phone use while driving. [Base: total respondents, speed and unsafe; n=4010]



## Chapter 4: Drowsy Driving

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Drowsy driving can be considered another form of distracted driving in that drivers experiencing drowsiness do not apply their full attention to the driving task. Yet, drowsy driving is a problem of its own.

In the 1996 appropriations bill for the U.S. Department of Transportation, the Senate Appropriations Committee report noted that "NHTSA data indicate that in recent years there have been about 56,000 crashes annually in which driver drowsiness/fatigue was cited by police. Annual averages of roughly 40,000 nonfatal injuries and 1,550 fatalities result from these crashes. It is widely recognized that these statistics underreport the extent of these types of crashes. These statistics also do not deal with crashes caused by driver inattention, which is believed to be a larger problem."

This section provides information on the driving age public's experiences and perceptions regarding drowsy driving. Specifically it covers the following topics:

- Experience with driving while drowsy
- Characteristics of most recent drowsy driving trip
- Measures to prevent falling asleep while driving
- Outcomes of drowsy driving
- Perceived threat of drowsy driving

## **Experiences With Drowsy Driving**

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### **Nodding Off While Driving**

Overall, 37% of the driving population says they have nodded off for at least a moment or fallen asleep while driving at some time in their life. Males (49%) are almost twice as likely to report having nodded off while driving than are female drivers (26%).

Not surprisingly, newer drivers (i.e. those under age 21) who have had less time driving overall, are only half as likely to have experienced nodding off while driving (18%) as older drivers. And, just as drivers over age 64 are less likely to undertake behaviors that are potentially distracting, these drivers are also less likely to have nodded off while driving (30%).  
[Figure 13-A]

### **Recency of Drowsy Driving**

While 37% of drivers have nodded off while driving at some point in their lives, approximately three out of ten (29%) of these drivers report that they last experienced this problem within the past year, with just one in ten (10%) saying this happened to them within the past month. This amounts to about 4% of the driving population or an estimated 7.5 million drivers who have nodded off while driving within the past month. An additional 4% of drivers (11% of those who have ever nodded off at the wheel) report having done so within the past two to six months.  
[Figure 13-B]

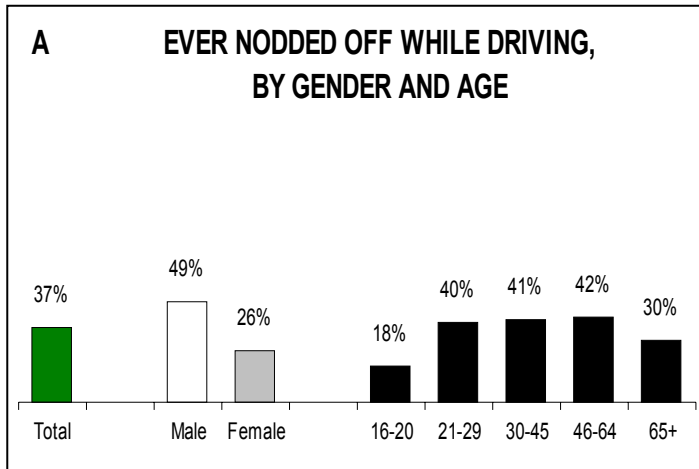
### **By Gender and Age**

About 22% of male drivers who have nodded off at the wheel report having done so within the past month as compared to 19% of their female counterparts.

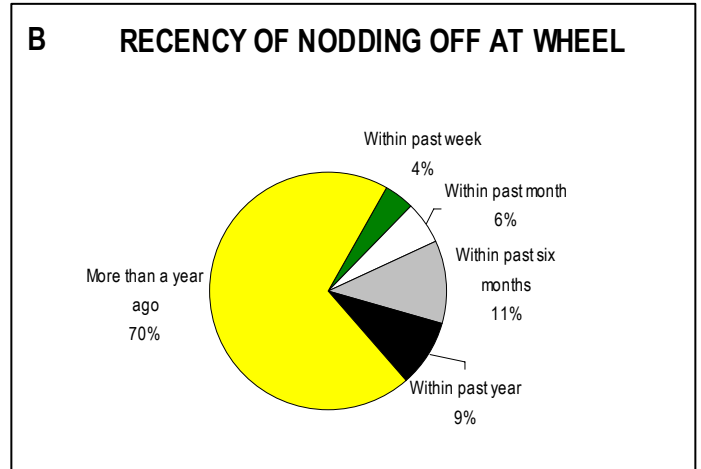
While drivers under age 21 are only half as likely to have had an experience of falling asleep while driving, slightly more than four of ten (44%) of those report having this experience within the past six months. [Figure 13-D]



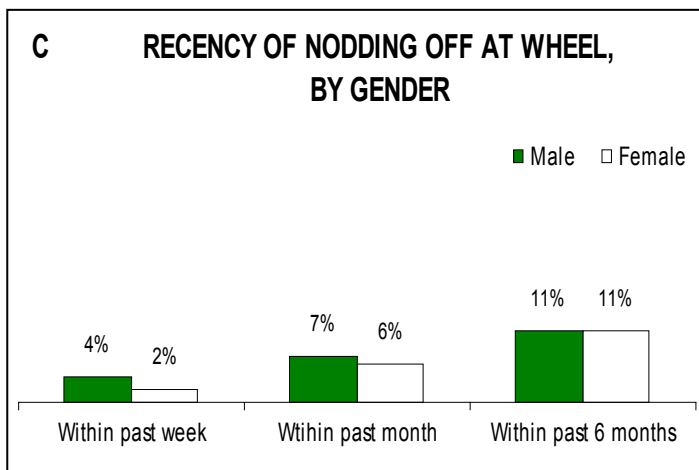
**FIGURE 13: EXPERIENCE WITH DROWSY DRIVING**



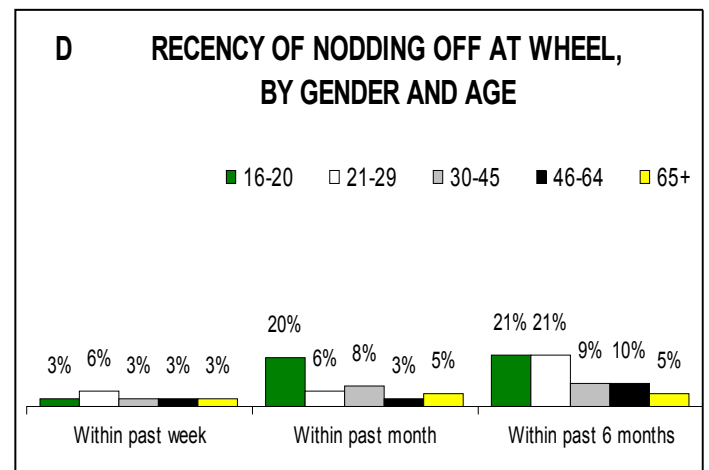
Q59: Have you ever fallen asleep or nodded off even for a moment, while driving?  
 [Base: total respondents, speed and unsafe; n=4010]



Q60: Thinking of the most recent time that you fell asleep or nodded off even for a moment while driving, how long ago was that?  
 [Base: have fallen a sleep while driving]\*



Q60: Thinking of the most recent time that you fell asleep or nodded off even for a moment while driving, how long ago was that?  
 [Base: have fallen a sleep while driving]\*



Q60: Thinking of the most recent time that you fell asleep or nodded off even for a moment while driving, how long ago was that?  
 [Base: have fallen a sleep while driving]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Have fallen asleep while driving	1505	906	599	44	214	526	511	203

## **Characteristics of Most Recent Drowsy Driving Trip**

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In order to better understand the conditions under which drivers experience drowsy driving, drivers who reported having nodded off while driving within the past six months were asked a series of defining characteristics of their most recent experience.

