WASHINGTON Traffic Safety COMMISSION

Distracted Driving in Washington State, 2016-2018: Final Results from the Annual Observation Surveys

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EXECUTIVE SUMMARY OF REPORT FINDINGS

- The statewide estimate of Washington's driver-distraction rate was 9.2 percent of drivers in both 2016 and 2017. In 2018, this rate dropped to 8.2 percent.

- The specific type of distraction changed very little in 2017 compared with 2016. However, in 2018 there was a **decrease** in the percent of drivers holding a cell phone. In 2016 and 2017, 5.6 and 5.7 percent (respectively) of observed drivers were holding or manipulating cell phones. In 2018 this dropped to 3.4 percent of drivers.

- In 2018 there was an **increase** in drivers engaged in "other distracting behavior", such as eating, tuning a radio, or attending to pets or children.

- In 2016 and 2017, cell phones were the source of three quarters of distractions. In 2018, due to the decrease in handheld cell phone use and the increase in "other distractions", cell phones are the source of just over half of driver distractions.

- In 2018, drivers holding a cell phone comprised 41.6 percent of all distraction, holding a phone to ear comprised 13.7 percent of all distraction, and all other sources comprised 44.7 percent of driver distractions.

- There was a significant reduction in the percent of drivers engaging in distractions while stopped at intersections. In 2018 this rate dropped to 8.4 percent, from 14.2 percent in 2016 and 17.4 percent in 2017.

Five counties experienced statistically significant decreases in distracted driving rates in 2018:

- King County distracted driving rates decreased from 10.2 percent to 7.0 percent.
- Kitsap County experienced the most significant decreases in distracted driving rates starting at 20.5 percent in 2016, declining to 12.6 percent in 2017, and dropping to 4.0 percent in 2018.
- Pierce County also achieved multiple year decreases in distracted driving rates starting at 18.4 percent in 2016, declining to 14.4 percent in 2017, and dropping to 5.8 percent in 2018.
- Thurston County distracted driving rates decreased from 11.0 percent to 4.2 percent.
- Whatcom County's distracted driving rate decreased to 3.7 percent in 2018 compared to 8.8 percent in 2016.

Two counties showed increases in distracted driving rates:

- Cowlitz County's 2018 distracted driver rate was 11.4 percent, up from 6.9 percent in 2017 and 3.6 percent in 2016.
- Spokane County's distracted driver rate increased to 11.6 percent in 2018, up from 5.9 percent in 2017 and 7.2 percent in 2016.

INTRODUCTION

Driver distraction has always been a focus of prevention among the traffic safety community. Driver distraction includes all activities that divert attention and full engagement from the task of driving including general inattention (lost in thought), smoking, eating, grooming, reading, interactions with passengers or vehicle controls, and electronic device use. Traffic safety researchers agree that driver distractions can greatly increase the risk that a crash will occur. American motorists appear to be highly conflicted about using cell phones while driving. According to the *2017 AAA Foundation Traffic Safety Culture Index*:

- Cellphone use while driving is common. In the past month, 60.5 percent of drivers talked on a hands-free cellphone while 49.5 percent talked on a hand-held cellphone while driving.
- Drivers view cellphone use while driving as a serious threat; 96.8 percent believe texting or emailing is a serious threat and 87.7 percent believe talking on cellphones is a serious threat.
- The majority of drivers (87.6 percent) support legislation against reading, typing or sending text or email messages and 73.4 percent support banning hand-held cellphone use while driving. However, only 40.9 percent support a ban on all cellphone use while driving.

Cell phones and other electronic communications or entertainment devices have been of particular interest to researchers. *Healthy People 2020* identifies motor vehicle crashes due to distracted driving as a research area needed to better understand trends, causes, and prevention strategies (CDC, 2018). Numerous simulator studies, closed-track, in-vehicle camera, and other studies have shown significant increases in serious driving errors resulting from cell phone use while driving.

In an ongoing series of studies, Dr. David Strayer, a professor of psychology at the University of Utah, has studied the nature of cell phone use while driving and has concluded that the distracting effect of cell phone conversation amounts to a serious performance deficit. Strayer described this in an essay:

> "We found that even when drivers were directing their gaze at objects in the driving environment they often failed to see them because attention was directed elsewhere. Thus, talking on a cell phone created a form of inattention blindness, making drivers less aware of important information in the driving scene. We also compared hand-held and hands-free cell phones and found the impairments to driving are identical for these two modes of communication. There was no evidence that hands-free cell phones were any safer to use while driving than hand-held devices."

It is clear that conducting a cell phone conversation while driving leads to greatly weakened visual information processing, with predictable and often disastrous consequences. In Washington State, distracted driving is a factor in nearly one of every three traffic fatalities and more than one of every four serious injuries. From 2015-2017, distraction-involved fatalities increased 27.1 percent and serious injuries 33.8 percent compared to the previous three years. Distraction ranks only behind impairment as a prevalent risky behavior in traffic fatalities and serious injuries. For the

first time in 2015, distraction became more prevalent in fatal and serious crashes than driver speeding and that trend continues today.

