Saving lives through research and education

American Driving Survey: Methodology and Year One Results, May 2013 – May 2014

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AAA Foundation for Traffic Safety

Title

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About the Sponsor

Introduction

The AAA Foundation for Traffic Safety is dedicated to saving lives through research and education. Fundamental to the research that we perform is the ability to quantify traffic risks. Quantifying traffic risks requires data regarding not only the motor vehicle crashes that occur and the number of people who are involved, injured, and killed in crashes, but also data regarding to people's exposure to risk, such as the number of miles that they travel.

A great deal of important research can be performed using aggregate data regarding the number of miles traveled by vehicles in the transportation system, which are collected routinely by state governments and published annually by the United States Federal Highway Administration (FHWA). However, many important research questions require data regarding exposure to risk that in relation the characteristics of individual travelers, such as their age, their sex, and the type of vehicle that they are driving. Such data are collected on the national level in a large survey conducted by the FHWA. This survey, called the National Household Travel Survey (NHTS) (and previously, Nationwide Personal Transportation Survey [NPTS]), has been essential to some of the most important traffic safety studies of the past two decades including a study by the AAA Foundation which quantified the relative risk that older versus younger drivers pose to other people,[1] as well as the seminal study of the relationship between the presence of passengers and a teenage driver's risk of being involved in a fatal crash.[2]

While the data from the NHTS has been an integral part of numerous studies, researchers' ability to rely on the NHTS to monitor trends in traffic safety is limited by the fact that the NHTS is conducted only periodically and at irregular intervals. For example, the most recent NHTS was conducted from March 2008 through May 2009. Statistics from the National Highway Traffic Safety Administration show that the annual number of police-reported crashes decreased by 2.1% between 2008[3] and 2013[4], and the annual number of people killed in crashes decreased by 12.6%, whereas the FHWA's aggregate statistics derived from counts of vehicles indicate that total vehicle miles of travel increased by 0.4% over the same period.[5] Without data relating driving mileage to the characteristics of drivers, vehicles, and trips, a clear understanding of the mechanisms by which these declines in crashes and fatalities have come about has eluded researchers.

To address the need for current data regarding driving exposure in relation to driver, vehicle, and trip characteristics, the AAA Foundation has commissioned a team of researchers at the Urban Institute to perform a survey to develop, pilot test, and implement a data collection system to collect these data at the national level on an ongoing basis, with a special focus on young drivers and senior drivers—two long-term priority areas for AAA

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[1] Tefft BC. (2008). Risks older drivers pose to themselves and to other road users. *Journal of Safety Research*, 39(6): 577-582.
[2] Chen LH, Baker SP, Braver ER, Li G. (2000). Carrying passengers as a risk factor for crashes fatal to 16- and 17-year-old drivers. *JAMA,* 283(12): 1578-1582.
[3] National Highway Traffic Safety Administration. (2009). *Traffic Safety Facts 2008*. Report No. DOT HS 811 170. Washington, DC: United States Department of Transportation.
[4] National Highway Traffic Safety Administration. (2014). *2013 Motor Vehicle Crashes: Overview*. Report No. DOT HS 812 101. Washington, DC: United States Department of Transportation.
[5] Federal Highway Administration. (2015). *Highway Statistics 2013*. Washington, DC: United States Department of Transportation. Available at: http://www.fhwa.dot.gov/policyinformation/statistics/2013/.

Foundation research. That data collection system—the *American Driving Survey*—was launched on May 21, 2013 and is presently ongoing.

The statistical methods and survey instrument for the American Driving Survey (ADS) were developed by the Urban Institute in collaboration with the AAA Foundation. The sample of the ADS comprises United States residents ages 16 and older who live in a house with landline telephone service and/or have a cellular telephone and can be interviewed in either English or Spanish. ADS data are collected via telephone interviews by Social Science Research Solutions (SSRS). In ADS interviews, a household member aged 16 years or older is selected at random and is asked to report information about all of the trips that they made during a 24-hour period that began in the morning of the day before the interview. Teenage drivers, drivers ages 75 and older, and drivers who reported driving "almost every day" are oversampled. The ADS interview is designed to collect data that is essential for future research envisioned by the AAA Foundation, and to collect it cost-effectively and with minimal respondent burden. The ADS does not seek to replicate the design, structure, sample, or data of the FHWA's NHTS.

This report documents the methodology of the ADS as well as the results of the first full year of data collection, which occurred between May 21, 2013 and May 31, 2014. Interviews were conducted with 3,319 drivers sampled from among 4,287 households that were initially contacted and screened.

The first year data show that all drivers 16 and older drive, on average, 29.2 miles per day or 10,658 miles a year. Men reported driving more miles than women; Caucasians reported driving more miles than respondents of other races; Hispanic respondents reported driving the least. Teenagers and drivers ages 75+ also drive significantly fewer miles on average. About one-third of all drivers did not drive at all on the day about which they were interviewed. About 50% of all miles driven are in a car, and another 40% in an SUV or pickup truck. People drive, on average, more on weekdays and less on weekends. There is a significant mileage gap between rural and urban drivers, but the gap is smaller on the weekends than on weekdays. People drive, on average, less during the winter months and more during the summer months.

While the scope and content of the ADS differs from the FHWA's NHTS in many important ways, our estimates of miles driven in light vehicles, overall and in relation to driver characteristics, are quite similar to comparable results in the 2009 NHTS. Notable exceptions include young drivers, older drivers, and women, who reported more driving in the ADS than in the NHTS, whereas drivers ages 35-54 reported less driving in the ADS than in the 2009 NHTS. The extent to which any differences reflect errors in either survey, legitimate differences in the scope of the two surveys, or changes in travel from the data collection period of the NHTS (2008-2009) to that of the ADS (2013-2014) is unclear.

These findings are described at greater length in the major sections that follow. The first section below briefly summarizes our research approach and methods. The second major section of the report focuses on the number, length, and duration of driving trips categorized by key socio-demographic variables such as sex, age, educational attainment, and residential and regional location. This section includes a preliminary comparison of our initial estimates to the 2009 NHTS. The third major section includes information on the type of vehicle driven by respondents and whether they drive alone or with passengers.

The fourth major section of the report focuses on seasonal and daily variations in driving behavior. The fifth section of the report describes the number of drivers and vehicles in the households interviewed. The sixth section describes the driving behavior of teenage drivers and those 75 and older. The seventh section is a detailed description of all aspects of the sampling methods and survey instrument and survey protocols.

1. Overview of Methods

The American Driving Survey (ADS) began operational data collection on May 21, 2013; interviews have been continuously conducted on almost every day of the year since then. This report includes data collected between May 21, 2013 and May 31, 2014. A detailed description of the survey design and methods appears in Section 7. Here we briefly summarize our overall approach and protocols.

The survey is administered as a telephone interview. Respondents can be contacted by landline or by cell phone. The survey instrument includes first a household roster which is administered to an adult respondent. If the respondent reports that one or more drivers live in the household, the program then selects the driver(s) who are asked to complete the second part of the instrument, the Trip/Driver Interview. A 'driver' is a household member who is reported to drive 'almost every day,' 'sometimes' or 'rarely.' (See Survey Question H2 – Household Roster, Appendix A.) The Trip Interview is administered to one or more drivers in the households, determined using a probability-based procedure that ensures that teenage drivers, drivers over 75 years of age, and those who report driving every day have a higher chance of being selected. A trip is defined as the driver leaving one destination for another if the stop lasted two minutes or more.

The results described in this report are based on aggregate statistics that were weighted, unless otherwise noted, to adjust for the probability of a driver being selected and to align the survey sample to the United States population with respect to key demographic variables. A full description of the methodology, including weighting, is provided in Section 7.

2. Daily Trip Estimates

Table 2-1 provides overall national estimates for the average total number of daily trips by any mode, number of driving trips, total duration of driving trips, total length of driving trips, and percentage of drivers who made no driving trips on their reporting day. The data show that drivers, on average, made two driving trips per day, with an average total duration of 46 minutes (median 22 minutes) and total distance of 29.2 miles (median 10.0 miles). An average of 29.2 miles driven daily would equate to approximately 10,658 miles driven over a one-year period. The substantial difference between the mean versus median daily driving distance and duration drivers is due to the distribution of trip lengths: more than half of all driving trips are shorter than 10 miles, thus longer driving trips increase the mean substantially but have little effect on the median. Many drivers also made non-driving trips and made additional trips as passengers in light vehicles; thus the total number of daily trips reported by each driver is greater than the total number of driving trips.

Table 2- 1: Average Daily and Annual Driving Estimates, Drivers 16 and Older, United States, May 21, 2013 – May 31, 2014, weighted to represent a one-year period.

Daily Trip Estimates	Total Trips of Any Kind		Duration of All Trips of Any Kind (minutes)		Total Driving Trips		Total Duration of All Driving Trips (minutes)		Total Miles Driven, All Driving Trips		Did Not Drive
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	% of sampled drivers who did not drive yesterday
All Drivers 16+ years old	2.3	2.0	48	25	2.0	2.0	46	22	29.2	10.0	31.6%

Annual Trip Estimates	Mean	Mean	Mean	Mean	Mean
All Drivers 16+ years old	832	292 hours	730	280 hours	10,658

Table 2-2 shows how reported driving varied across a number of key demographic variables. For example, while women reported making more driving trips than men on average, men reported spending 25% more time driving and reported driving 35% more miles. Non-Hispanic white drivers spent more time driving and drove more miles than African Americans or Hispanic drivers; Hispanic drivers reported driving the least. Both teenagers and seniors over the age of 75 drove less than any other age group; drivers 30 to 49 years old drove the most. Average time spent driving and driving distance increased in relation to increasing educational attainment.

The amount of driving that people reported also varied in relation to the area where they lived. Respondents who described the area where they live as 'in the country' or 'a small town' reported driving greater distances and spending a greater amount of timing driving than people who described the area where they lived as a 'medium sized town' or a city. Respondents living in the South Census region reported driving the most; those in the Northeast Census region reported driving the least.

