

American Driving Survey, 2014 – 2017

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The AAA Foundation for Traffic Safety is dedicated to saving lives through research into the causes of traffic crashes and educating the public about ways to prevent crashes and reduce injuries based on research. One of the fundamental elements of any traffic safety research is quantifying traffic risks, which requires two types of data: 1) the number of motor vehicle crashes and people who are involved, injured, and killed in such crashes; and 2) people's exposure to risk; for example, the number of miles that they travel.

To address the need for concrete information regarding driving patterns of the public in the United States (number 2 above), the Foundation launched its data collection system — the American Driving Survey — in May 2013 and has collected data almost every day of the year until December 2017. This research brief summarizes survey results regarding the American public's driving exposure in relation to selected demographic characteristics in calendar years 2014 through 2017.

During 2016 and 2017, the American Driving Survey found that on average, drivers spent 51 minutes driving approximately 31.5 miles each day, making an average of 2.2 driving trips. Nationwide, drivers made 183 billion trips, driving 2.6 trillion miles, in 2016 and 2017. Also, all driving metrics increased when comparing statistics with the previous period measured, 2014-2015.

METHODS

The American Driving Survey (ADS) utilizes telephone interviews through landline phones and cellphones to collect data. A standard random-digit-dial telephone survey method was used to select a sample of the respondents.

Surveys began with asking for basic demographic information and the driving frequency for all household members age 16 or older.

Next, at least one driver from the household was selected to report detailed information about all of the driving they did on the day before the interview. In the remainder of the interview, drivers were asked to report where they began the previous day at 3 a.m. and whether they stayed at the same location all day or whether they went to any other location, they were asked whether they drove there, and if so, what type of vehicle they drove, how many passengers they had, and the distance and duration of the trip. This procedure was repeated for each trip the driver took over a 24-hour (one day) period. The full questionnaire and details of the methodology are available in Triplett et al. (2016).

Data were weighted to adjust for respondents' probabilities of being selected to participate in the survey, ensuring the weighted statistics represent estimates of the driving done by all drivers nationwide. The statistics presented in this brief, other than the sample size, are based on weighted data.

RESULTS

Driving Population

Table 1 shows the percentage of the population who reported driving, in relation to various demographic characteristics, from 2014 through 2017. On average, 87.3% of U.S. residents ages 16 and older reported that they drove at least occasionally during 2014-2015, which is comparable to the 2016-2017 percentage of 87.2%.

Similar to figures from 2014-2015, the 2016-2017 data indicate the proportion of the population that drives increases as they become older until approximately ages 35-49 and then decreases slightly when they are 50-64. It remains fairly constant through ages 65-74 and then decreases substantially among people age 75 and older.

Data from 2016-2017 show that men were more likely than women to drive. Non-Hispanic whites were more likely to drive than other races, and married people were more likely to drive than those who were single, separated or living with a partner.

There was a statistically significant increase from 2014-2015 to 2016-2017 in the proportion of Hispanic respondents who reported driving, and statistically significant decreases from 2014-2015 to 2016-2017 in the proportion of respondents with a high-school education or a GED who drove. There were also statistically significant decreases in the proportion of Midwest residents who reported driving.

Driving Trips

Drivers made an average of 2.22 daily driving trips in 2016-2017, which is slightly higher than the number in 2014-2015 (Table 2). Similar to the results in 2014-2015, results show that the average daily numbers of driving trips in 2016-2017 were higher among middle-aged drivers than teen or older drivers, higher for women than men and higher for non-Hispanic whites than for other races.

Additionally, the average number of daily trips in 2016-2017 increased as the participants' education level increased. The trips also increased with each type of residence during both times, 2014-2015 and 2016-2017.

There was a statistically significant increase from 2014-2015 to 2016-2017 in the mean number of trips reported by drivers who had a high-school education or GED, were widowed, or lived in the Midwest and/or the countryside.

Driving Time

Drivers spent an average of 51 minutes driving per day in 2016-2017, slightly higher than the 48 minutes reported in 2014-2015 (Table 3). Similar to 2014-2015, the average number of minutes driving in 2016-2017 was higher for middle-aged drivers than for teen or older drivers and higher for men than for women. Similar to the results for driving population and trips, the average daily driving time increased as the level of education increased. In addition, from 2014-2015, non-Hispanic whites spent more time driving daily than those from any other race/ethnicity, but in 2016-2017 Hispanic drivers reported the most time driving. Drivers who were married or living with a partner spent the most time driving on a daily basis from 2014-2015 and 2016-2017.

There was a statistically significant increase from 2014-2015 to 2016-2017 in the mean number of minutes spent driving among respondents who were older than 75 and those living in the Northeast.