In 2017, Washington passed stricter distracted driving laws (RCW 46.61.672 and RCW 46.61.673). Until recently, Washington State had not attempted to measure the statewide level of driver distraction on Washington roads. This report marks the third year of this effort. This survey was first conducted in May 2016, and again in May 2017, prior to the new law implementation. The new laws became effective on July 23, 2017. The majority of law enforcement delayed enforcement of these new laws in lieu and education opportunities with drivers. Full enforcement began in January 2018. From July-December 2017 when the new law went into effect, just over 7,000 tickets were issued statewide during the "warning" period. In the first six months of 2018, over 20,000 tickets have been issued under the new laws.

This report provides the baseline measure of driver distraction prior to the new law's effective date and one year following. The information for this report was collected only at randomly selected intersections. Driver behavior at intersections may be different than driver behavior on other roadway types and scenarios, such as freeway driving. In order to determine if the new laws would impact the observed driver distractions, the data was collected following the exact same methods in June 2018 (only at intersections). Beginning in 2019, driver distraction will be measured on all road types across the state, creating a new baseline measure of observed driver distractions.

SURVEY METHOD

Intersections were sampled in incorporated areas 1) so that observers would be able to view more clearly the target behaviors of drivers inside their vehicles, and 2) so that observers would be able to collect a sufficient number of observations to reach a robust estimate. Accordingly, a database of all 6,279 intersections in Washington's incorporated areas was generated and tagged with geographic coordinates, road names (where available), and other information. This process is detailed further in Appendix A.

Intersections were randomly sampled from 23 counties with 50 or more total intersections. These 23 counties comprised 94 percent of all municipal intersections in the state (5,906 of 6,279). Each of the 23 counties was allotted the percentage of survey intersections equal to that county's proportion of all intersections in the 23-county pool of 5,906 sites. For example, since 929 of the sites in the 23-county sample (15.7 percent) are in King County, 47 of the 300 sample sites (15.7 percent) were assigned to King County. The final sites were randomly selected for each county to reach the predetermined proportional allotment.

In preparation for the survey, the survey coordinator assigned a smaller team to visit each site in order to document, photograph, and record relevant information. Geographic coordinates for each location were programmed into GPS devices and site sheets were produced to instruct the observers where to stand and which direction of travel to observe. Two-person teams (consisting

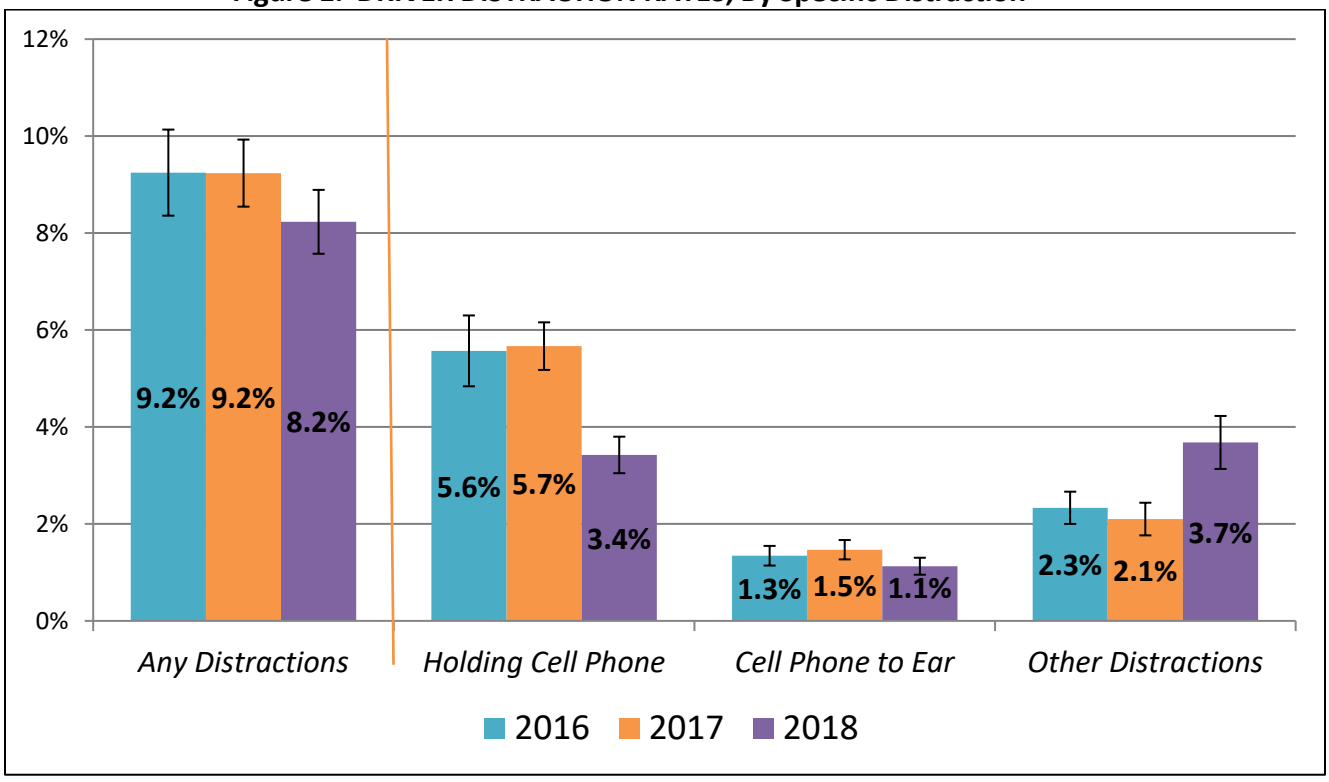
of an observer and a recorder) receive classroom instruction and field training in observation and data recording procedures.