Table 2-3 reports on drivers who do not drive on their reporting day characterized by a number of key demographic variables. Overall, 31.6% of drivers reported that they did not drive at all on their reporting day. Of drivers who reported no driving on their reporting day, 79% of those (25% of all drivers) reported that they stayed at home all day, whereas the remainder took some trips but did not drive. Non-white respondents, teenage drivers, older drivers, and drivers of lower educational attainment were more likely to report not driving at all on their reporting day.

Drivers who reported that they live in the country or in a small town were more likely to have driven on their reporting day than drivers in more urban areas, but that difference was very small and was not statistically significant. Drivers living in the Northeast Census region of the country were significantly more likely to report no driving on their reporting day than respondents in other parts of the country.

Table 2- 2: Average Daily Number, Duration, and Distance of Driving Trips, Drivers 16 and Older in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region.

	Total Daily Driving Trips	Total Annual Driving Trips	Daily Duration of Driving Trips (minutes)	Annual Duration of Driving Trips (hours)	Estimated Miles Driven Daily	Estimated Miles Driven Annually
All Drivers (n=3,319)	2.0	730	46	280	29.2	10,658
Gender:						
Males (n=1,537)	1.9	694	51	310	33.6	12,264
Females (n=1,782)	2.2	803	41	249	24.9	9,089
Race and Ethnicity :						
White (n=2,408)	2.1	767	49	298	32.1	11,717
African American (n=417)	1.9	694	44	268	25.1	9,162
Hispanic (n=290)	1.5	548	33	201	18.7	6,826
Other (n=144)	1.7	621	35	213	23.5	8,578
Age:						
16-19 (n=215)	1.5	548	28	170	19.7	7,300
20-29 (n=438)	2.0	730	49	298	31.0	11,315
30-49 (n=872)	2.3	840	54	329	36.0	13,140
50-64 (n=915)	2.1	767	47	286	30.0	10,950
65-74 (n=445)	1.8	657	39	237	23.0	8,395
75+ (n=434)	1.7	621	36	219	19.0	6,935
Education:						
Grade school or some High School (n=205)	1.6	584	32	195	19.9	7,264
High School Graduate (n=934)	1.8	657	42	256	25.1	9,162
Some College (n=774)	2.1	767	47	286	31.7	11,571
College Graduate (n=821)	2.3	840	58	353	37.2	13,578
Graduate School (n=438)	2.4	876	61	371	37.3	13,615
Residential Location:						
City or medium sized town (n=2100)	2.0	730	43	262	26.6	9,709
Country or small town (n=1219)	2.1	767	50	304	33.6	12,264
Census Region:						
Northeast (n=623)	1.9	694	43	262	23.2	8,468
Midwest (n=810)	2.1	767	43	262	26.9	9,819
South (n=1295)	2.1	767	48	292	32.4	11,826
West (n=591)	2.0	730	48	292	30.9	11,279

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

Table 2- 3: Percentage of Sampled Drivers Who Did Not Drive on their Reporting Day, Drivers 16 and Older, in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region.

Demographic Group	% of Drivers who did not drive on reporting day
All Drivers (n=3,319)	31.6
Gender:	
Males (n=1,537)	32.5
Females (n=1,782)	30.9
Race and Ethnicity :	
White (n=2,408)	28.8
African American (n=417)	35.9
Hispanic (n=290)	41.3
Other (n=144)	40.1
Age:	
16-19 (n=215)	39.3
20-29 (n=438)	29.7
30-49 (n=872)	27.3
50-64 (n=915)	30.0
65-74 (n=445)	36.9
75+ (n=434)	41.4
Education:	
Grade school or some High School (n=205)	44.2
High School Graduate (n=934)	35.1
Some College (n=774)	29.4
College Graduate (n=821)	25.6
Graduate School (n=438)	21.7
Residential Location:	
City or medium sized town (n=2100)	32.5
Country or small town (n=1219)	30.3
Census Region:	
Northeast (n=623)	34.4
Midwest (n=810)	31.6
South (n=1295)	32.0
West (n=591)	29.1

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

Benchmark Comparison to the 2009 NHTS

To investigate the extent to which data from the ADS was similar to or different from other data from other well-accepted sources, we compared data from the ADS to data from the most recent survey that was designed to produce somewhat comparable data: the Federal Highway Administration's 2009 National Household Travel Survey (NHTS).[6] The NHTS was conducted between March 2008 and May 2009, had a much larger sample size than the ADS, sampled respondents by landline telephone only (the ADS also included individuals reachable by cell phone who could not have been reached by landline), and asked respondents to enter detailed information about all of their travel on an assigned date into a diary (ADS respondents were asked to recall their trips without the aid of a diary). Nonetheless, we would expect that the estimates of miles driven daily would be similar in the two surveys.

Table 2-4 shows that the estimates of miles driven daily *are* remarkably close. The ADS estimated that drivers drove an average of 29.2 miles per day, 0.2 miles (0.7%) more than reported in the 2009 NHTS. By way of comparison, data from the Federal Highway Administration's Highway Performance Monitoring System,[7] which is based on counts of vehicles at a sample of locations and cannot be analyzed in relation to driver characteristics, indicate that total annual miles driven in light-duty vehicles increased by approximately 1.3% from 2009 to 2013 and that average daily miles driven per driver in light-duty vehicles increased by 0.2%, which agrees well with our estimated 0.7% increase.

ADS results indicate that the youngest and oldest drivers drive somewhat more than was estimated in the 2009 NHTS, whereas drivers aged 35-54 reported slightly more driving in the 2009 NHTS than in the ADS. Whether these differences reflect errors in either survey, legitimate differences in the scope of the two surveys, or changes in travel from the data collection period of the NHTS (2008- 2009) to that of the ADS (2013-2014) is unclear.

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[6] Santos A, McGuckin N, Nakamoto HY, Gray D, Liss S. *Summary of Travel Trends: 2009 National Household Travel Survey*. Report No. FHWA-PL-11-022. Washington, DC: United States Department of Transportation. 2011.

[7] *Highway Statistics 2013*. Washington, DC: United States Department of Transportation.

Table 2- 4: Comparison of Average Daily Miles Driven by Driver Gender, Age, and Day of Week, 2013-2014 American Driving Survey and 2009 National Household Travel Survey.

	Mean Daily Miles Driven for all Sampled Drivers	
	2013-2014 American Driving Survey	**2009 National Household Travel Survey[a]**
All Drivers	29.2	29.0
Gender:		
Males	33.6	34.0
Females	24.9	23.1
Age:		
16-19	19.7	14.0
20-34	33.9	30.8
35-54	31.9	34.1
55-64	31.5	28.2
65+	21.3	19.7
Weekdays versus Weekends		
Weekdays	30.7	30.6
Weekends	25.4	25.0

[a] *2009 NHTS data are from: Santos A, McGuckin N, Nakamoto HY, Gray D, Liss S. Summary of Travel Trends: 2009 National Household Travel Survey. Report No. FHWA-PL-11-022. Washington, DC: United States Department of Transportation. 2011.*

3. Driving with Passengers; Miles Driven by Vehicle Type

Respondents spent about 60% more time driving alone than with passengers (Table 3-1). While women and men drove about the same number of miles with passengers, men reported driving more miles alone than women did. Drivers of all races and ethnic groups drove more miles alone than with passengers; however, Hispanic drivers drove almost as many miles with passengers as they did alone. Drivers ages 20 to 29 years old were more likely to drive with passengers than by themselves, while drivers ages 50 to 64 were much more likely to report driving alone than any other age group. Drivers who reported higher levels of education, drivers in urban areas, and drivers who lived in the Midwest also reported greater shares of miles driven alone as a proportion of total miles driven.

Approximately half of all miles driven were driven in cars, and another 40% in SUVs or pickup trucks (Table 3-2). Men were much more likely than women to report driving a pick-up truck; otherwise there are no significant gender differences in the types of vehicle driven. Pickup trucks were driven more in the South, and in rural areas, and by drivers who reported lower levels of education. Conversely, SUVs were more popular among drivers with higher educational attainment. A relatively small number of miles are driven using a van, mini-van, or motorcycle; demographic differences in driving these types of vehicles are generally not reliable due to the small number of responses on which those estimates were based.

Table 3- 1: Average Daily Number of Miles Driven With and Without Passengers in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region

	Total Miles Driven	Miles Driven with Passengers	Miles Driven Alone
All Drivers (n=3,319)	29.2	11.2	17.9
Gender:			
Males (n=1,537)	33.6	11.7	21.9
Females (n=1,782)	24.9	10.8	14.1
Race and Ethnicity :			
White (n=2,408)	32.1	11.9	20.1
African American (n=417)	25.1	9.9	15.2
Hispanic (n=290)	18.7	8.2	10.5
Other (n=144)	23.5	10.6	12.9
Age:			
16-19 (n=215)	19.7	7.9	11.8
20-29 (n=438)	30.7	16.3	14.5
30-49 (n=872)	35.5	13.6	21.9
50-64 (n=915)	29.6	8.5	21.1
65-74 (n=445)	23.2	8.8	14.4
75+ (n=434)	19.5	8.3	11.2
Education:			
Grade school or some High School (n=205)	19.9	7.1	12.8
High School Graduate (n=934)	25.1	8.4	16.7
Some College (n=774)	31.7	13.5	18.2
College Graduate (n=821)	37.2	14.6	22.6
Graduate School (n=438)	37.3	12.2	24.6
Residential Location:			
City or medium sized town (n=2100)	26.6	10.1	16.5
Country or small town (n=1219)	33.6	13.1	20.5
Census Region:			
Northeast (n=623)	23.2	9.4	13.8
Midwest (n=810)	26.9	8.5	18.4
South (n=1295)	32.4	12.4	20.0
West (n=591)	30.9	13.6	17.3

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

Table 3- 2: Average Daily Miles Driven by Vehicle Type in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region.