Miles Driven

Participants drove an average of 31.5 miles per day from 2016-2017, an increase from the 29.9 miles reported in 2014-2015 (Table 4). The numbers in 2016-2017 were higher for middle-aged drivers than for teen or older drivers, higher for men than for women, and higher for non-Hispanic whites than for other races. The average number of daily driving miles in 2016-2017 also increased as education level increased. Drivers who lived in the country reported driving more miles than those living in a town or city in both 2014-2015 and 2016-2017.

There was a statistically significant increase from 2014-2015 to 2016-2017 in the average daily number of miles driven among participants living in the Northeast.

Driving Population Estimates

The U.S. "driving-aged" population (i.e., ages 16 and older) increased every year between 2014 and 2017. This increase in driving population also contributed to an increase in the total time spent driving, the total number of trips taken and the total number of miles driven (Table 5). This aligns with the number of drivers in the United States, which increased by a statistically significant 3.6 million, from 222.2 million in 2014-2015 to 225.8 million in 2016-2017. Additionally, the annual total number of trips taken by all drivers nationwide increased from 175 billion in 2014-2015 to 183 billion in 2016-2017, the total number of hours spent driving increased from 65 billion to 70 billion and the total annual number of miles driven increased from 2.4 trillion to 2.6 trillion.

DISCUSSION

The annual edition of the American Driving Survey indicated that drivers made an average of 2.2 driving trips per day, spending 51 minutes driving approximately 31.5 miles daily, during the 2016-2017 calendar years. Nationwide, drivers made 183 billion driving trips annually and drove 2.6 trillion miles annually during 2016-2017.

When comparing these statistics to the annual averages from years 2014-2015, all metrics of driving increased slightly. For specific demographic groups, aggregating multiple years of data improves the precision of estimates.

Such subgroup comparisons (i.e., changes in driving patterns by people in demographic groups) should be analyzed with caution as a majority of the changes over the four years was not statistically significant at the 95% confidence level. There were exceptions to this, most notable among Hispanics, drivers with a lower level of education and those who lived in the Midwest, in 2016-2017.

The aggregated data provides insights into the driving patterns of the U.S. population throughout the past four years, not only showing that the total amount of driving nationwide has increased but identifying the key components of this growth. While the percentage of driving-aged people who drive has remained fairly constant, the size of the driving-aged population itself has increased, thus increasing the total number of drivers on the road. In addition, the average daily amount of driving also slightly increased by all measures examined (number of trips, time spent driving and miles driven), which contributed to an increase in the annual average number of miles nationwide in years 2016-2017 relative to the previous two-year period.

The AAA Foundation for Traffic Safety will continue efforts toward addressing the need for concrete information regarding driving patterns of the public. Updates to the sample design and data collection protocol are currently being evaluated.

REFERENCES

Tefft, B.C. (2018, January). American Driving Survey: 2015-2016. (Research Brief). Washington, D.C.: AAA Foundation for Traffic Safety.

Triplett T, Santos R, Rosenbloom S. (2016). American Driving Survey: 2014-2015. Washington, D.C.: AAA Foundation for Traffic Safety.

ABOUT THE AAA FOUNDATION FOR TRAFFIC SAFETY

The AAA Foundation for Traffic Safety is a 501(c)(3) nonprofit, publicly supported charitable research and education organization. It was founded in 1947 by the American Automobile Association to conduct research to address growing highway safety issues. The organization's mission is to identify traffic safety problems, foster research that seeks solutions and disseminate information and educational materials. AAA Foundation funding comes from voluntary, tax-deductible contributions from motor clubs associated with the American Automobile Association and the Canadian Automobile Association, individual AAA club members, insurance companies and other individuals or groups.

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Table 1: Percent of U.S. Residents Age 16+ Who Drive at Least Occasionally, in Relation to Selected Demographic Characteristics, United States 2014–2015 and 2016–2017

	2014–2015	2016–2017
Total	87.3	87.2
Age		
16 to 19	73.2	70.8
20 to 24	87.4	86.3
25 to 34	90.5	89.4
35 to 49	90.8	91.8
50 to 64	90.7	89.1
65 to 74	87.1	89.3
75+	73.1	75.5
Gender		
Male	89.3	89.0
Female	85.6	85.8
Race/Ethnicity		
White	91.0	90.2
Black	79.2	79.8
Hispanic	79.6	82.9*
Other	86.2	84.0
Education Level		
Less than HS (or HS age)	68.0	70.9
HS or GED	86.2	84.3*
Some college	92.8	92.1
College degree or higher	94.7	95.1
Marital Status		
Married	93.6	93.5
Living with a partner	89.9	87.3
Widowed	70.2	73.8
Divorced/separated	87.4	86.1
Never married	82.2	82.6
Census Region		
Northeast	82.9	84.3
Midwest	89.9	87.3*
South	88.6	88.3
West	86.0	87.7
Place of Residence		
Country	91.0	89.1
Town	89.0	88.6
City	84.7	85.5

* Denotes yearly increase or decrease statistically significant at 95% confidence level

Table 2: Average Daily Number of Driving Trips Made by U.S. Drivers in Relation to Selected Demographic Characteristics, United States 2014–2015 and 2016–2017