Data was collected using an iPad application modified from the Washington State seat belt observation application to collect distracted driver observations. The observations were conducted for 20 minute periods at each site in May of 2016 and 2017, and June of 2018 between the hours of 7 a.m. and 6 p.m. For each vehicle surveyed at a given site, one member of the team observed oncoming vehicle motion and driver distraction behavior and reported those observations verbally to the team's recorder (facing the observer), who entered that information into the data fields appearing on the iPad screen. A more detailed description of the data collection process is described in Appendix B.

RESULTS

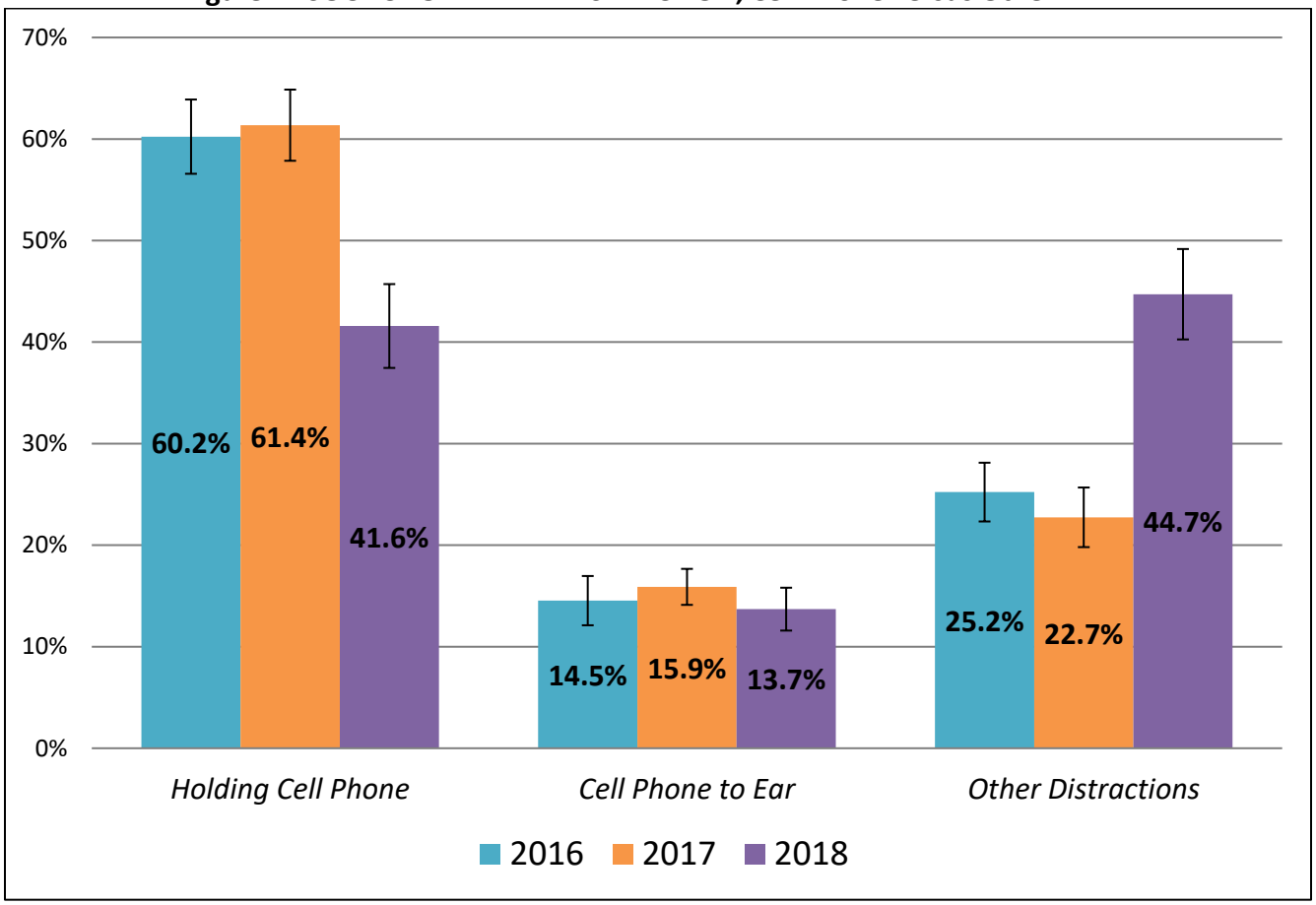
The statewide estimate of Washington's driver-distraction rate was 9.2 percent in both 2016 and 2017. In 2018, this rate dropped to 8.2 percent, although this was not a statistically significant decrease. The specific type of distraction changed very little in 2017 compared with 2016, but in 2018 there was a decrease in the percent of drivers holding a cell phone. In 2016 and 2017, 5.6 and 5.7 percent (respectively) of observed drivers were holding or manipulating cell phones but in 2018 this dropped to 3.4 percent of drivers. However, in 2018 there was also an increase in drivers engaged in "other distracting behavior", such as eating, interacting with vehicle systems, or attending to pets or children. (Figure 1).