	Car	Pickup	Van	Mini-Van	SUV	Motorcycle	Other
All Drivers (n=3,319)	14.3	5.4	0.8	1.5	6.5	0.4	0.7
Gender:							
Males (n=1,537)	14.4	8.6	1.0	1.6	6.8	0.4	0.7
Females (n=1,782)	14.2	2.3	0.5	1.3	6.3	0.0	0.2
Race and Ethnicity :							
White (n=2,408)	14.7	6.9	0.1	1.6	7.1	0.3	0.6
African American (n=417)	14.2	3.0	0.7	1.8	5.4	0.0	0.0
Hispanic (n=290)	10.7	1.3	0.4	1.2	5.1	0.0	0.1
Other (n=144)	18.2	0.3	0.0	0.1	4.6	0.2	0.1
Age:							
16-19 (n=215)	10.1	4.0	0.5	0.2	4.9	0.0	0.0
20-29 (n=438)	17.5	5.4	0.6	0.6	6.4	0.1	0.1
30-49 (n=872)	15.9	5.6	1.2	2.3	9.3	0.5	0.8
50-64 (n=915)	14.3	7.5	0.7	1.7	4.8	0.2	0.4
65-74 (n=445)	10.9	4.3	0.8	1.8	5.1	0.1	0.3
75+ (n=434)	11.4	2.1	0.3	0.4	5.1	0.0	0.1
Education:							
Grade school or some High School (n=205)	5.6	9.1	0.2	0.3	4.6	0.1	0.0
High School Graduate (n=934)	12.9	5.0	1.3	0.7	3.9	0.2	0.1
Some College (n=774)	14.9	5.6	0.5	1.9	8.4	0.0	0.4
College Graduate (n=821)	20.9	5.1	0.8	2.0	7.2	0.8	0.3
Graduate School (n=438)	17.5	5.6	0.9	3.0	10.1	0.2	0.1
Residential Location:							
City or medium sized town (n=2100)	13.6	3.9	1.0	1.3	6.3	0.3	0.2
Country or small town (n=1219)	15.5	8.1	0.4	1.8	6.9	0.1	0.8
Census Region:							
Northeast (n=623)	11.0	3.0	0.5	1.5	5.7	0.0	1.4
Midwest (n=810)	11.6	4.2	1.5	2.4	6.1	0.6	0.4
South (n=1295)	15.3	7.3	0.8	1.4	7.3	0.2	0.2
West (n=591)	17.9	5.6	0.3	0.6	6.4	0.1	0.1

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

4. Seasonal and Weekly Driving Estimates

The amount of driving that people do varies by day of week (Figure 4-1) and by season (Figure 4-2). Drivers, on average, drive fewer miles on the weekend and more on weekdays. Of the weekdays, respondents report driving the most on Thursdays and Wednesdays and the least on Fridays.

Across all days of the week, men consistently drove more miles than women except for on Fridays, where women and men drove similar numbers of miles (Table 4-1). Drivers between the age of 20 and 29 reported more driving on Saturdays than any other age group, whereas drivers 30 to 49 reported the most driving overall. Differences between the average number of miles that respondents reported driving in urban versus rural areas were smaller on weekends than on weekdays.

Figure 4-2 and Table 4-2 show average daily miles driven by season. Respondents reported significantly fewer miles daily during the winter months than during the rest of the year (January through March). The average number of miles driven daily was greatest during the summer months, but differences between average daily miles driven in the summer, spring, and fall were not statistically significant.

Gender differences in miles driven were greater in the summer and fall. The differences in miles driven between non-Hispanic white drivers and non-white drivers were also greater in the summer and fall. Both teenage drivers and senior drivers 75 and older reported driving relatively fewer miles than other drivers during the winter months. While drivers in rural areas always reported more driving than drivers in urban areas, differences were greatest during the summer. Average daily driving mileage was lowest in the winter months in all regions of the country except in the West; in the West, average daily miles driven were greatest in the winter months.

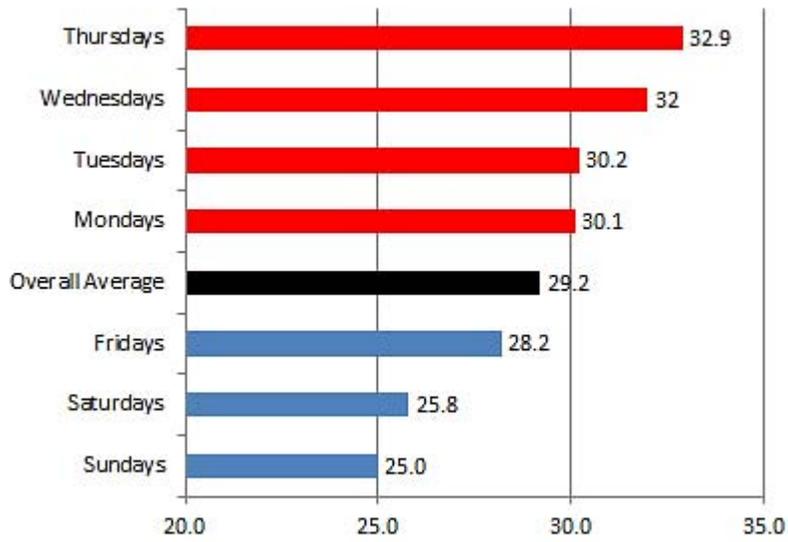**Figure 4- 1:** Average Daily Miles Driven, by Day of Week.

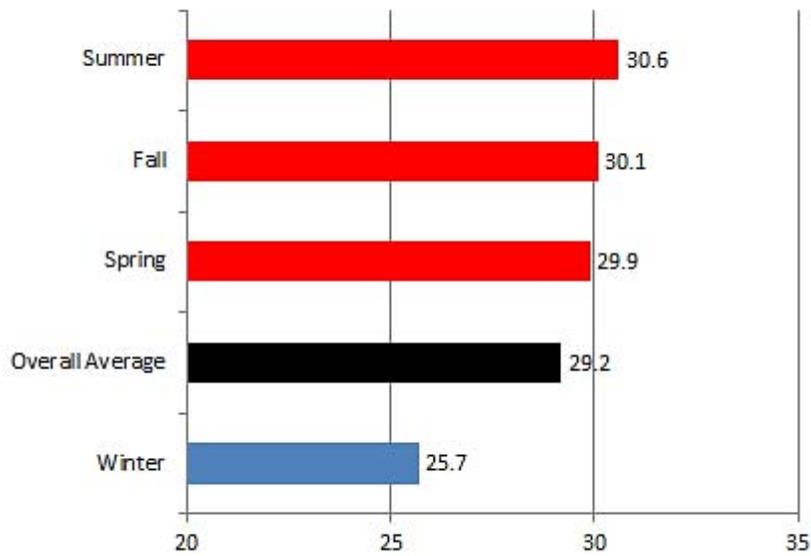**Figure 4- 2:** Average Daily Miles Driven, by Season.

Table 4- 1: Average Daily Miles Driven, by Day of Week, in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region.

	All days	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
All Drivers (n=3,319)	29.2	30.1	32.9	32.0	30.2	28.2	25.8	25.0
Gender:								
Males (n=1,537)	33.6	34.7	41.7	35.8	34.6	29.0	30.5	29.4
Females (n=1,782)	24.9	25.8	24.1	29.0	26.0	27.5	20.4	20.6
Race and Ethnicity :								
White (n=2,408)	32.1	31.9	38.5	34.7	36.7	29.4	26.4	27.4
African American (n=417)	25.1	27.0	34.6	28.1	15.9	21.5	26.5	21.3
Hispanic (n=290)	18.7	24.1	17.1	16.6	15.4	28.2	15.4	12.3
Other (n=144)	23.5	22.5	5.3	43.3	12.5	23.8	25.8	34.8
Age:								
16-19 (n=215)	19.7	19.7	10.5	28.5	20.0	24.4	15.5	17.0
20-29 (n=438)	30.7	29.0	39.2	24.3	30.7	36.3	37.4	17.0
30-49 (n=872)	35.5	47.6	35.9	37.7	31.1	29.9	29.6	36.4
50-64 (n=915)	29.6	41.3	41.3	31.5	39.5	30.6	21.1	20.5
65-74 (n=445)	23.2	25.6	15.1	28.0	25.7	18.4	25.3	22.3
75+ (n=434)	19.5	12.4	23.3	37.7	13.6	17.5	16.9	17.5
Education:								
Grade school or some High School (n=205)	19.9	22.5	19.9	19.6	30.7	18.9	7.2	16.5
High School Graduate (n=934)	25.1	25.1	24.6	40.2	24.4	18.5	23.9	18.4
Some College (n=774)	31.7	30.1	42.9	31.1	27.0	36.0	30.8	24.8
College Graduate (n=821)	37.2	37.0	38.6	36.6	42.7	38.8	29.6	38.3
Graduate School (n=438)	37.3	49.0	33.1	32.7	40.0	37.3	35.2	33.5
Residential Location:								
City or medium sized town (n=2100)	26.6	28.4	26.5	29.4	30.1	24.2	24.2	23.6
Country or small town (n=1219)	33.6	32.9	44.0	36.1	30.3	33.9	29.6	27.2
Census Region:								
Northeast (n=623)	23.2	29.3	23.0	29.0	23.6	21.4	19.6	16.8
Midwest (n=810)	26.9	28.4	32.2	25.9	23.3	28.8	29.2	20.7
South (n=1295)	32.4	36.0	36.0	35.9	37.1	24.6	24.4	31.3
West (n=591)	30.9	23.3	36.3	33.7	33.7	41.6	29.2	25.8

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

Table 4- 2: Average Daily Miles Driven, by Season in Relation to Driver Gender, Race/Ethnicity, Age, Education, Residential Location, and Census Region.