	2014–2015	2016–2017
Total	2.16	2.22
Age		
16 to 19	1.83	2.02
20 to 24	2.08	1.91
25 to 34	2.23	2.25
35 to 49	2.37	2.52
50 to 64	2.24	2.30
65 to 74	2.16	2.13
75+	1.66	1.83
Gender		
Male	2.06	2.10
Female	2.26	2.34
Race/Ethnicity		
White	2.29	2.32
Black	1.87	2.04
Hispanic	1.83	1.93
Other	2.01	2.24
Education Level		
Less than HS (or HS age)	1.57	1.75
HS or GED	1.84	1.99*
Some college	2.34	2.36
College degree or higher	2.47	2.41
Marital Status		
Married	2.25	2.31
Living with a partner	2.05	2.25
Widowed	1.80	2.20*
Divorced/separated	2.31	2.25
Never married	2.12	2.07
Census Region		
Northeast	2.02	2.04
Midwest	2.15	2.34*
South	2.12	2.23
West	2.32	2.22
Place of Residence		
Country	1.86	2.12*
Town	2.19	2.17
City	2.23	2.27

* Denotes yearly increase or decrease statistically significant at 95% confidence level

Table 3. Average Daily Number of Minutes Spent by U.S. Drivers in Relation to Selected Demographic Characteristics, United States, 2014–2015 and 2016–2017

	2014–2015	2016–2017
Total	48.0	51.0
Age		
16 to 19	33.2	39
20 to 24	51.2	52.2
25 to 34	56.0	58.2
35 to 49	55.2	59.6
50 to 64	46.9	49.6
65 to 74	46.3	45.1
75+	28.3	34.8*
Gender		
Male	52.5	55.4
Female	43.3	46.4
Race/Ethnicity		
White	50.1	52.5
Black	41.3	44.8
Hispanic	45.2	52.6
Other	44.8	46.9
Education Level		
Less than HS (or HS age)	33.8	41.6
HS or GED	43.3	43.4*
Some college	51.0	54.0
College degree or higher	55.5	57.0
Marital Status		
Married	52.6	55.3
Living with a partner	51.9	56.7
Widowed	33.7	39.0
Divorced/separated	49.7	46.4
Never married	46.0	49.1
Census Region		
Northeast	43.6	51.1*
Midwest	47.8	44.5
South	48.6	49.9
West	50.7	58.9
Place of Residence		
Country	50.9	54.2
Town	45.2	49.2
City	50.1	51.1

* Denotes yearly increase or decrease statistically significant at 95% confidence level

Table 4. Average Daily Number of Miles Driven by U.S. Drivers in Relation to Selected Demographic Characteristics, United States, 2014–2015 and 2016–2017

	2014–2015	2016–2017
Total	29.9	31.5
Age		
16 to 19	20.6	22.5
20 to 24	32.5	35.9
25 to 34	34.9	36.5
35 to 49	34.3	35.6
50 to 64	29.5	30.7
65 to 74	29.6	28.5
75+	15.1	19.0
Gender		
Male	32.8	35.3
Female	26.8	27.7
Race/Ethnicity		
White	31.6	33.0
Black	25.7	26.5
Hispanic	26.6	31.4
Other	26.5	28.5
Education Level		
Less than HS (or HS age)	18.4	23.3
HS or GED	26.3	27.0
Some college	32.0	33.2
College degree or higher	35.5	35.9
Marital Status		
Married	33.6	34.8
Living with a partner	31.8	37.4
Widowed	18.7	21.5
Divorced/separated	30.3	26.5
Never married	28.7	31.1
Census Region		
Northeast	25.4	30.5*
Midwest	30.6	27.6
South	31.6	31.5
West	29.8	36.1
Place of Residence		
Country	35.3	38.1
Town	29.4	31.4
City	28.9	29.8

* Denotes yearly increase or decrease statistically significant at 95% confidence level

Table 5. Daily and Annual Estimates of the Driving Population, Driving Trips, Driving Duration and Distance Driven

	2014–2015	2016–2017
Population Age 16+ (millions)	254.5	259.0
Drivers		
% of population that drives	87.3	87.2
Number of drivers (millions)	222.2	225.8*
Driving Trips		
Daily trips (per driver, mean)	2.16	2.22
Annual trips (per driver, mean)	788.4	810.3
Annual trips (total all drivers, billions)	175.2	183.0*
Time Spent Driving		
Daily (mean per driver, minutes)	48.0	51.0
Annual (mean per driver, hours)	292	310
Annual (total all drivers, billions of hours)	64.9	70.1*
Miles Driven		
Daily (mean per driver, miles)	29.9	31.5
Annual (mean per driver, miles)	10,914	11,498
Annual (total all drivers, trillions of miles)	2.42	2.60

* Denotes yearly increase or decrease statistically significant at 95% confidence level