### **Time of Day**

While some hold the perception that drowsy driving occurs mostly late at night or in the early morning hours, just 28% of drivers reporting a recent drowsy driving experience report this experience occurring between the hours of midnight and 6:00 a.m. More than one-third (35%) of drivers who nodded off while driving within the past six months say their last experience occurred between 6:00 a.m. and 5:00 p.m. An additional 17% report they nodded off between 5:00 p.m. and 9:00 p.m. [Figure 14-A]

### **Average Length of Time Driving**

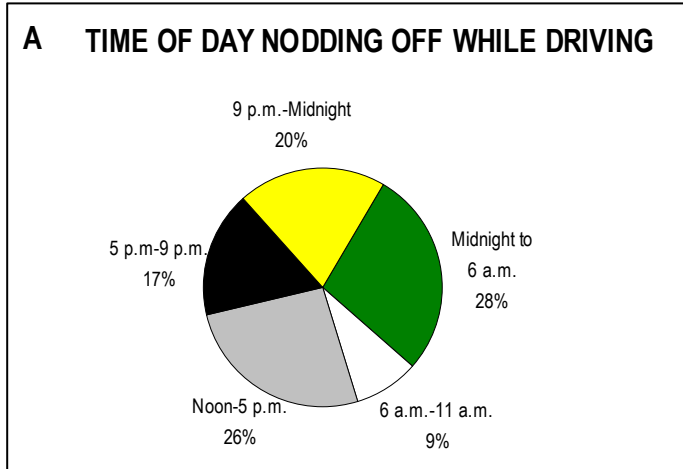
While slightly more than one in five (22%) drivers who recently experienced a drowsy driving episode report having been on the road driving for five or more hours, nearly half (47%) were driving for an hour or less. [Figure 14-B]

On average, these drivers were driving for almost three hours before they nodded off. Males had driven for about an hour longer than females on average (3.2 as compared to 2.2 hours). Drivers age 30 and over became drowsy in a shorter amount of time than younger drivers. [Figure 14-C]

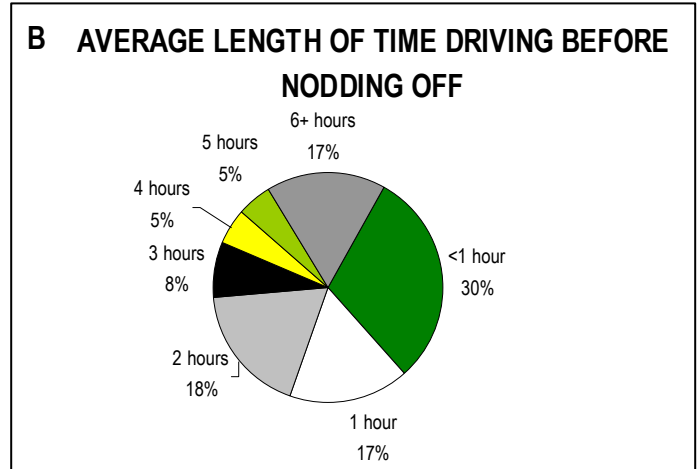
### **Type of Road Driving**

Nearly six in ten (58%) drivers with a recent drowsy driving episode report this occurrence on multi-lane interstate highways, 23% report nodding off while driving on a two-lane road with posted speed limits of 45 MPH or higher, and fewer than one in ten drivers nodded off while driving on non-interstate multi-lane roads (8%) or local city or neighborhood roads (8%). [Figure 14-D] This report of nodding off experience by road type does not match the overall pattern of driving by road type. Just 55% of drivers report frequently driving on multi-lane interstate highways as compared with 83% who frequently drive local city or neighborhood roads. [Figure 2-A]

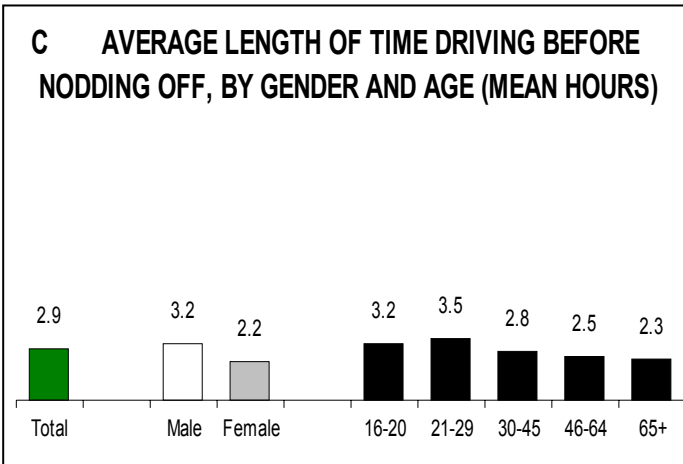
**FIGURE 14: CHARACTERISTICS OF MOST RECENT DROWSY DRIVING TRIP**



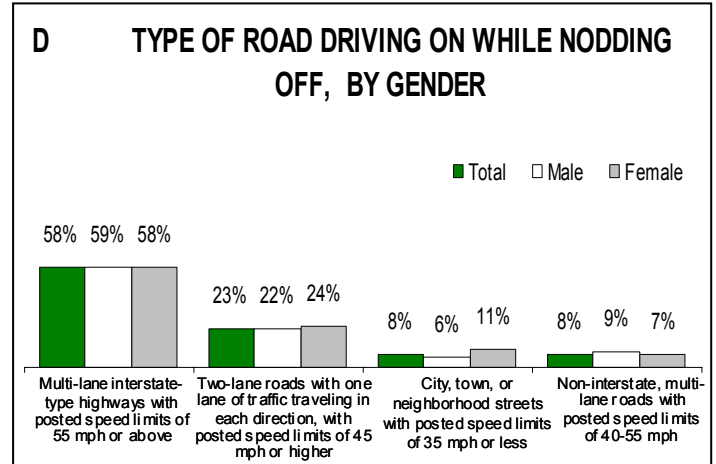
Q62: Thinking of the most recent time that this occurred, what time of day was it?  
 [Base: have fallen asleep while driving past six months]\*