	Entire Year	January - March (Q1)	April -June (Q2)	July-September (Q3)	October- December (Q4)
All Drivers (n=3,319)	29.2	25.7	29.9	30.6	30.1
Gender:					
Males (n=1,537)	33.6	28.5	32.9	35.5	36.6
Females (n=1,782)	24.9	23.1	27.0	25.8	23.6
Race and Ethnicity :					
White (n=2,408)	32.1	26.3	31.1	35.8	34.0
African American (n=417)	25.1	22.6	29.5	28.1	20.6
Hispanic (n=290)	18.7	19.6	24.2	16.0	14.4
Other (n=144)	23.5	43.1	28.6	9.4	20.5
Age:					
16-19 (n=215)	19.7	12.3	20.9	22.9	22.1
20-29 (n=438)	30.7	33.2	32.3	24.5	33.7
30-49 (n=872)	35.5	30.3	35.6	37.5	38.4
50-64 (n=915)	29.6	27.2	31.3	34.0	25.4
65-74 (n=445)	23.2	19.6	27.6	27.6	19.3
75+ (n=434)	19.5	12.3	17.4	15.2	29.8
Education:					
Grade school or some High School (n=205)	19.9	15.4	16.7	28.9	17.1
High School Graduate (n=934)	25.1	18.8	27.6	26.6	26.3
Some College (n=774)	31.7	32.3	30.8	29.0	34.8
College Graduate (n=821)	37.2	35.4	43.0	36.6	34.5
Graduate School (n=438)	37.3	28.2	35.0	41.1	42.1
Residential Location:					
City or medium sized town (n=2100)	26.6	24.1	27.9	25.2	29.0
Country or small town (n=1219)	33.6	28.1	33.5	41.3	31.9
Census Region:					
Northeast (n=623)	23.2	20.0	24.4	23.2	24.5
Midwest (n=810)	26.9	18.8	33.2	33.4	22.2
South (n=1295)	32.4	27.4	32.0	33.8	35.7
West (n=591)	30.9	35.2	28.1	27.8	33.5

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

5. Household Estimates of Number of Vehicles and Drivers

Although the main focus of the American Driving Survey is individual-level driving behavior, some basic household-level data is also collected. While most household-level information is collected primarily to enable the calculation of weights (described in Section 7), some of this information is also of substantive interest.

Nationwide, the average number of vehicles per household (2.1) was greater than the average number of drivers per household (1.8) (Table 5-1). Overall, 58% of households had the same number of vehicles as drivers, 28% had more vehicles than drivers, and 14% had fewer vehicles than drivers. Households with teenagers reported having more vehicles than households with the same number of drivers ages 20 and older but without teenagers. Households in rural areas have even more vehicles relative to the number of drivers than do urban households. The average number of vehicles per household was lowest in the Northeast region but similar across the other three regions. While the number of drivers per household was also slightly lower in the Northeast than in other regions, households in the Northeast were also the least likely to have more vehicles than drivers: 20% of Northeast households had more vehicles than drivers, compared with 28-32% in all other regions. Households that include members ages 65 and older reported having fewer vehicles than households in which no members were aged 65+; households with at least one member aged 75+ reported the fewest vehicles on average.

Table 5- 1: Average Number of Household Vehicles, Household Members Ages 16+, Household Drivers Ages 16+ by Sampling Frame, Presence of Teenagers or Seniors, Residential Location, and Census Region.

	Average Number of Vehicles per Household	Average Number of Members Aged 16+ per Household	Average Number of Drivers Aged 16+ per Household
All Households (n=4286)	2.1	2.1	1.8
Sampling Frame:			
Landline (n=2130)	2.0	2.0	1.7
Cell (n=2156)	2.2	2.2	1.9
Household Includes:			
Teenager aged 16-19 (n=549)	2.8	3.3	2.5
Includes adult 65+ (n=1487)	1.8	2.0	1.6
Included adult 75+ (n=761)	1.7	1.9	1.4
Residential Location:			
City or medium sized town (n=2737)	2.0	2.1	1.8
Country or small town (n=1549)	2.3	2.1	1.8
Census Region:			
Northeast (n=814)	1.9	2.1	1.7
Midwest (n=991)	2.2	2.1	1.8
South (n=1667)	2.1	2.1	1.8
West (n=814)	2.2	2.2	1.8

Overall, 92.2% of all households in the United States reported having at least one driver and 61.5% of households reported two or more drivers (Table 5-2). The proportion of households with no drivers was slightly lower among households with teenagers and slightly higher among households with older members. The proportion of households with two or more drivers was much higher among households with teenagers and much lower among households with members ages 65+ and 75+.

Households in rural areas were more likely than urban households to report having at least one driver and more likely to report having two or more drivers. Households in the Northeast were the most likely to report having no drivers and the least likely to report having two or more drivers; households in the Midwest were the least likely to report having no drivers, but households in all regions except the Northeast were similarly likely to report having two or more drivers.

Table 5- 2: Proportion of Households with No Drivers and Proportion with Two or More Drivers by Sampling Frame, Presence of Teenagers or Seniors, Residential Location, and Census Region.

	% of Households with No Drivers	% of Households with 2+ Drivers
All Households (n=4286)	7.8	61.5
Sampling Frame:		
Landline (n=2130)	9.6	58.0
Cell (n=2156)	6.6	63.9
Household Includes:		
Teenager 16-19 (n=549)	6.5	73.2
Includes adult 65+ (n=1487)	11.0	52.5
Included adult 75+ (n=761)	15.6	42.8
Residential Location:		
City or medium sized town (n=2737)	8.6	60.2
Country or small town (n=1549)	6.3	64.1
Census Region:		
Northeast (n=814)	9.5	59.1
Midwest (n=991)	5.4	61.7
South (n=1667)	7.7	62.4
West (n=814)	9.0	61.9

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

6. Teenage and Senior Drivers

In order to provide data to elucidate the travel behavior of teenagers and seniors—two groups of special interest in traffic safety research, the American Driving Survey oversampled both teenage drivers and drivers 75 or older.

Overall, 30% of adults ages 75 and older reported that they never drive (Table 6-1).[8] Among seniors ages 75+, men were more likely to drive than women, non-Hispanic whites were more likely to drive than respondents of any other race or ethnicity, and those urban areas were more likely to drive than those in areas that were more rural. Among those who did report driving, seniors ages 75+ were much less likely than the general population to report driving almost every day. The relationship between educational attainment and driving frequency was weaker among seniors than among the general population. Among the general population, those with at most a high school diploma were markedly more likely to report not driving at all than those who attended at least some college, whereas among seniors ages 75+, these differences were much smaller and were not statistically significant.

Just over half (53%) of all teenagers ages 16-19 were reported to have a driver's license, and 19% were reported to have a learner's permit (Table 6-2). As expected, the proportion of teenagers who were licensed increased with age: only 26% of 16-year-olds but 77% of 19-year-olds were reported to have been licensed. Just over 40% of teenagers were reported to drive every day, and 30% reported not driving at all. While there was a clear trend toward more frequent driving among older teens than among younger teens, these differences were not statistically significant due to the limited number of teenagers in the survey. Non-Hispanic white teens were more likely to be licensed and drove more frequently teens of other races and ethnicities.

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[8] Note that the American Driving Survey only collects data regarding licensure status for teenagers; adults who do not drive may include some who still possess a valid license as well as adults who have stopped driving or have never driven.

Table 6- 1: Frequency of Driving for all Persons Ages 16+ and for Seniors Ages 75+ in Relation to Gender, Race/Ethnicity, Education, Residential Location, and Census Region.

	Ages 75+ (n=953)				All Ages 16+ (n=9,085)			
	Drive Almost Every Day	Drive Sometimes	Drive Rarely	Never Drive	Drive Almost Every Day	Drive Sometimes	Drive Rarely	Never Drive
All Persons 16+	46.2	16.7	7.2	29.9	69.0	12.2	5.3	13.5
Gender:								
Males	58.1	14.3	6.2	21.4	73.0	10.9	4.7	11.4
Females	38.1	18.5	7.7	35.7	65.4	13.3	5.9	15.4
Race and Ethnicity :								
White	49.7	18.0	7.5	24.8	74.0	11.7	4.7	9.6
African American	27.8	15.3	2.8	54.2	57.5	14.4	5.4	22.7
Hispanic	39.7	9.5	7.9	42.9	59.8	11.0	6.8	22.4
Other	26.3	5.3	10.5	57.9	62.7	13.3	7.2	16.7
Education:								
Grade school or some High School	34.4	19.5	8.4	37.7	50.8	12.9	7.5	28.8
High School Graduate	42.4	16.1	9.7	31.8	65.0	13.2	6.2	15.5
Some College	54.2	20.8	4.2	20.8	75.1	12.7	4.5	7.7
College Graduate	57.8	13.3	7.2	21.7	81.6	9.2	3.2	6.0
Graduate School	60.0	13.3	2.2	24.4	84.2	8.4	2.9	4.5
Residential Location:								
City or medium sized town	43.5	15.1	7.1	34.3	67.8	11.7	5.5	15.0
Country or small town	50.0	19.0	7.3	23.7	71.4	13.0	5.0	10.7
Census Region:								
Northeast	47.5	16.3	7.8	28.4	63.7	14.0	5.3	17.0
Midwest	54.6	14.1	7.4	23.9	72.7	11.1	6.0	10.2
South	43.6	16.7	6.4	33.3	69.6	12.3	5.5	12.7
West	41.6	19.9	7.8	30.7	69.0	11.5	4.4	15.2

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

Table 6- 2: Licensure Status and Driving Frequency of Teenagers Ages 16-19 in Relation to Gender, Age, Race/Ethnicity, Education, Residential Location, and Census Region.