Figure 1. DRIVER DISTRACTION RATES, By Specific Distraction



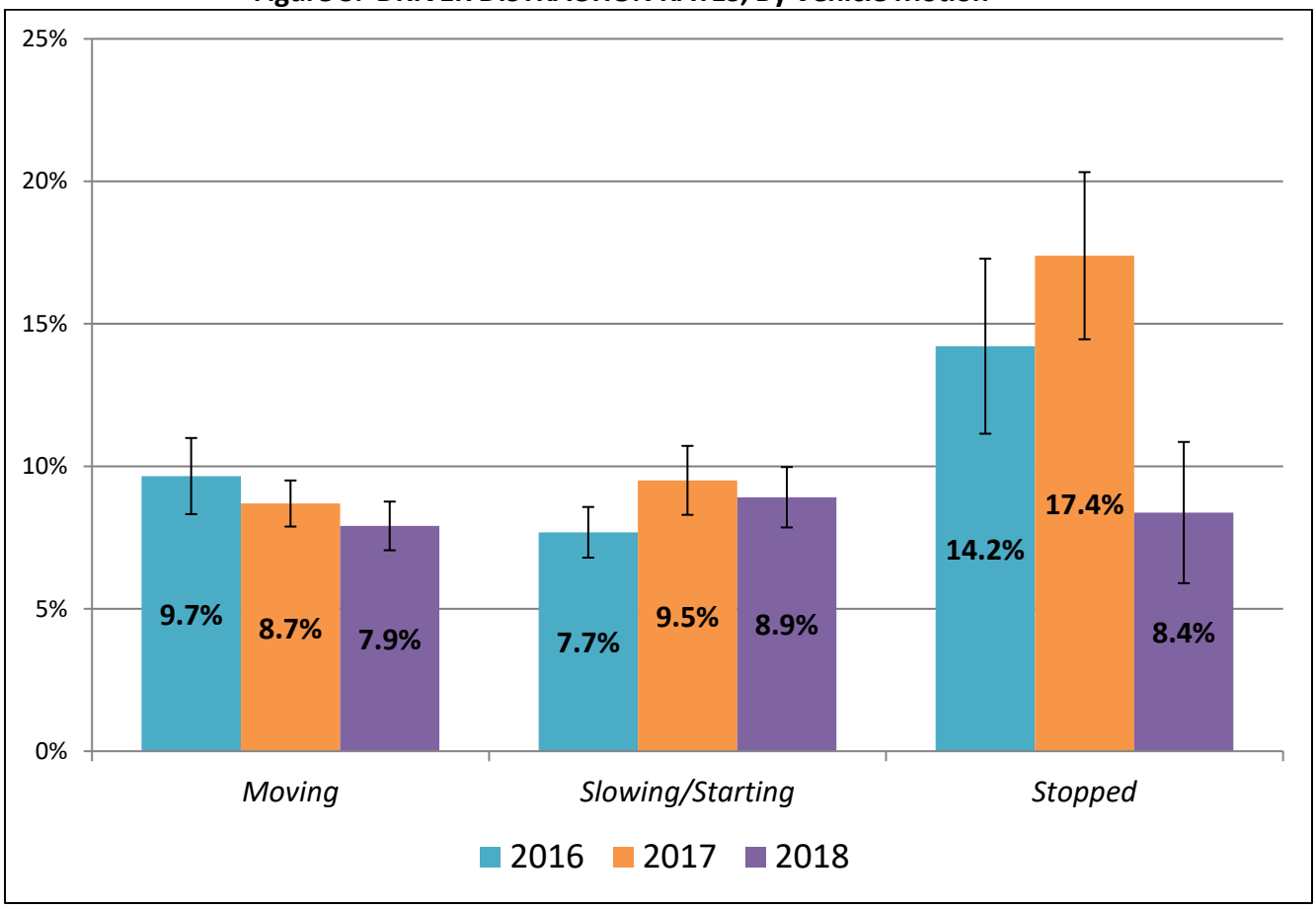
In 2016 and 2017, cell phones were the source of three quarters of distractions. In 2018, due to the decrease in handheld cell phone use and the increase in "other distractions", cell phones are the source of just over half of driver distractions. In 2018, drivers holding a cell phone comprised 41.6 percent of all distraction, holding a phone to ear comprised 13.7 percent of all distraction, and all other sources comprised 44.7 percent of driver distractions (Figure 2).