Q65: How many hours had you been driving (the most recent time you fell asleep or nodded off even for a moment while driving)?  
 [Base: have fallen asleep while driving past six months]\*



Q65: How many hours had you been driving (the most recent time you fell asleep or nodded off even for a moment while driving)?  
 [Base: have fallen asleep while driving past six months]\*



Q63: What type of road were you driving on?  
 [Base: have fallen asleep while driving past six months]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Have fallen asleep while driving past 6 months	311	197	114	24*	71	107	83	26**

\*\*Note: Extremely small sample sizes – interpret with caution

## **Characteristics of Most Recent Drowsy Driving Trip (continued)**

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### **Number of Hours Slept the Night Before**

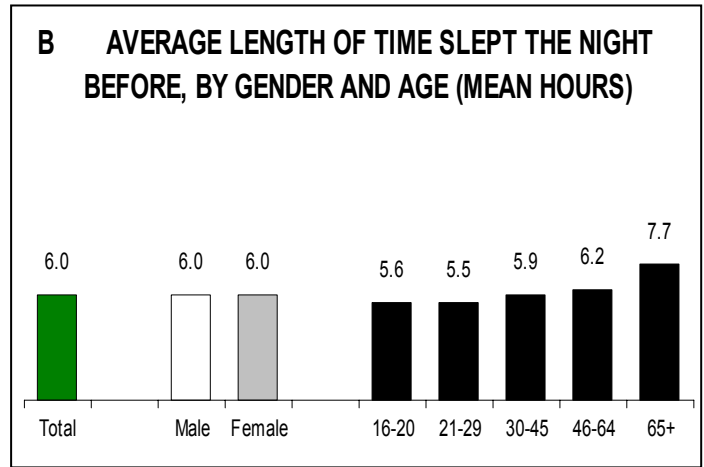
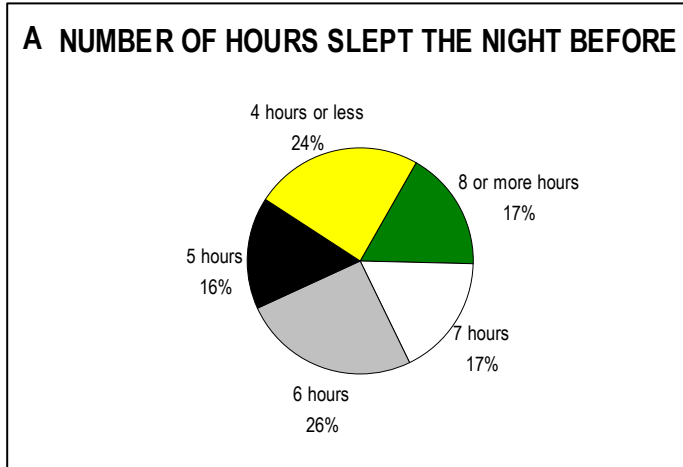
While about one in four (24%) drivers experiencing a recent drowsy driving episode reported having just four or fewer hours of sleep the night before, a full one-third (33%) of the drivers had at least seven hours of sleep. An additional 26% report receiving about six hours of sleep the prior night. [Figure 15-A]

While drowsy drivers on average had received six hours of sleep the night before they nodded off while driving, older drivers report having a drowsy driving episode even after longer sleep times. Drowsy drivers under age 30 reported an average of 5.5 hours of sleep the night before they nodded off at the wheel. The average sleep time of drowsy drivers increases with age, with those age 65 or older reporting a drowsy driving episode after an average of 7.7 hours of sleep the prior night. [Figure 15-B]

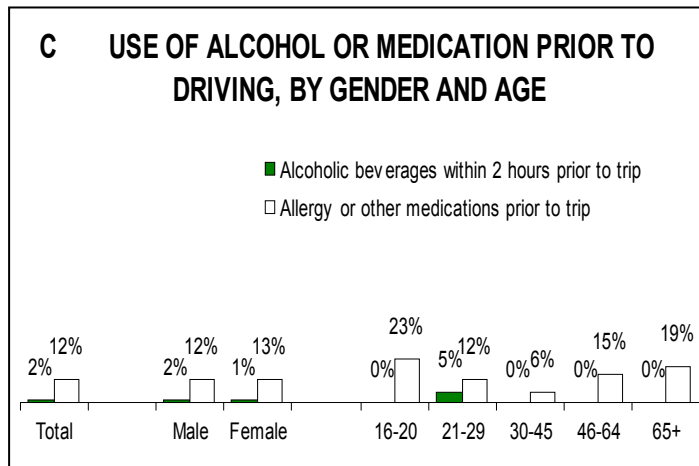
### **Use of Alcohol or Medications Prior to Driving**

Relatively few drivers who nod off at the wheel report having had consumed alcohol (2%) or allergy or other medications (12%) prior to their trip. Alcohol is reported more of a factor among those in their 20s, of whom 5% report having consumed alcohol prior to their trip. Drivers age 30-45 are least likely to report either alcohol (0%) or medication (6%) as a factor in their drowsy driving. [Figure 15-C]

**FIGURE 15: CHARACTERISTICS OF MOST RECENT DROWSY DRIVING TRIP (cont.)**



Q67: How many hours did you sleep the night before (the most recent time you fell asleep or nodded off even for a moment while driving)?  
 [Base: have fallen asleep while driving past six months]\*



Q68: Did you have any \_\_\_\_\_ (the last time you fell asleep or nodded off even for a moment while driving)?  
 [Base: have fallen asleep while driving past six months]\*

\*Sample bases for figures on this page:

	Total	Male	Female	16-20	21-29	30-45	46-64	65+
Have fallen asleep while driving past six months	311	197	114	24*	71	107	83	26**

\*\*Note: Extremely small sample sizes – interpret with caution

# Preventative Measures for Drowsy Driving

---

## Actions Taken When Feel Sleepy While Driving

While only about 11% of all drivers say they have nodded off or fallen asleep while driving in the past year, we asked all drivers what actions they take if they feel sleepy while driving. About one-half of all drivers mention multiple actions, most of which serve as a change of status quo that alters the current driving experience. The majority of actions are physical in nature rather than cognitive changes. It is important to note that drivers who *have* nodded off while driving take different actions than those who have never nodded off.