	Licensure Status		Frequency of Driving			
	Learner's Permit	Driver's license	Drive Almost Every Day	Drive Sometimes	Drive Rarely	Never Drive
All Teenagers Ages 16-19 (n=625)	18.6	53.1	40.8	19.7	11.0	28.5
Gender:						
Males	20.2	53.0	40.4	21.9	10.9	26.8
Females	17.0	53.1	41.3	17.4	11.1	30.2
Age:						
16 (n=159)	26.7	26.1	25.7	17.7	11.4	45.1
17 (n=163)	21.9	59.0	45.8	20.1	11.7	22.3
18 (n=153)	11.1	62.7	46.8	18.3	9.5	25.4
19 (n=145)	7.7	76.9	50.5	22.9	11.4	15.2
Race and Ethnicity :						
White	15.8	66.0	51.0	19.9	7.0	22.0
African American	31.5	28.8	17.8	21.9	19.2	41.1
Hispanic	15.7	35.7	28.7	17.4	15.7	38.3
Other	28.6	46.9	37.5	22.9	12.5	27.1
Education:						
Grade school or some High School	22.5	44.0	36.6	18.3	11.6	33.5
High School Graduate	9.7	69.9	48.0	22.5	9.8	19.6
Some College	8.8	82.4	54.4	22.1	10.3	13.2
Residential Location:						
City or medium sized town	19.3	49.5	35.8	20.6	11.9	31.7
Country or small town	17.3	59.1	49.3	18.1	9.5	23.1
Census Region:						
Northeast	20.4	53.4	35.0	20.4	12.6	32.0
Midwest	23.6	59.3	45.4	19.9	12.8	22.0
South	19.7	50.7	42.4	20.2	10.8	26.6
West	11.1	50.0	38.5	17.5	9.1	35.0

* Yellow Shaded Box indicates that the estimate is significantly different than the overall estimate at the 95% confidence level.

7. Survey Methodology

Data collection for the American Driving Survey began on May 21, 2013. Since that date, interviews have been conducted almost every day. This report includes data from interviews completed prior to May 31, 2014. Table 7-1 provides sample counts and other pertinent information about the sample that is used in this report. Table 7-2 provides an unweighted look at the characteristics of the sample of interviews collected during the roughly one year period of data collection.

For the annual report we screened 4,286 households to identify eligible drivers; we completed 3,319 trip interviews. Our estimated household level response rate was 32.4%; that is the number of households completing the screener divided by the number of households contacted that were eligible for the survey. The overall response rate for the trip interview was 73.5%. We estimate the overall response rate as 23.8% of all drivers in the United States, which was derived by multiplying the household-level response rate by the individual driver-level response rate. It took just over 5 minutes on average to administer the household roster and just over 4 and a half minutes on average to administer the driving trip portion of the instrument.

The questionnaire was translated into Spanish and respondents could choose to be interviewed in English or Spanish, or switch between the languages according to their comfort level. A total of 220 household interviews, including 129 driver interviews, were conducted in Spanish.

Table 7- 1: Sample Counts, Estimated Response Rates, and Length of Interview

Sample counts	Annual	Jan -March (Q1)	April- June (Q2)	July-Sept (Q3)	Oct-Dec (Q4)
Number of Households Rostered	4286	987	1085	1069	1135
Estimated Household Level Response Rate	32.4%	29.7%	32.3%	33.8%	32.1%
Mean Length of the Household Roster	5 minute 12 seconds	5 minute 11 seconds	5 minute 26 seconds	5 minutes 13 seconds	4 minutes 48 seconds
Total number of person 16+ rostered	9085	2087	2406	2251	2341
Total number of drivers rostered	7730	1743	2030	1944	2013
Total number of driver sampled	4514	1020	1182	1122	1190
Total number of Completed Trip Interviews	3319	761	786	855	917
Driver level response rate	73.5%	74.6%	66.5%	76.2%	77.1%
Mean length of the Driving trip Interviews	4 minute 34 seconds	4 minutes 41 seconds	4 minutes 49 seconds	4 minutes 28 seconds	4 minutes 20 seconds

Table 7- 2: Unweighted Demographic Breakdown of the Sample

Demographic breakdown of the sample (unweighted)	Annual	Jan -March (Q1)	April- June (Q2)	July-Sept (Q3)	Oct-Dec (Q4)
Gender:					
Males	47.4%	47.3%	47.4%	47.1%	47.7%
Females	52.6%	52.7%	52.6%	52.9%	52.3%
Race and Ethnicity :					
White	68.5%	66.2%	68.1%	68.4%	71.1%
African American	14.0%	15.8%	13.6%	13.8%	12.9%
Hispanic	12.2%	13.0%	12.6%	12.5%	11.0%
Other	5.3%	5.1%	5.7%	5.3%	5.1%
Age: (driving report counts)					
16-17 (total)	129	36	34	26	33
16-17 (direct cell phone)	57	22	8	12	15
16-17 (proxy reported)	51	9	18	10	14
16-19	7.0%	7.2%	7.6%	7.0%	6.4%
20-39	15.8%	16.2%	15.9%	15.5%	15.7%
30-49	27.4%	28.6%	27.1%	27.4%	26.7%
50-64	26.9%	24.6%	26.8%	28.9%	27.1%
65-74	12.1%	13.1%	11.4%	11.4%	12.5%
75+	10.7%	10.2%	11.2%	9.9%	11.5%
Day of the Week: (driver reported on)					
Monday	15.7%	13.9%	13.7%	15.7%	16.0%
Tuesday	14.9%	14.5%	13.9%	14.9%	11.5%
Wednesday	13.3%	16.6%	13.1%	13.3%	14.0%
Thursday	12.6%	13.7%	16.2%	12.6%	14.9%
Friday	14.2%	14.6%	13.9%	14.2%	13.6%
Saturday	13.5%	10.4%	14.0%	13.5%	11.6%
Sunday	15.9%	16.4%	15.3%	15.9%	18.4%
Residential Location:					
City or medium sized town	64.4%	63.2%	63.1%	66.8%	64.6%
Country or small town	35.6%	36.8%	36.9%	33.2%	35.4%
Census Region:					
Northeast	19.1%	18.5%	19.4%	16.9%	21.7%
Midwest	22.7%	23.5%	21.4%	23.5%	22.5%
South	38.7%	39.2%	38.7%	39.0%	38.0%
West	19.5%	18.8%	20.5%	20.7%	17.9%

Study Methodology

The American Driving Survey comprised an overlapping dual-frame (landline/cell phone) telephone survey sample design to maximize the proportion of the entire population that would be covered in a cost-effective manner. The landline sample was generated through Marketing Systems Group's (MSG's) GENESYS sampling system. MSG is one of the survey research industry's largest statistical sampling companies and is the supplier for social science researchers and government organizations such as the U.S. Census Bureau and Centers for Disease Control. The standard GENESYS methodology produces a strict single-stage, Equal Probability Selection Method (epsem) sample of telephone numbers. In other words, a GENESYS sample ensures an equal and known probability of selection for each landline telephone number in the sample frame. A large portion of the sample was generated shortly before the beginning of data collection. This provided the most up-to-date sample possible, maximizing the number of valid telephone extensions.

We generated the sample at this point and used MSG's proprietary GENESYS ID-plus procedure, which not only limits sample to telephone banks that contain at least one valid telephone number, but also identifies and eliminates more than 80% of all non-working and business numbers and ported cell phones.

Similar to the landline sample, MSG generated a list of cell phone telephone numbers randomly. The cell sample is run through the Cell-WINS process. Cell-WINS (Cellular Working Identification Number Service) is a real-time non-intrusive screening process that accurately identifies inactive telephone numbers within a Cellular RDD (Random-Digit Dial) sample.

Questionnaire Design

Urban Institute and the AAA Foundation developed the questionnaire in consultation with the SSRS project team. The instrument includes two sections: a Household Roster administered to an adult respondent and a Trip/Driver Interview administered to one or more drivers (in households with drivers). As part of the Household Roster section of the survey, respondents were asked to provide demographic and driver frequency information for all members of the household, age 16 and older. If the number reached was determined to be the cell phone of a 16- or 17-year-old respondent, the instrument would not roster for other members of the household but would continue with the person level parts of the survey. If the respondent reported that one or more drivers were living in the household, the program then selected the driver/s who would be asked to complete the 'Trip/Driver' section of the interview.

Table 7-3 shows a summary of questions asked in each section of the instrument:

Table 7- 3: Summary of Questionnaire Domains in the Survey Instrument

	Survey Respondent "HH interview"	Selected Driver/s "Trip Interview"
Demographic characteristics (age, race/ethnicity, gender) for each 16+ HH member (for 16 and 17 year olds reached on their cell phone, this information was collected for the respondent only)	X	
Marital Status for each 18+ HH member	X	
Education Level for each 18+ HH member	X	
Urbanicity of household (large city, small city, medium sized town, etc.)	X	
Driver frequency of each 16+ HH member	X	
Driver's License/Learners Permit/Neither (asked if HH member is 16 to 19)	X	
Number of vehicles available for use by HH residents	X	
HH phone status questions	X	
Callback information for drivers, if needed	X	
Trip information from previous day including: diary of trips taken, miles driven, number of passengers, type of vehicle driven, etc.		X
Additional driving trips not previously mentioned		X
Age, gender check, if driver is not the respondent		X
Incentive information for all cell phone sample and random half of landline sample	X	X

Selecting Drivers to Complete the Driving Trip Portion of the Survey

The following specifications for landline and cell phone sample were used to determine driver selection:

<u>Landline driver selection</u>

- If one driver in the household is age 16 to 19, that driver is selected.

- If two or more drivers in the household are ages 16 to 19, the program randomly selects one 16 to 19 year old driver, giving twice the selection probability to drivers who drive almost every day over drivers who report driving sometimes or rarely.

- If one driver in the household is age 20 to 74, that driver is selected.

- If two or more drivers in the household are ages 20 to 74, the program randomly selects one 20 to 74 year old driver, giving twice the selection probability to drivers who drive almost every day.

- If one driver in the household is age 75 or older, that driver is selected.

- If two or more drivers in the household are age 75 or older, the program randomly selects one 75 plus driver, giving twice the selection probability to drivers who drive almost every day. [9]

- If fewer than three drivers have been selected and there are additional drivers ages 16 to 19 year old, the program randomly selects additional 16 to 19 year old drivers up to three drivers per household.

<u>Cell phone driver selection</u>

- If the respondent is a driver, he/she is selected.

- If one driver in the household is age 16 to 19 and is not the respondent, that driver is selected.

- If two or more drivers in the household are ages 16 to 19 and neither is the respondent, the program randomly selects one 16 to 19 year old driver, giving twice the selection probability to drivers who drive almost every day over drivers who drive sometimes or rarely.