Figure 2. SOURCE OF DRIVER DISTRACTION, Cell Phone versus Other



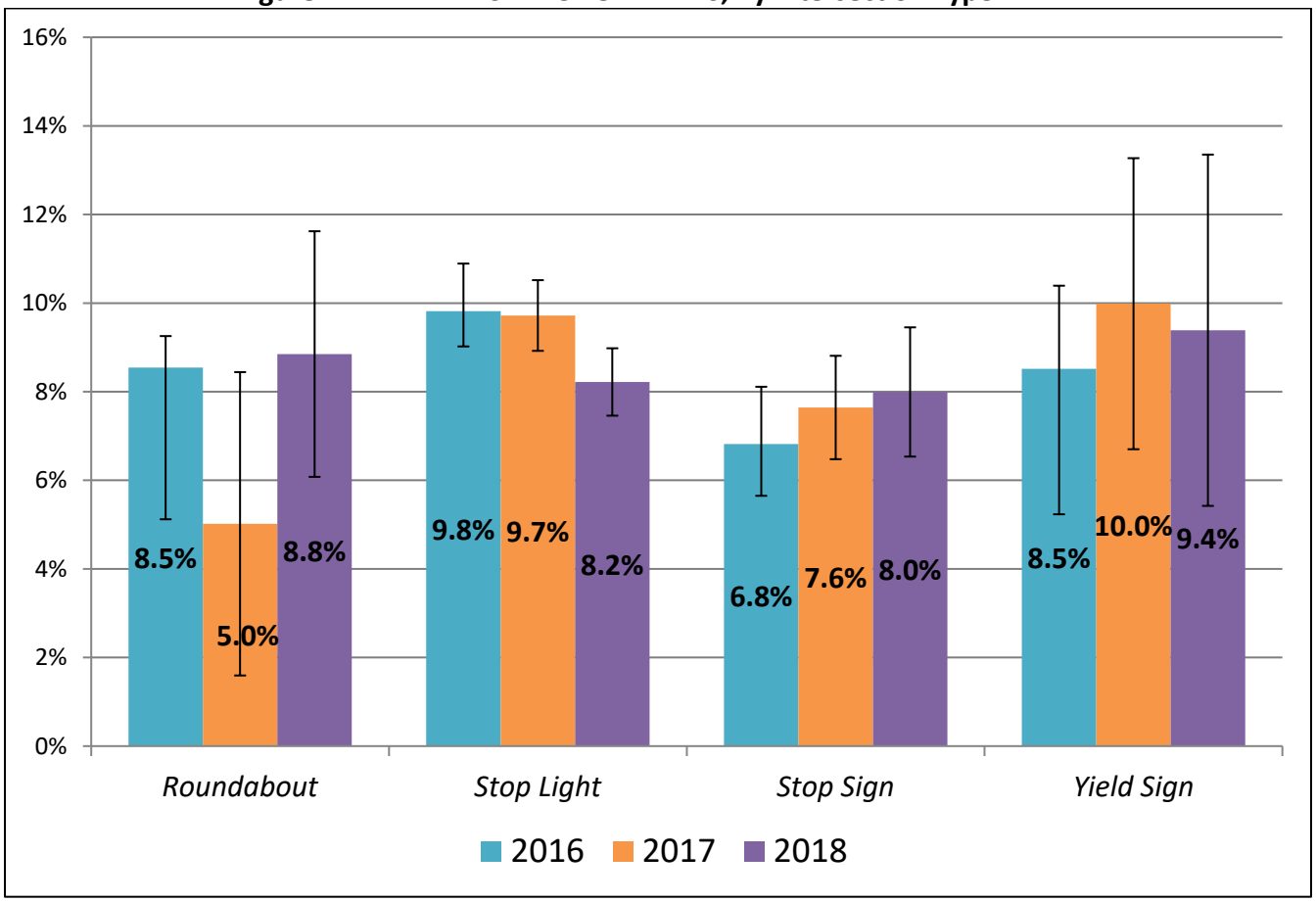
From 2016-2017, driver distraction by vehicle motion showed higher rates of distraction among drivers of stopped vehicles than among drivers of vehicles that were moving or slowing/starting. In 2018 there was a significant reduction in the percent of drivers engaging in distractions while stopped at intersections. In 2018 this rate dropped to 8.4 percent, from 14.2 percent in 2016 and 17.4 percent in 2017.