The largest proportion of drivers (43%) say they pull over and take a nap, while an additional 15% say they just pull over or get off the road. Six percent (6%) change drivers. About one in ten (9%) get out of the car to stretch or exercise. About one in four (26%) open a window to get air, while about one in five get a coffee or soda to drink (17%) or get something to eat (3%). One in seven (14%) say they turn on the radio or increase its volume, while an additional 3% say they sing or talk to himself or herself or another person (via cell phone) or a fellow passenger. [Figure 16-A]

## By Gender and Age

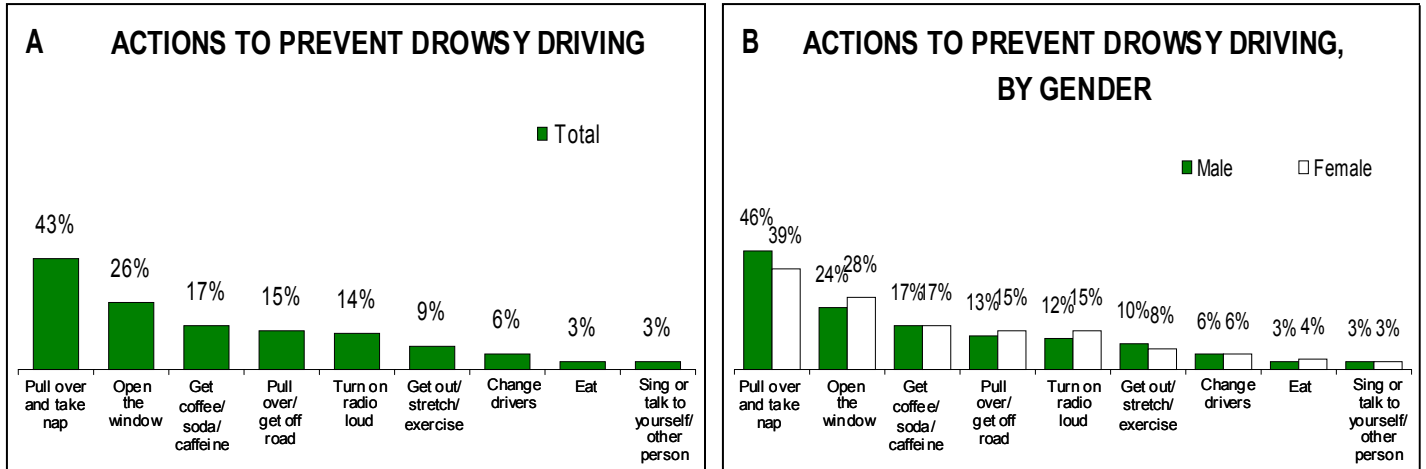
Male drivers are much more likely to say they pull over and take a nap if they feel sleepy while driving (46% as compared to 39% of females), while female drivers are more likely to open a window (28% as compared to 24%). [Figure 16-B]

The prevalence of drivers taking physical actions such as pulling over to nap, getting out of the car to stretch or exercise, and pulling over to get off the road all increase somewhat with age. Just 33% of drivers under age 21 reports that they pull over and nap as compared to 48% of those over age 45. Similarly, just 3% of the young drivers get out to exercise or stretch as compared to 12% of the older drivers. Young drivers are most likely to rely upon turning the radio loud to keep them awake if they feel sleepy. More than one-third (35%) of drivers under 21 rely on this action as compared to just 6% of drivers over age 64. [Figure 16-C]

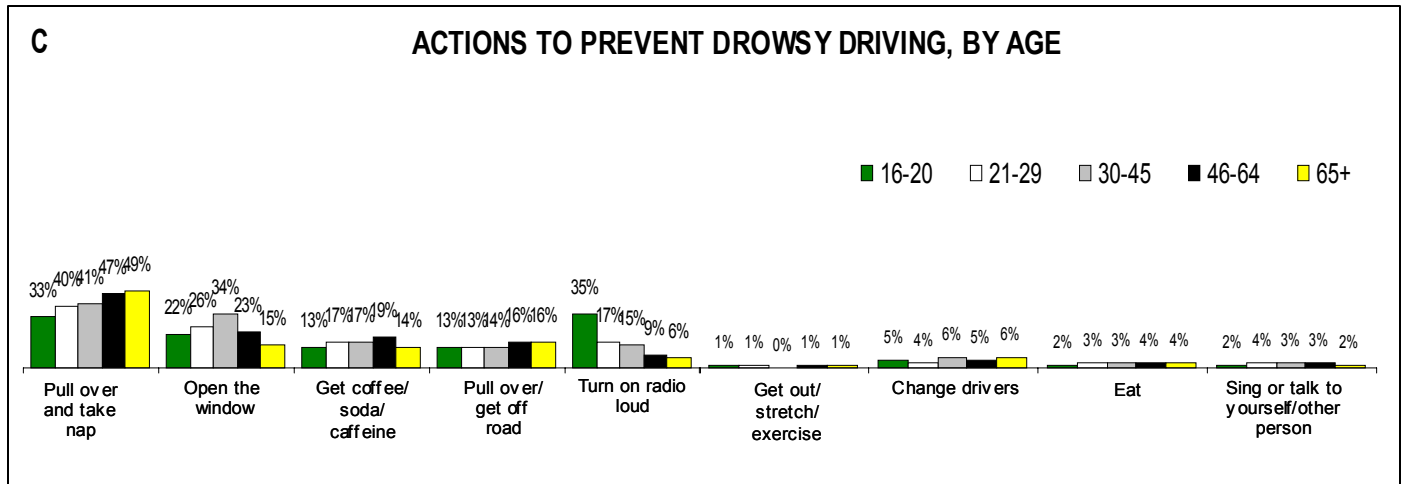
## By Drowsy Driving Experience

Drivers who have ever nodded off while driving are more likely than those who have never nodded off at the wheel to open a window (34% as compared to 21% of those who have never nodded off), to get a soda or coffee (20% as compared to 15%), get out of the car and stretch or exercise (12% compared to 7%), and to turn the radio on loud (19% compared to 11%). Those who have never nodded off while driving are more likely to say they pull over and take a nap (46% versus 38%) or pull over to get off of the road (16% compared to 12%). [Figure 16-D]