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[9] Prior to November 15, the driver selection process at this always selected the driver with the highest frequency of driving, instead of giving them twice the selection probability of lower-frequency drivers as was intended. This error affected the selection of 45 drivers. Had the program functioned as intended, we estimate that approximately one-third of these trip interviews (approximately 15) would have been completed by a driver who reported driving sometimes or rarely instead of by the driver who was selected, whereas approximately two-thirds of them would have still been selected had all drivers in the household been assigned appropriate probabilities of selection.

- If one driver in the household is age 20 to 74 and is not the respondent, that driver is selected.

- If two or more drivers in the household are ages 20 to 74 and neither is the respondent, the program randomly selects one 20 to 74 year old driver, giving twice the selection probability to drivers who drive almost every day.

- If one driver in the household is age 75 or older and is not the respondent, that driver is selected.

- If two or more drivers in the household are age 75 or older and neither is the respondent, the program randomly selects one 75 plus driver, giving twice the selection probability to drivers who drive almost every day. [10]

- If fewer than three drivers have been selected and there are additional age 16 to 19 year old drivers in the household who were not previously selected as a driver, the program randomly selects additional 16 to 19 year old drivers up to three drivers per household.

Programming, Interviewer Training, and Fielding

Prior to the field period, SSRS programmed the study using CfMC computer assisted telephone interviewing (CATI) software. The program was extensively checked to assure that skip patterns followed the design of the questionnaire.

The field period for the data used in this report ran from May 21, 2013 – May 31, 2014. The interviews were conducted by SSRS, and all interviews were done through the CATI system, which ensured that questions followed logical skip patterns and dispositions of all call attempts were recorded.

Interviewers received both formal training and written materials about the survey. The written materials, which were provided prior to the beginning of the field period, included an annotated questionnaire containing information about the goals of the study as well as detailed explanations about why questions were being asked, the meaning and pronunciation of key terms, potential obstacles to be overcome to get good answers to questions, respondent problems that could be anticipated ahead of time, and strategies for addressing unforeseen potential problems.

Interviewer training was conducted immediately before the survey was fully launched. Call center supervisors and interviewers were walked through each question on the

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[10] As previously noted, prior to November 15, the driver selection process at this always selected the driver with the highest frequency of driving, instead of giving them twice the selection probability of lower-frequency drivers as was intended. This error affected the selection of 45 drivers. Had the program functioned as intended, we estimate that approximately one-third of these trip interviews (approximately 15) would have been completed by a driver who reported driving sometimes or rarely instead of by the driver who was selected, whereas approximately two-thirds of them would have still been selected had all drivers in the household been assigned appropriate probabilities of selection.

questionnaire. Interviewers were given instructions to help them maximize response rates and ensure accurate data collection.

Interviewers were monitored throughout the field period and were given feedback, when appropriate, to improve their interview technique and to clarify survey questions.

In order to maximize survey response, SSRS enacted the following procedures during the field period:

- Interviews were not conducted if the respondent was currently driving.

- Following the initial call, on average, eleven follow-up attempts were made to both reach non-responsive household telephone numbers (no answer, busy, answering machine) and set up callbacks to complete trip interviews.

- The program is set up so that pieces of sample released on odd-numbered days of the Julian calendar year are dialed on 'odd' days and sample released on even-numbered days of the Julian calendar year are dialed on 'even' days. This allows for the sample to be regularly called (and rested) through the entire period of time that the sample is active. Of course, specific callbacks override this schedule.

- Each non-responsive telephone number was dialed multiple times – at different times of day and varying the days of the week on which callbacks were placed – using a programmed differential call rule.

- Respondents were offered the option of setting a schedule for a callback for themselves.

- Respondents were also offered the option of setting a schedule for a callback for others in the household who were selected to complete the driver section of the interview, if they were not available at the time of the original household interview.

- In an attempt to convert refusals to completed interviews, specially trained interviewers contacted households where the initial call had resulted in a refusal.

- Bilingual interviewers made callbacks to Spanish-speaking households.

- The study included an incentive of $10 for cell phone household respondents and drivers.

- A random half of the households contacted on their landline phone were offered a $5 incentive and half were not. Similar to the cell sample, if a household was selected to receive the $5 compensation for their time, the same incentive was offered to every driver selected to complete the survey in the household.

Pretest of the Main Instrument Prior to Fielding

SSRS pre-tested the ADS instrument on May 3th and May 4th of 2013. Interviewers completed household rosters with 20 cell phone respondents and 11 landline respondents. In most cases, one driver section was completed in the initial interview; in one interview, two driver interviews were completed. Over a period of one week, SSRS interviewers continued to call back and attempt to reach other drivers in the household, especially for proxy situations.

Overall, the instrument for the ADS worked well; however, SSRS identified areas for improvement related to the instrument, the program, and the interviewer-respondent interaction.

Review of Changes to the Screening and Roster Sections of the Main Instrument:

Based on the pilot study conducted in 2012, several changes had been made to the main instrument and a few questions were redesigned. These changes were evaluated as part of the pretest interviews completed in early May 2013.

- Language was revised in some of the questions for one-person households. For example, H4 was changed to ask the respondent "….how many vehicles are available for use by residents of your household?" only when the interview is with a multiple person household. When the respondent is the only person living in the household, H4 now asks, "…how many vehicles do you own or are otherwise available for your use?" Based on the pretest interviews, it was clear that these changes worked well.

- We determined that in many cases, when respondents describe the driving trips they had taken, they point out that they are still driving the same vehicle. For the main study, we adjusted the programming to allow the interviewer to record the correct vehicle without repeatedly confirming this with the respondent. These questions flowed more smoothly in the pretests than they had in the pilot interviews.

Changes to the Driving Questions

- The addition of questions to capture additional driving trips that the respondent initially forgot to report worked well; several drivers reported that there was at least one additional trip they had originally forgotten to mention. From monitoring, the SSRS team determined that it was beneficial to add an interviewer note to make sure that respondents would include round trip calculations and/or the total miles driven when going back to report a trip that they had initially omitted.

- During the pretest, we reached two households with drivers under the age of 18.
    - In the first case, with a 48 year old driver/respondent and a 16 year old driver, the interviewer did not handle this situation correctly. Instead of asking the female respondent to complete the survey as a proxy for the 16

year old male driver in the household when he was not available, the interviewers instead attempted to set up a call back for the 16 year old driver.

- o In the second case, however, when the interviewer determined that the 17 year old driver was unavailable, she attempted to complete the remainder of the survey for the 17 year old with the 61 year old as proxy. The proxy asked us to call back since she was not able to continue the interview at that time. We reached this household on May 8 and completed the proxy interview at that time. From this callback completion, we found it beneficial to add some additional programming instructions to assist with the completion of proxy interviews done as callbacks.

Quality Control and Ongoing Monitoring

During the first few weeks of interviewing, feedback based on the monitoring of live interviews and recordings was collected and sent to UI. Digitally recorded interviews were placed on a secure FTP site so that staff from UI and AAAFTS could review them with along with SSRS project managers. SSRS provided feedback both on the instrument and the interviewing process based on the first week of interviews.

SSRS closely monitored interviews throughout the field period. Since a dedicated core group of interviewers are always assigned to this project, the ongoing monitoring sessions have not produced many issues. The SSRS project staff did, however, provide feedback to interviewers on a few issues including the following:

- In several cases, interviewers asked 'am or pm' to clarify the timing of a driving trip, even when it was obvious. Interviewers were coached to clarify rather than ask, when needed. Once this was adjusted the flow was much smoother.

- Interviewers were reminded that they should 'round up' the miles in Q.P2d (see Appendix for Questionnaire) rather than asking respondents to clarify their response.

- Interviewers were reminded that they were calling on behalf of the "AAA Foundation for Traffic Safety" and not just AAA.

- In the beginning of the main field period a few interviewers were not reading the full list of vehicles to the respondent the first time they are asked Q.P2g (see Appendix for Questionnaire). This was corrected after the interviewers became used to the new setup in this section of the CATI program.

Missing Data in Household Roster Questions

Overall, item non-response was rare among the roster questions. For most questions, data were missing (i.e., refused) for only one or two household members. For race, marital status, and education, data are missing for a handful of household members but in all

cases, missing data account for less than two percent of the household members included in the roster.

Missing Data for the Trip Section and Miles Driven

Data were missing (don't know or refused) for a very small number of cases in the trip section of the survey which is similar to the household roster section. The largest proportion of missing data in the Trip Section was for the questions about the number of miles driven from destination to destination (Q2f questions). Even for these questions, however, data were missing for 4% or fewer of the cases.

Data Processing

Data file preparation began soon after the study entered the field. CATI range and logic checks were used to check the data during the data collection process. Additional data checks were implemented as part of the data file development work, checking for consistency across variables for both households and drivers.

Drivers were not always able to recall the exact mileage or length of every trip. Data editing and imputation strategies were implemented to account for this. These procedures are detailed at the end of this section of the report.

Weighting Procedures

To facilitate the analysis of the driving exposure survey data, we created the following weights:

1. Household Level Weight

2. Person Level Weight

3. Driver Level Weight

4. Driver Trip level weight

Household Level Weight

Since this study is a telephone survey, the universe for our sample is all households in the United States that can be reached by telephone. To accomplish this, we used a dual frame sampling strategy in which we sampled cell phones phone numbers (including those used by people who have a smart phone or other mobile phone device) and landline phone numbers (which also includes most households that are using voice over internet phone services). The goal of this study is to reach a nationally representative sample of telephone households; the sample design does not include any disproportionate or cluster sampling at the household level. The following four steps were used to create a household level weight which we sometimes refer to as the base weight:

Step 1: Weighting down landline households that report more than one landline telephone number that could be used to complete the survey (question H6). At most, landlines would be weighted down to 0.5.

Step 2: Merging the two sampling frames and creating the dual frame adjustment. To correct for differences in likelihood of selection for respondents answering both landlines and cell phones, compared with single mode users, cases were assigned weights so that the distribution of cases would reflect the known national distribution of households along the lines of single-mode users (landline only and cell phone only) and dual-mode users.