Figure 3. DRIVER DISTRACTION RATES, By Vehicle Motion



The percent of drivers engaged with distractions showed little variation across intersection types (Figure 4). Drivers were more likely to engage in distractions at intersections equipped with stop lights versus stop signs, due to the increased time spent at those intersections. In 2018, there was no difference in distracted driver rates based on intersection type.

Figure 4. DRIVER DISTRACTION RATES, By Intersection Type



Figures 5 and 6 show driver distraction rates for all counties included in the survey. Variability in driver distraction rates among the counties is evident. While it may appear that counties experienced significant changes in distracted driving rates, the differences are not statistically significant as is evident by the overlapping confidence intervals (the lines shown on the bar charts that represent the accuracy of the estimate). However, five counties did experience meaningful decreases in distracted driving rates in 2018:

- King County distracted driving rates decreased from 10.2 percent to 7.0 percent.
- Kitsap County experienced the most significant decreases in distracted driving rates starting at 20.5 percent in 2016, declining to 12.6 percent in 2017, and dropping to 4.0 percent in 2018.
- Pierce County also achieved multiple year decreases in distracted driving rates starting at 18.4 percent in 2016, declining to 14.4 percent in 2017, and dropping to 5.8 percent in 2018.
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- Spokane County's distracted driver rate increased to 11.6 percent in 2018, up from 5.9 percent in 2017 and 7.2 percent in 2016.