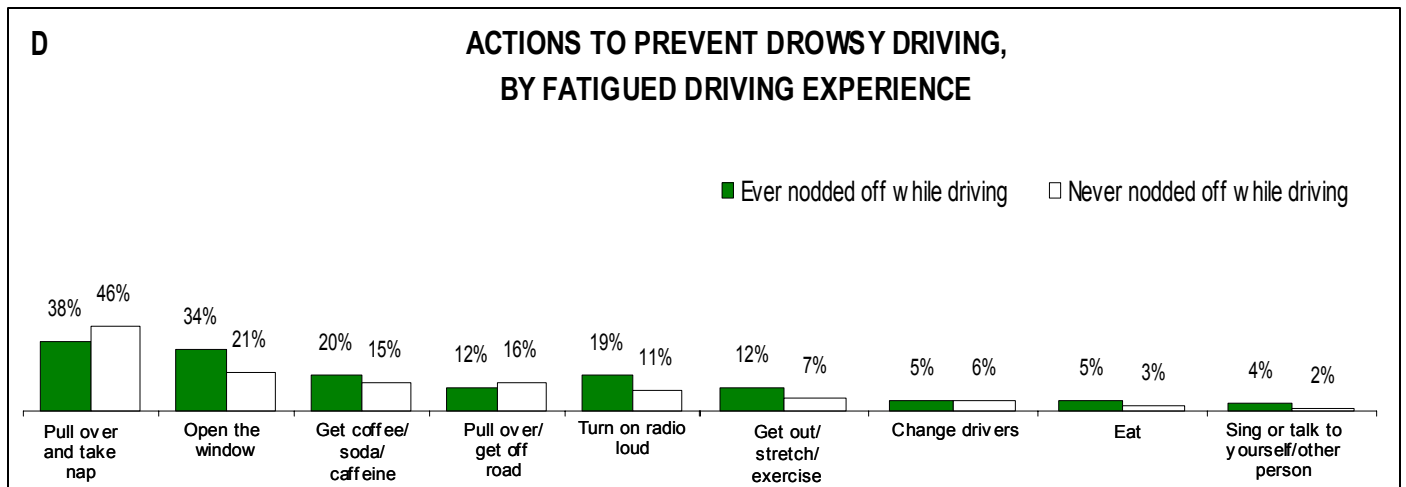
**FIGURE 16: PREVENTATIVE MEASURES**



Q70: If you feel sleepy while driving, what if anything, do you do to stop it? [Base: total respondents, speed and unsafe; n=4010]



Q70: If you feel sleepy while driving, what if anything, do you do to stop it? [Base: total respondents, speed and unsafe; n=4010]



Q70: If you feel sleepy while driving, what if anything, do you do to stop it? [Base: respondents how nodded off while driving, n=1505; never nodded off, n=2597]

## Outcomes of Drowsy Driving

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### Outcome of Nodding Off on Most Recent Occasion

The overwhelming majority (92%) of drivers who have nodded off while driving within the past six months report that they startled awake. However, sizable proportions of these drivers' experiences had more dangerous outcomes. One of three (33%) wandered into another lane or onto the shoulder, while 19% say they crossed the centerline. In one in ten (10%) cases, the driver ran off the road. While it happened in only about 2% of the most recent drowsy driving episodes, it is estimated that approximately 292,000 drivers were involved in some type of crash within the past six months as a result of nodding off at the wheel. [Figure 17-A]

### Involved in Crash as Result of Nodding Off Past Five Years

Less than one percent (.7%) of all drivers (1.4% of those who have *ever* nodded off while driving, and 6.4% of those who have done so in the past six months) report they have been involved in a crash within the past five years that they attribute to them nodding off or having to greatly struggle to keep their eyes open. This equates to 2.5% of drivers who have been in any crash in the past five years attributing a crash to drowsy driving.

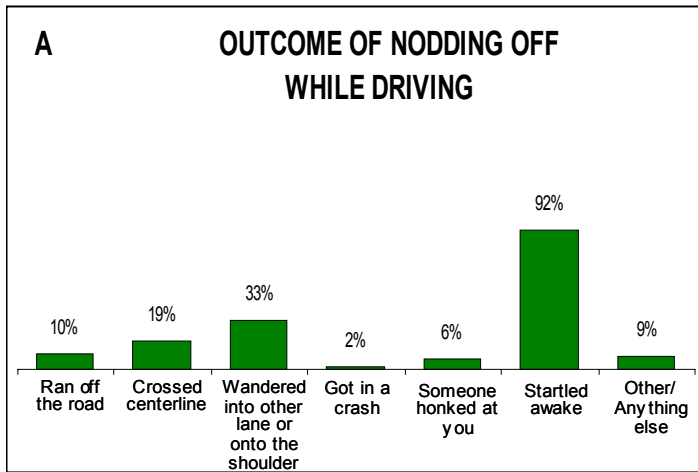
Males are twice as likely as females to have been in such a crash (1.0% compared to .4%). While the total numbers of drivers involved is still small, drivers under age 30 are about six times more likely (1.8% have) to report involvement in a crash as a result of drowsy driving as are older drivers (.3%). [Figure 17-B]

While the proportion of drivers involved in a crash as a result of nodding off at the wheel is very small, the actual numbers of drivers involved in such crashes over the past five years is sizable. Figure 17-C shows the estimated numbers of drivers by age and gender involved in a drowsy driving-related crash, along with high and low ranges around the estimates.

An estimated 1.35 million drivers have been involved in a drowsy driving related crash in the past five years. About seven in ten of these drivers, or 972,000 were males, while 379,000 were females. Young drivers make a disproportionately high number of drowsy driving-related crashes, with about 274,000 drivers under age 21 involved in a drowsy driving-related crash within the past five years. These young drivers make up about 20% of all drivers involved in such a crash, yet these drivers under age 21 make up about 8.5% of the driving population. Similarly, about 44% of all drivers involved in a drowsy driving-related crash are in their 20s (594,000 drivers) yet they make up just 15% of the driving population. Relatively few drivers over age 64 (18,000) have had a drowsy driving-related crash in the past five years.

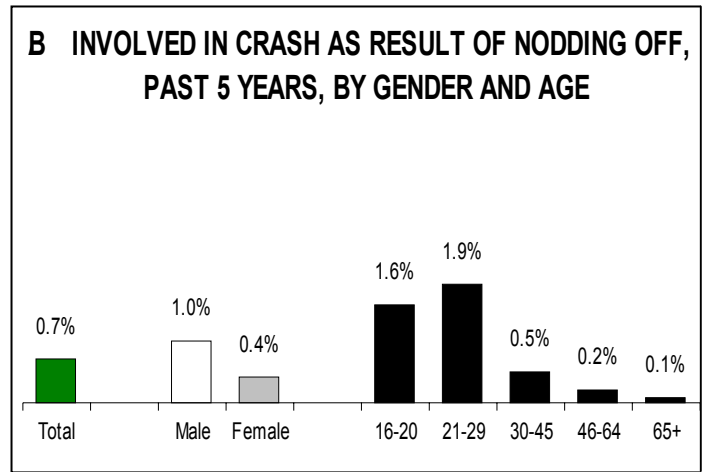


**FIGURE 17: OUTCOME OF DROWSY DRIVING**



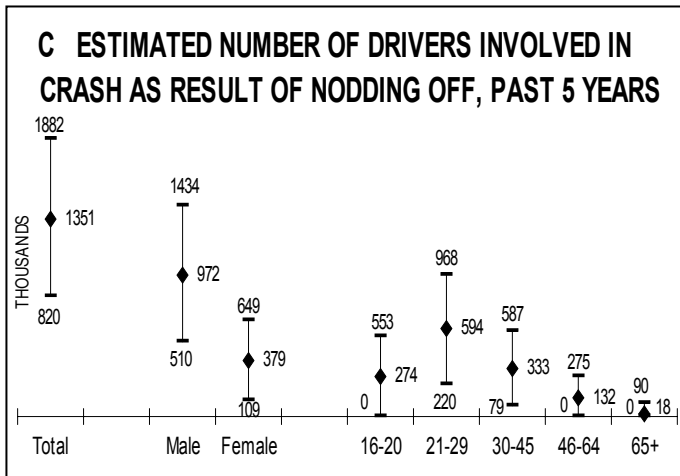
Q61: On this most recent time, which, if any of the following happened when you fell asleep or nodded off even for a moment while driving?