Step 3: A simple non-response adjustment by major census region (Northeast, Midwest, South, and West) raking the household to match the percentage estimates of telephone households from each region of the country.

Step 4: Normalizing the final household weight back to the household sample size and reviewing the range of the household weights. We reviewed the range of the household level weights but did not need to trim unusually small or large weights.

Person Level Weight

Since the household screening roster collected demographic information about everyone in the household 16 years of age or older, a person level weight was created to allow for person level national estimates based on the people captured in the roster. This weight is also the key starting point in creating the driver level weight. There are two basic steps needed to create the person level weight.

Step 1: The base weight from above was assigned to each of the sampled persons 16 or older, and then an iterative post-stratification balancing ('raking') was carried out to make the sample nationally representative. The post-stratification adjusted the sample so as to approximate the population distribution based on the most recent U.S. Census Bureau's American Community Survey (ACS) estimates. Specifically, the post-stratification weighting was conducted for the following parameters: age (16-19; 20-29; 30-49; 50-64; and 65+), race (Non-Hispanic White; Black/African American; Hispanic; and Other); education (no high school diploma, high school graduate, some college; and college degree); gender; and phone usage (cell phone only, dual-mode user, and landline only)

Step 2: The final person level weight was normalized back to the sample size. We reviewed the range of the person level weights but did not need to trim unusually small or large weights.

Driver Level Weight

Two steps were needed to create the driver level weight:

Step 1: The person weight from above was assigned to each of the drivers as their starting weight. For all persons who do not drive, their driver weight was set equal to zero.

Step 2: The final driver level weight was normalized back to the sample size (total number of drivers 16 or older). We reviewed the range of the driver level weights but determined that we did not need to trim unusually small or large weights.

Driver Trip Level Weight

Since not all sampled drivers completed the driving trip portion of the survey and driving reports were not spread perfectly evenly across days of the week, a driver trip weight is needed that includes only drivers who completed the driver trip section. This is the weight used to estimate miles driven and driving duration. The following steps were followed to create this weight.

Step 1: The driver level weight from above was assigned to each of the drivers who completed a driving report about their trips on the prior day. For all drivers who did not complete a driving report their driver trip weight was set equal to zero.

Step 2: The driver trip weight went through a new iterative post-stratification balancing. This post-stratification adjusted the sample so as to approximate the population distribution of drivers based on the estimates from the survey using the driver level weight. This post-stratification weighting was conducted along the same parameters used in the person level raking except it includes a day of the week adjustment (day being the day in which trips were reported on). The post-stratification variables were: age (16-19; 20-29; 30-49; 50-64; and 65+), race (on-Hispanic white; Black/African-American; Hispanic; and Other); education (no HS diploma, HS diploma, some college; and college degree); gender; phone usage (cell phone only, dual-mode user, and landline only); and day of the week (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday). The control totals for the demographics were generated from the survey using the driver level weight and for the days of the week the control total for each day is 1/7.

Step 3: We normalized the final driver level weight back to the sample size (total number of drivers in sampled households). We reviewed the range of the driver trip level weights but determined that we did not need to trim unusually small or large weights.

Imputation Procedures for Missing Data

Drivers were not always able to recall the exact mileage or length of every trip. The following data editing and imputation strategies were implemented to account for this:

- Convert distances of less than 1 mile to 1 mile and times of less than 1 minute to 1 minute.

- If duration of the trip was recalled but not miles driven then the formula used was 1 minute = .527 miles (e.g., a 20 minute trip would be 10.54 miles which was rounded to 11 miles).

- If miles driven was obtained but not the duration then the formula is 1 mile= 113.8 seconds (e.g., a 20 mile trip would take 2,276 seconds or 37.9 minutes which could be rounded to 38 minutes)

- If both duration and miles are missing – but not for all driving trips then the missing value of distance was imputed as the average of the number of miles in the trips for which miles were provided.

- The same procedure was followed for missing data for trip duration of the trip – if the minutes were obtained for some but not all of the trips, we imputed the duration in minutes as the average of the number of minutes in the trips for which minutes were provided.

- If the respondent did not provide any estimates of miles or duration for all of the reported trips driven then this was not able to be counted as a completed driving interview and the person's driver trip level weight was set to zero.

- If a respondent reported at the end of the survey additional trips and miles driven that were not captured in trip by trip reporting, we added these additional miles to the person's total miles driven for the full day. Additional minutes were also added to the total duration driven. If only additional minutes or only additional miles were given then the same formula was used which was used to obtain both additional minutes and miles driven. These minutes were also added to the Trip duration variable.

- If additional miles were reported, those miles were added to the estimated miles driven by vehicle type. If a person reported driving one type of vehicle that day then miles were added to the total miles driven in that vehicle. If more than one vehicle type was driven then miles were assigned to the first vehicle driven that day.

- Similarly, we added these additional miles to the estimated miles driven with or without passengers. We added the additional miles to the most common situation that day (with or without passengers). If they reported the same number of driving trips with or without passengers, than the first reported trip was used as the determinant.

Appendix A: Questionnaire

The following questionnaire is a reader friendly interpretation of the American Driving Survey computer assisted telephone instrument (CATI).

Introduction1:

Hello, I am _____ calling on behalf of Triple A (AAA) Foundation for Traffic Safety. We're doing research that will help make cars and roads safer.

Cell phone sample only
And we will pay you $10 as a token of appreciation for you taking time to complete this survey.

Landline sample only - random 1/2 of landline sample get following additional text
And we will pay you $5 as a token of appreciation for you taking time to complete this survey.)

(IF NECESSARY: All of your answers are strictly confidential and will not be connected with your name or telephone number.)

(READ IF NECESSARY ONLY IF RESPONDENT IS CONCERNED ABOUT THE VALIDITY OF THE SURVEY: If you have any questions or concerns about the survey please call Kathy Langdale at 1-800-633-1986 ext. 4449 Monday through Friday between 8:30 and 5:00PM EST)

{Ask Cell1 and Cell2 only for the cellphone sample}
Cell1. Could you please tell me if you are 16 or older?

        1   Yes - continueto Cell2
        2   No (*thank respondent and terminate interview)*
        R   Refused (terminate, record reason as Cell1R)

Cell2. Before we continue, are you driving right now? (OPTIONAL: and unable to complete the survey)?

        1   No, (*continue interview starting will question H2*)
        2   Respondent is driving (*cannot continue- will call back*)
        R   Refused (terminate, record reason as Cell2R)

{Ask LL1 only for the landline sample}
LL1.   Just to confirm, are you 18 years of age or older?

        1   Yes, qualified respondent 18 or older is on the phone (continue with H2)
        2   Qualified respondent18 or older is available (*repeat intro and continue*

with H2)

>> 3   Qualified respondent 18 or older is not available (*set up call back*)
>> 4   Not a household (*thank respondent and terminate interview –record as*

LL1R)

>> 5   No one in household 18+ (*thank respondent and terminate interview –*

record as LL15)

>> 9   Refusal   (*record reason for refusing*)

H2. This interview is part of a research project being conducted to make cars and roads safer. Your participation is voluntary but vital to the success of the research. We'd like to include your household in our research by completing a brief interview that takes less than 10 minutes.

Thinking about everyone who is currently living in your household, how many people age 16 or older live in your household including yourself? Please do not include college students living away from home or military who are deployed and living somewhere else.

>> _____   (1-9)
>> 10   10 or more
>> RR Refused   THANK AND TERMINATE, RECORD AS H2R

Roster: {Record information on all current household members who are 16 or older}

Note: For cell phone interviews conducted directly with a 16 or 17 year old respondent – the roster information is only asked of the respondent and not anyone else in the household

Rostera1: {Ask if H2=1} - Could you please tell how old you are?

Rostera2: {Ask if H2>1} - Could you please tell me the age of the oldest person in the household?

Rostera3: {if more household members 16 or older} – How old is the next oldest person in your household? {Record age in grid}

Rosterb1: *{only ask if necessary} [Are you/*Is this person] a male or female?

Rosterc1: [Are you/Is this person] of Hispanic, Latino, or Spanish origin?

Rosterc2: [Are you/Is this person] {Read list: Enter one only, include mixed race under something else}

1   White
2   Black
3   Asian
4   Or something else – What is that? _____

Rosterd1: What is [this person's/your] marital status? {Read list: Enter one only}

1   Now married
2   Widowed

3   Divorced
4   Separated
5   Or never married

Rostere1: What is the highest degree or level of school [this person/you] have completed?
{Read list: Enter one only}

1   Less than high school (0-11)
2   High school or GED (12)
3   Some College
4   College Degree
5   Advance College Degree (Masters, PhD)

Rosterf1: [Does/Do] [this person/you] drive almost every day, sometimes, rarely, or never?

Rosterg1 *{ask for person ages 16 to 19}* - [Does/Do] [this person/you] have a driver's license, learners permit, or neither?

[Repeat A through D, for additional household members 16 or older – starting with question rostera3]

	Age	Gender (M or F)	Race / Ethnicity	Marital Status	Education	Does this person drive; (1) almost every day; (2) sometimes (3) rarely (4) or never?	(Ages16 to 19) driver's license, learners permit, or neither?
Person 1: **Oldest person**							
Person 2: **Next oldest**							
Person 3: **Next oldest**							
Person 4: **Next oldest**							
Person 5: **Next oldest**							
Person 6: **Next oldest**							
Person 7: **Next oldest**							
Person 8:							

Next oldest						
Person 9: **Next oldest**						
Person 10: **Next oldest**						

H3.   How would you describe the area where you live? Is it out in the country, a small town, a medium-sized town, a small city, or a large city?

       1   Out in the country
       2   Small town
       3   Medium-sized town
       4   Small City
       5   Large City

(Skip H4: if there are no drivers in the household, i.e., if all persons 16 years old or older "never drive")
H4.   Counting cars, vans, minivans, SUV's, pickup trucks, and motorcycles, (IF H2 or H2c>1; how many vehicles are available for use by residents of your household?) (IF H2 or H2c=1; how many vehicles do you own or are otherwise available for your use?)