Figure 5. DRIVER DISTRACTION RATES, By Sampled County B-King

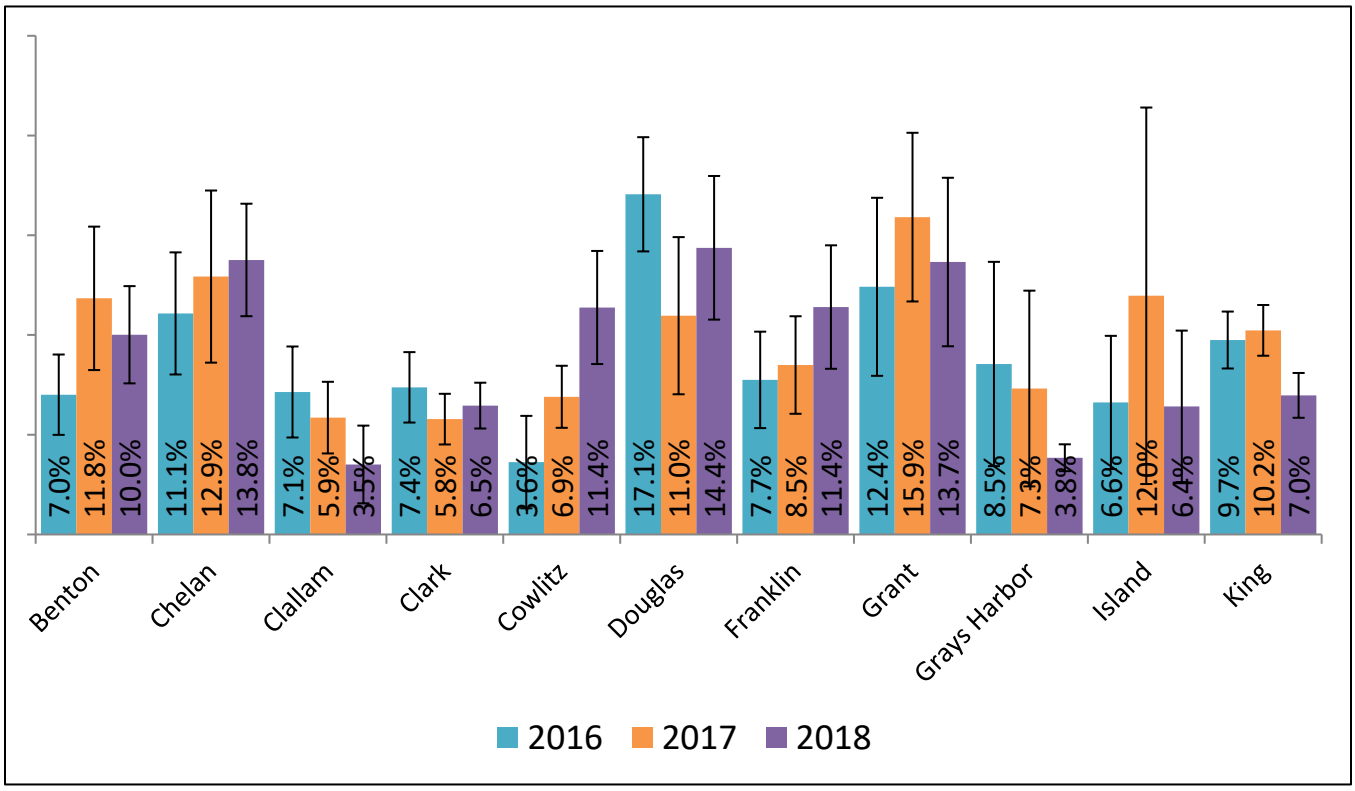
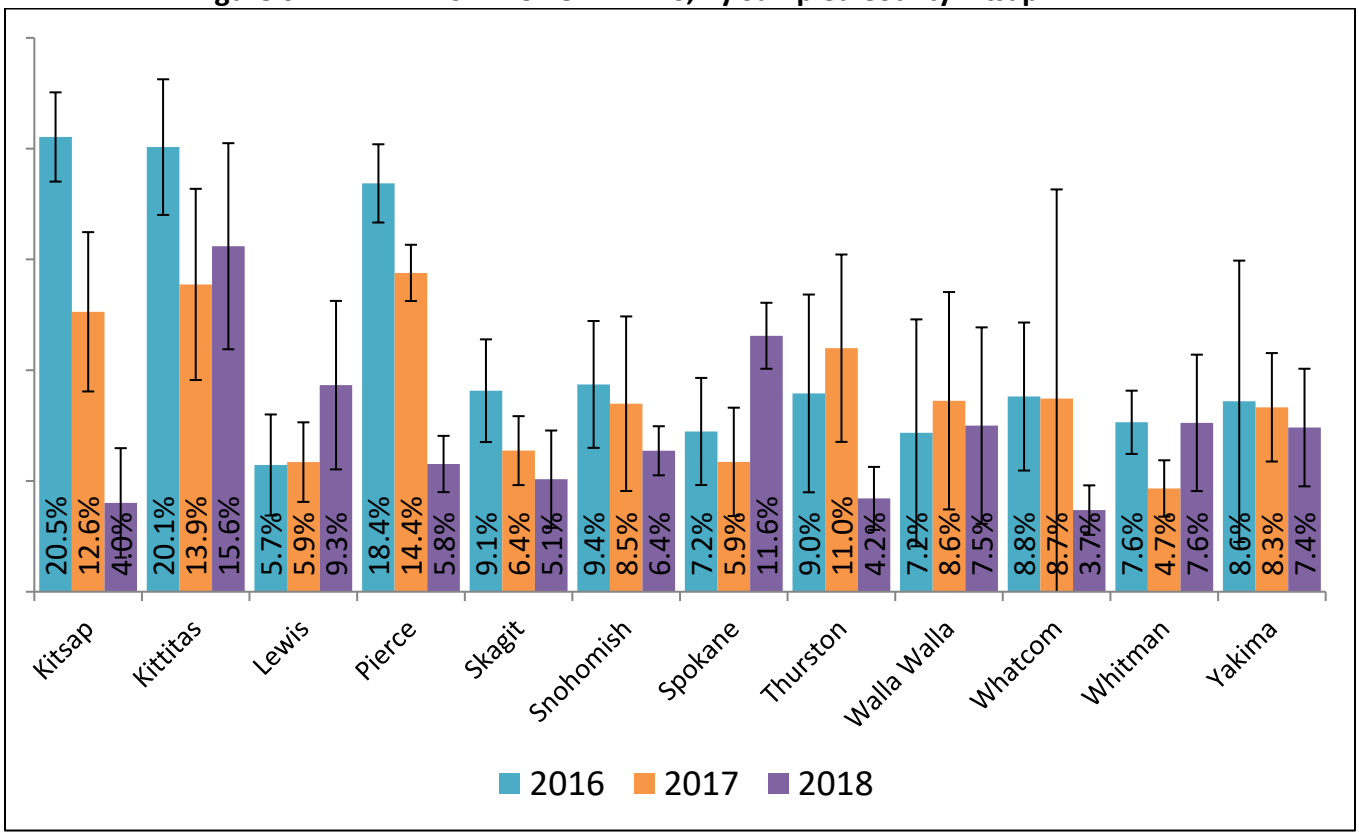


Figure 6. DRIVER DISTRACTION RATES, By Sampled County Kitsap-Y



DISCUSSION

This report is based on Washington's statewide observation survey of distracted driving, representing benchmark measures of estimated driver distraction. A similar study was conducted in 2013 and 2014 by the Harborview Injury Prevention and Research Center, collecting information in King, Spokane, and Whatcom Counties. Despite the differences in these studies, the results were similar; the majority of distracted drivers are using a cell phone. These efforts to measure the frequency of distracted driving in Washington are critical due to significant data limitations from other sources, such as crash data.

On January 1, 2006, the Washington State Department of Transportation (WSDOT) and the Washington State Patrol implemented Legislature-enacted changes to the state's Police Traffic Collision Report, adding 12 new and specific distraction codes to the collision report form. This change increased the frequency of crash investigators' reporting of driver distraction from 6.1 percent of crashes in 2005 to 11.1 percent in 2006. Through 2012, that proportion remained fairly steady, after which an even larger increase occurred in 2013 as a result of administrative changes to collision coding practices at the WSDOT. When analyzing distraction involvement in crashes from WSDOT's statewide collision database, the baseline benchmark is now year 2013 as previous years are not comparable.