[Base: have fallen asleep while driving past six months; n=311]



Q71/73: In the past five years, have you been involved in a crash while driving a motor vehicle in which there was damage to your vehicle or another vehicle? If yes, were any of these crashes a result of you nodding off, or having to greatly struggle to keep your eyes open?

[Base: total respondents, speed and unsafe; n=4010]



## **Perceived Threat of Driving While Drowsy**

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### **Perceived Threat of Other Drivers Driving While Sleepy or Drowsy**

Virtually all drivers believe that other drivers who drive while sleepy or drowsy are a threat to their own personal safety and that of their family. Ninety-five percent (95%) believe this behavior by others to be a major threat, while 5% see it as a minor threat. [Figure 18-A]

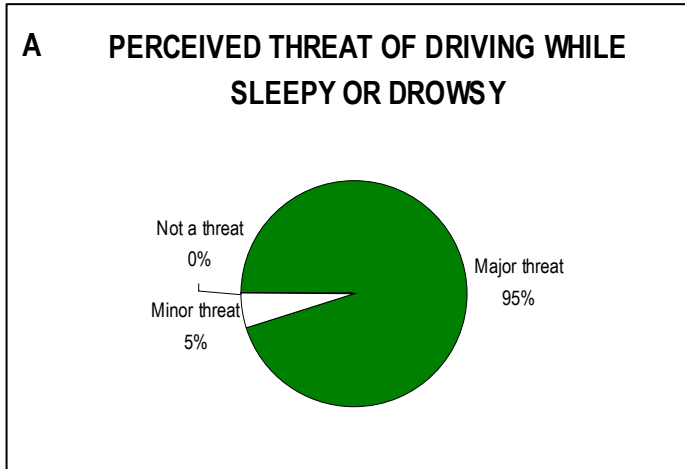
#### **By Gender**

There is little substantive difference in the perception of the threat of other drivers who drive while drowsy or sleepy between male and female drivers. Male drivers are slightly more likely to view this behavior as a minor (6%), rather than a major (93%) threat to their and their family's safety as compared to female drivers (3% and 96% respectively). However, all drivers see the behavior as a personal threat to their safety. [Figure 18-B]

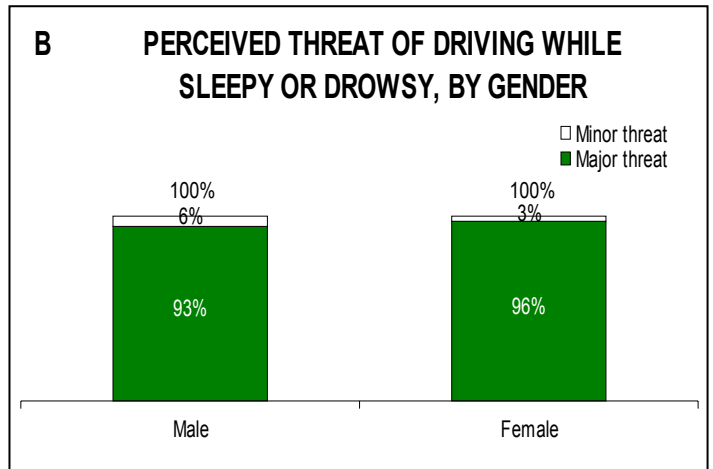
#### **By Age**

There is also little difference in the perceived threat of others' driving while drowsy or sleepy by age, with the exception that drivers in their 20s are more likely to see this behavior as a minor (8%) rather than a major threat (91%) to their and their family's safety. [Figure 18-C]

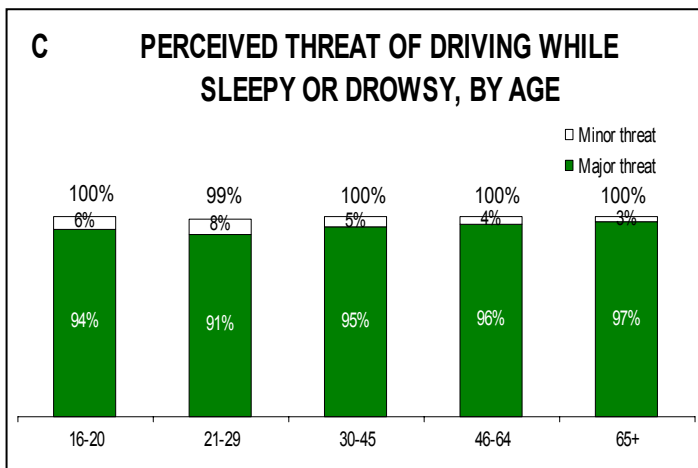
**FIGURE 18: PERCEIVED THREAT OF DRIVING WHILE DROWSY**



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following?  
 [Base: Total respondents, speed and unsafe; n=4010]



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following?  
 [Base: total respondents, speed and unsafe; n=4010]



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following?  
 [Base: total respondents, speed and unsafe; n=4010]



# Appendix A: NHTSA Regions

The National Highway Traffic Safety Administration (NHTSA) has 10 regional offices that work on the agency's mission to save lives, prevent injuries, and reduce traffic-related healthcare and other economic costs. The states and territories that make up each region include:

**Region 1:** Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

**Region 2:** New Jersey, New York, Puerto Rico, Virgin Islands

**Region 3:** Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

**Region 4:** Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

**Region 5:** Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

**Region 6:** Arkansas, Indian Nations, Louisiana, New Mexico, Oklahoma, Texas

**Region 7:** Iowa, Kansas, Missouri, Nebraska

**Region 8:** Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

**Region 9:** American Samoa, Arizona, California, Guam, Hawaii, Nevada, North Marianas

**Region 10:** Alaska, Idaho, Oregon, Washington



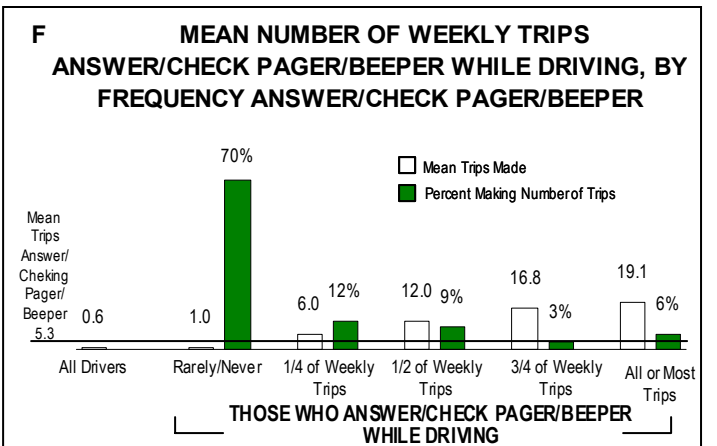
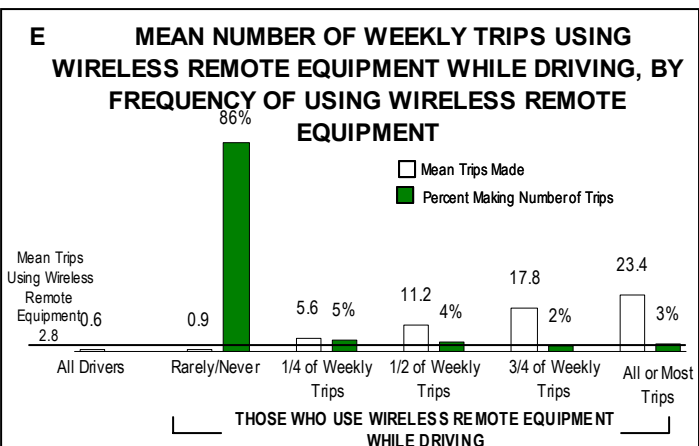
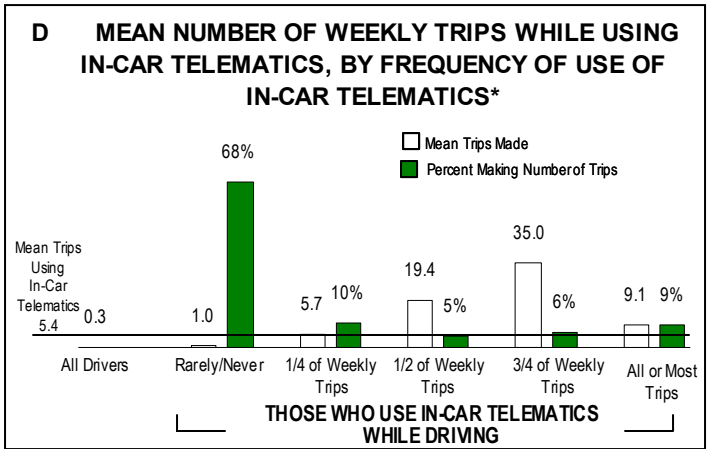
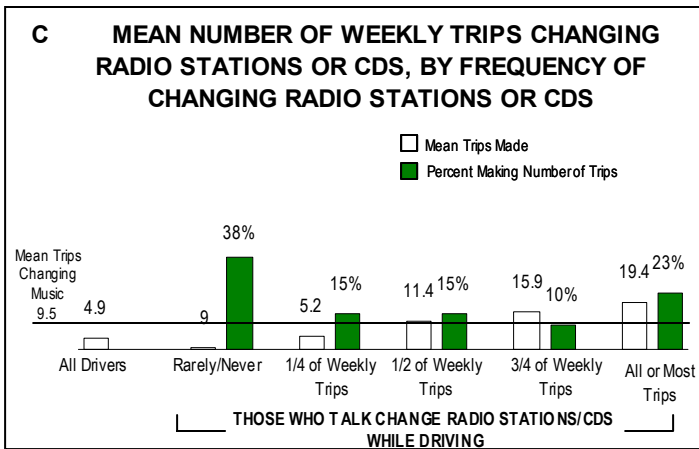
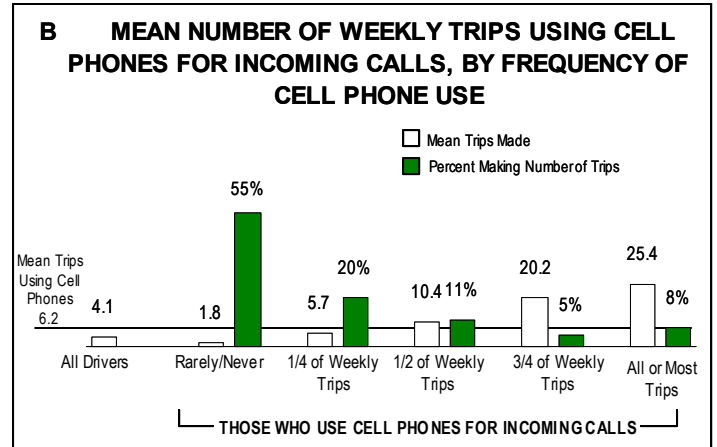
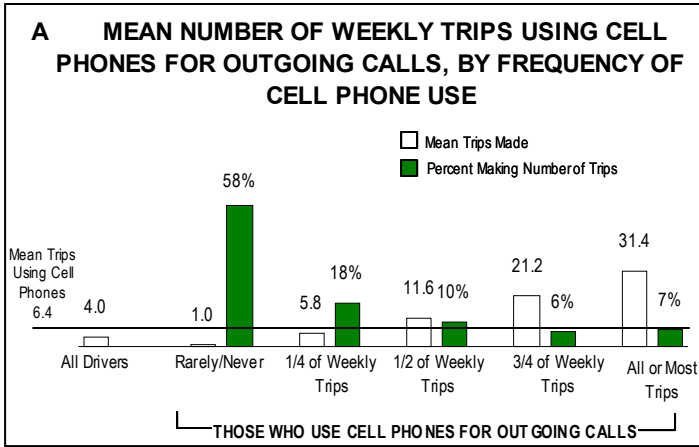
# **Appendix B:**