      _____   (0-9)

      10   10 or more

H5. Is the phone number I have reached you on a cell phone number?

      1   Yes
      2   No

H6. Excluding cell phone numbers or phone numbers that are strictly used for business purposes how many household landline or voice over internet phone numbers can be used to contact your household.

  (*IF NECESSARY: These questions are designed to find out if it is possible that your household could be contacted more than once for the study.*)

      _____   (0-3)
      4   four or more

H7. And how many working cell phones do you and other people 16 or older in your household use.

      _____   (0-9)
      10   10 or more

NOTE: The computer will now select a driver from within the household – the algorithm for picking the respondent will be:

    a. Cell phone
        i. If the cell phone is answered by a 16 or 17 year person who is a driver than this will be the only person interviewed in this household
        ii. If the cell phone household was rostered and there are drivers in the household between 16 to 19 years of age: Attempt to interview one driver between the ages of 16 and 19. If there is more than one 16 to 19 year old driver then interview the cell phone respondent. If the cell phone respondent is not between the ages 16 and 19 or not a driver, then interview a driver selected at random given twice the selection probability to any drivers that reported drive almost every day.
        iii. If there are drivers in the household between 20 to 74 years of age: Attempt to interview one driver between the ages of 20 and 74. If there is more than one 20 to 74 year old driver then interview the cell phone respondent. If the cell phone respondent is not between the ages 20 and 74 or not a driver, then interview a driver selected at random given twice the selection probability to any drivers that reported drive almost every day.
        iv. If there are drivers 75 or older: Attempt to interview one driver 75 or older. If there is more than one driver 75 or older then interview the cell phone respondent. If the cell phone respondent is not 75 or older or not a driver, then interview a driver selected at random given twice the selection probability to any drivers that reported drive almost every day.

    b. Landline
        i. If there are drivers in the household between 16 to 19 years of age: Attempt to interview one driver between the ages of 16 and 19. If there is more than one 16 to 19 year old driver then interview a driver selected at random given twice the selection probability to any drivers that reportedly drive almost every day.
        ii. If there are drivers in the household between 20 to 74 years of age: Attempt to interview one driver between the ages of 20 and 74. If there is more than one 20 to 74 year old driver then interview a driver selected at random given twice the selection probability to any drivers that reportedly drive almost every day.
        iii. If there are drivers 75 or older: Attempt to interview one driver 75 or older. If there is more than driver 75 or older then interview a driver selected at random given twice the selection probability to any drivers that reportedly drive almost every day.

{If a different respondent is selected to answer about trips take yesterday: read introduction 2a}

Introduction2a:

Thank you, this completes your part of our study. For the next part of this study I need to speak with the [xx year old male/female] about any trips they made yesterday. May I speak with that person now?

- o *If person is not available – setup a call back getting first name if possible and get an alternative phone number if this a personal cell phone*
- o *If refusal – record reason for refusing*
- o *If person is available continue below:*

Hello, I am _____ calling on behalf of _____. We're conducting a voluntary survey for a non-profit organization that studies driving. Your responses will be used for research that will help make cars and roads safer. Your name will not be recorded and all answers are strictly confidential. And we will pay you $5 as a token of appreciation for you taking time to complete this survey.

{If selected respondent is 16 or 17 years old and the parent/guardian does not give permission to speak with or the child refuses, or there has already been 5 attempted call backs – then attempt to obtain interview via proxy report – starting with introduction 2c}

Introduction2b: *(proxy)*

For the next part of this study I need to speak with someone who can answer a few questions on behalf of the [xx year old male/female] living in this household about any trips they made yesterday. May I speak with that person now?

- o *If person is not available – setup a call back getting first name if possible and get an alternative phone number if necessary*
- o *If refusal – record reason for refusing*
- o *If person is available continue below:*

Hello, I am _____ calling on behalf of _____. We're conducting a voluntary survey for a non-profit organization that studies driving. Your responses will be used for research that will help make cars and roads safer. Your name will not be recorded and all answers are strictly confidential. The study involves simply answering a few questions about travel trips that [xx year old male/female] made yesterday. And we will pay you $5 as a token of appreciation for you taking time to complete this survey.

Note: For teenage proxy interviews the computer will replace "you" or "your" with

P1. The following questions concern trips you made yesterday. For each trip, I will be asking you about when and where you went. When possible it would be helpful if you could provide us with an address or nearest road intersection to the places you went to. So starting at 3am yesterday morning, were you:

> 1   <u>At Home</u>:
>
> 2   <u>Or Someplace else</u>: Where was that: _____

P2. Now, I am now going to ask a few specific questions about trips that you took yesterday. {Repeat questions A. through J. for each trip taken from 3:00 a.m. yesterday to 3:00 a.m. today}

- A. {Skip P2a, if not at home and last end time is before midnight} Were you at [P1/last location] [all day/the rest of the day] yesterday, that is through 3am today?
  - a. If yes (skip to question P3)
- B. What time did you leave [P1/last location] to go somewhere else? {record start time in grid}
- C. {record [P1/last location] in grid}
- D. Where did you go next? {record location: home, work, store, restaurant, school, or other place recorded specified in the grid}
- E. How long did it take you to get there [location given in P2D]? {record minutes in grid}
- F. Did you yourself drive to get to [location given in P2D]? {if no, skip to next trip question P2A}
- G. About how many miles did you drive going from [P1/last location] to [location given in P2D]? {record miles in grid}
- H. Were you driving a; (1) car; (2) pick-up truck; (3) van; (4) minivan; (5) SUV; (6) motorcycle, or (7) something else? {record vehicle type in grid and have respondent specify something else}
- I. Did you have any passengers? {if no, record "0" in the grid and skip to next trip question P2A}
- J. How many passengers did you have? {record # in the grid and go to next trip question P2A}

	Start Time	Starting – location	Ending – location	Travel duration	Miles Driven	Vehicle Type	# of passengers
Trip #1							
Trip #2							
Trip #3							
Trip #4							
Trip #5							
Trip #6							
Trip #7							
Trip #8							
Trip #9							
Trip #10							
Trip #11							
Trip #12							
Trip #13							
Trip #14							
Trip #15							
Trip #16							
Trip #17							
Trip #18							

Trip #19							
Trip #20							
Trip #21							
Trip #22							
Trip #23							
Trip #24							
Trip #25							
Trip #26							
Trip #27							
Trip #28							

(Skip to GENDERCHECK, if person did not report more than one driving trip yesterday)

Drivea. Besides the driving trips you just told me about taking yesterday, did (you/he/she) do any additional driving yesterday?
- 1   Yes
- 2   No - skip to GENDERCHECK
- D   (DO NOT READ) Don't know
- R   (DO NOT READ) Refused

Driveb About how many miles did (you/he/she) drive for this additional driving trip or trips?
(IF NECESSARY: Your best estimate is fine.)
NOTE: Always round up miles estimates if the respondent gives an estimate that includes a decimal or partial amount. Example 3.3 miles or 3 and a half miles should be recorded as 4 miles.

_____ENTER NUMBER OF MILES (1-500 Miles)
- LL (DO NOT READ) Less than one mile
- DD (DO NOT READ) Don't know
- RR (DO NOT READ) Refused

Drivec. About how long did it take? (IF NECESSARY: Your best estimate is fine.)
INTERVIEWER NOTE: IF TIME GIVEN IN HOURS AND MINUTES ENTER CODE 1 AND 2 AT THIS SCREEN
- 1   Time Given in Minutes
- 2   Time Given in Hours
- 3   Less than 1 minute
- D   (DO NOT READ) Don't Know
- R   (DO NOT READ) Refused

(ASK GENDERCHECK AND AGECHECK IF RESPONDENT ON PHONE IS DIFFERENT THAN THE ORIGINAL RESPONDENT WHO COMPLETED THE ROSTER QUESTIONS AND RESPONDENT IS NOT PROXY REPORTING)
GENDERCHECK.   (INTERVIEWER NOTE: ASK Gender IF NECESSARY, OTHERWISE RECORD GENDER OF RESPONDENT)
- 1   Male
- 2   Female

AGECHECK. Could you please tell me how old (you/they) are?
NOTE: If proxy interview verify age of the 16 or 17 year old, not the respondent.
_____ (RANGE 16-97)
(ASK GENDERCHECKA, AGECHECKA AND RELATIONCHECK IF RESPONDENT ON PHONE IS THE PROXY (PROXY=1) FOR 16 /17 YEAR OLD DRIVER.)
GENDERCHECKA.   (INTERVIEWER NOTE: ASK Gender IF NECESSARY, OTHERWISE RECORD GENDER OF RESPONDENT
      1   Male
      2   Female

AGECHECKA.   And just to verify could you please tell me how old you are?
      _____ (RANGE 18-97)

RELATIONCHECK.   Can you please tell me what your relationship is to this teen driver?
  (DO NOT READ LIST)
      1   Mother/step mother/foster mother
      2   Father/ step father/foster father
      3   Grandmother
      4   Grandfather
      5   Guardian
      6   Aunt/Uncle
      7   Other (SPECIFY)_____
      R   Refused

(ASK PEND# IF CELL PHONE SAMPLE OR IF LL SAMPLE THAT IS OFFERED $5)
(PN: ADD IN VERIFICATION SCREEN FOR ZIP CODE – SO INTERVIEWER CAN CONFIRM
  FOR SELF THAT HE/SHE TYPED IN CORRECT NUMBERS)
  Pend#.   Now I just need your name and address to send the (IF CELL PHONE SAMPLE: the $10 thank you check; IF LL SAMPLE AND PART OF THE RANDOM HALF SELECTED TO RECEIVE AN INCENTIVE: $5 thank you check we have for you for completing our study.
      May I please have your name?
      (VERIFY SPELLING)

      1   Answer given (SPECIFY) _____
      R   (DO NOT READ) Refused

      May I please have your address?
      (VERIFY SPELLING)

      1   Street: _____
      2   City: _____
      3   State: _____
      4   Zip code: _____

Done. Thank you so much for your time and cooperation. Have a pleasant day.