# **Supplemental Charts**

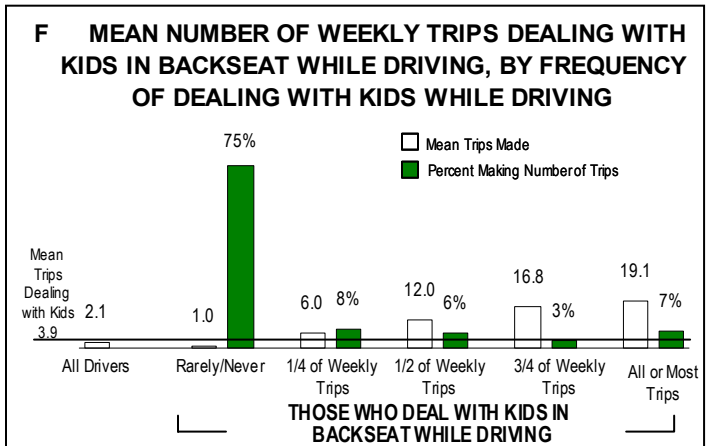
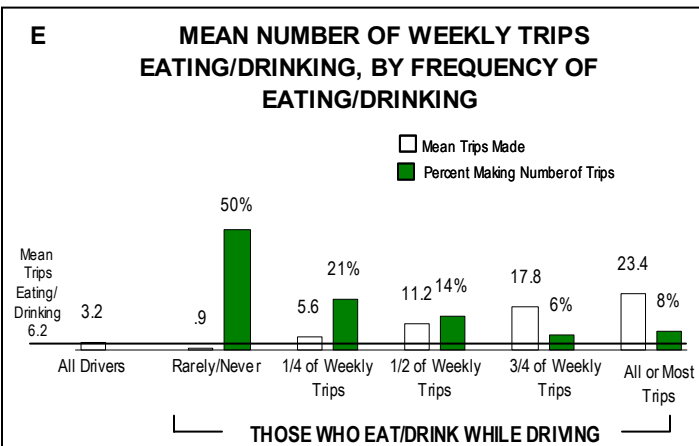
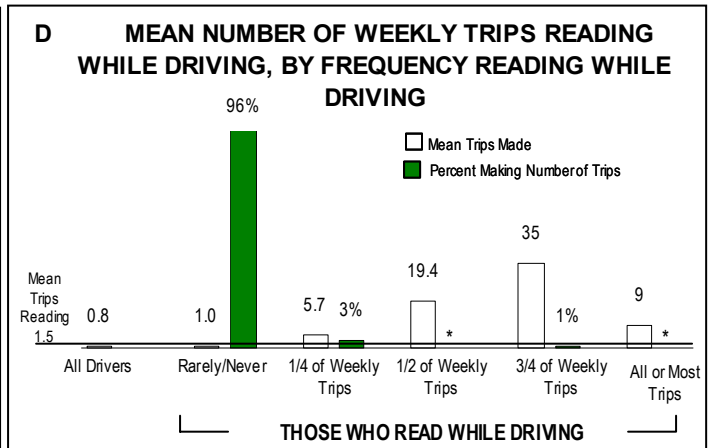
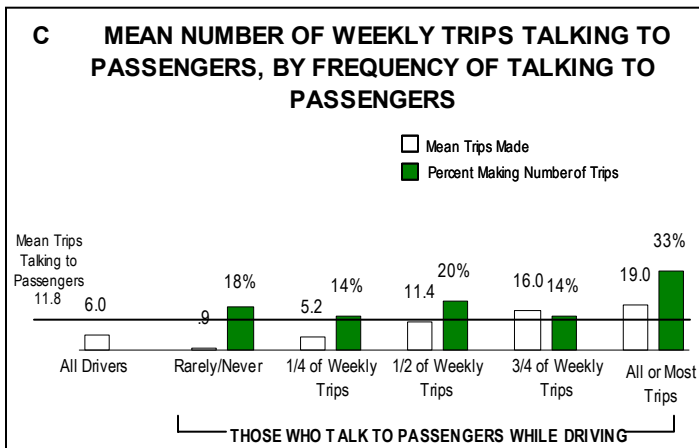
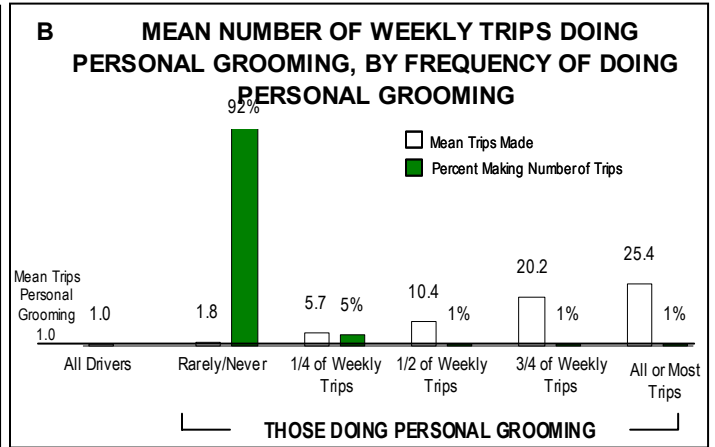
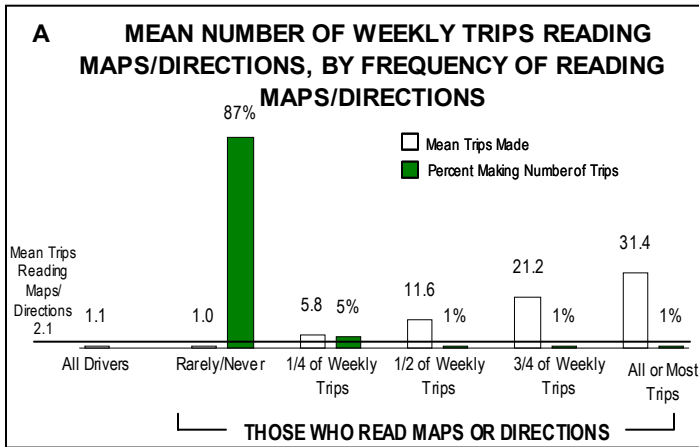




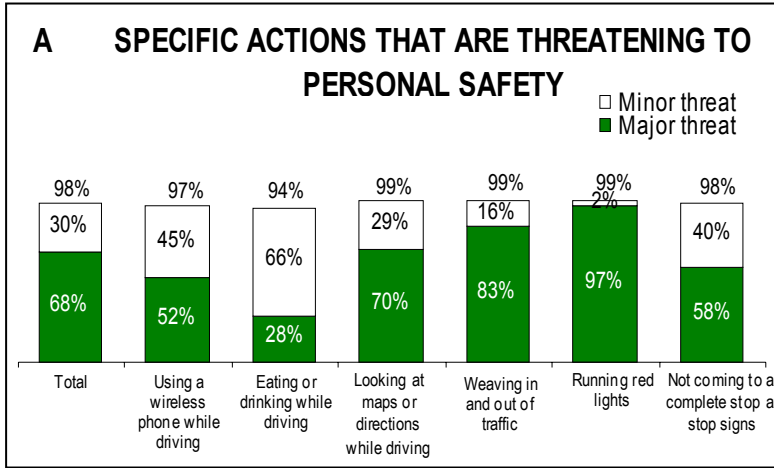
**FIGURE 19: FREQUENCY AND MEAN NUMBER OF POTENTIALLY DISTRACTED DRIVING BEHAVIORS INVOLVING TECHNOLOGY**



**FIGURE 20: FREQUENCY AND MEAN NUMBER OF POTENTIALLY DISTRACTED DRIVING BEHAVIORS NOT INVOLVING TECHNOLOGY**



**FIGURE 21: PERCEIVED THREAT OF DRIVING BEHAVIORS**



Q86a: In your opinion, how much of a threat is it to the personal safety of you and your family if other drivers do the following?  
Is it a major threat, minor threat, or not a threat?

[Base: total respondents, speed and unsafe; n=4010]