In addition to collision data challenges, there are good reasons to believe that police investigators under-report the involvement of driver distraction in crashes. One important reason is the difficulty of gaining access to driver cell phone records during the investigation of crashes. Even when police suspect that cell phone-based distraction has played a role in a crash, unless they are able to establish probable cause (e.g., through witness statements or other evidence) they will be unable to obtain a warrant for a driver's cell phone records.

Considering these limitations along with other data sources, this study provides important information regarding the nature of distracted driving in Washington State. The distracted driving laws implemented in 2017 seem to have had immediate effect on driver behavior, although further evaluation is required. While the state has experienced measured reductions in cell phone use contributing to driver distraction, the increase in the frequency of other distracting behaviors is concerning. In order to achieve significant reductions in death and injury from distracted driving, it is important to address all driver distractions.

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DATA TABLES

Type of Distraction	2016			2017			2018		
	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL
Not Distracted	20,235	90.8%	89.9-91.6%	25,009	90.8%	90.1-91.5%	21,587	91.7%	91.1-92.4%
Holding Phone	1,160	5.6%	4.8-6.3%	1,496	5.7%	5.2-6.2%	805	3.4%	3.0-3.8%
Other Distraction	600	2.3%	2.0-2.7%	697	2.1%	1.8-2.4%	863	3.7%	3.1-4.2%
Holding Phone to Ear	321	1.3%	1.1-1.5%	435	1.5%	1.3-1.7%	278	1.1%	1.0-1.3%
TOTAL	22,322	9.2%	8.4-10.1%	27,638	9.2%	8.5-9.9%	23,533	8.2%	7.6-8.9%

Distraction by Vehicle Motion	2016			2017			2018		
	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL
Moving	13,304	9.7%	8.3-11.0%	20,174	8.7%	7.9-9.5%	14,706	8.8%	7.1-8.8%
Slowing/Starting	7,673	7.7%	6.8-8.6%	6,473	9.5%	8.3-10.7%	6,676	10.0%	7.9-10.0%
Stopped	1,339	14.2%	11.1-17.3%	991	17.4%	14.5-20.3%	2,151	10.9%	5.9-10.9%
TOTAL	22,322	9.2%	8.4-10.1%	27,638	9.2%	8.5-9.9%	23,533	8.2%	7.6-8.9%

Distraction by Type of Intersection	2016			2017			2018		
	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL
Stop Light	15,839	9.8%	8.7-10.9%	20,025	9.7%	8.9-10.5%	17,217	9.0%	7.5-9.0%
Stop Sign	4,426	6.8%	5.5-8.1%	5,512	7.6%	6.5-8.8%	4,706	9.5%	6.5-9.5%
Yield Sign	1,595	8.5%	7.8-9.3%	1,185	10.0%	6.7-13.3%	1,077	13.4%	5.4-13.4%
Roundabout	462	8.5%	7.8-9.3%	916	5.0%	1.6-8.4%	538	11.6%	6.1-11.6%
TOTAL	22,322	9.2%	8.4-10.1%	27,638	9.2%	8.5-9.9%	23,533	8.2%	7.6-8.9%

Distraction by Sampled County	2016			2017			2018		
	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL	TOTAL OBSERVATIONS	WEIGHTED RATE	95% CL
Benton	1,213	7.0%	5.0-9.0%	1,622	11.8%	8.2-15.4%	1,598	10.0%	7.6-12.5%
Chelan	370	11.1%	8.0-14.1%	642	12.9%	8.6-17.2%	654	13.8%	10.9-16.6%
Clallam	252	7.1%	4.9-9.4%	239	5.9%	4.17.7%	171	3.5%	1.6-5.5%
Clark	1,166	7.4%	5.6-9.1%	1,351	5.8%	4.5-7.1%	1,517	6.5%	5.3-7.6%
Cowlitz	441	3.6%	1.3-5.9%	623	6.9%	5.3-8.5%	580	11.4%	8.5-14.2%
Douglas	129	17.1%	14.2-19.9%	155	11.0%	7.0-14.9%	334	14.4%	10.8-18.0%
Franklin	542	7.7%	5.3-10.2%	777	8.5%	6.0-10.9%	728	11.4%	8.3-14.5%
Grant	444	12.4%	8.0-16.9%	528	15.9%	11.7-20.1%	615	13.7%	9.4-17.9%
Grays Harbor	117	8.5%	3.4-13.7%	84	7.3%	2.4-12.2%	105	3.8%	3.2-4.5%
Island	136	6.6%	3.3-10.0%	117	12.0%	2.5-21.4%	109	6.4%	2.6-10.2%
King	3,766	9.7%	8.3-11.2%	4,271	10.2%	9.0-11.5%	3,442	7.0%	5.8-8.1%
Kitsap	381	20.5%	14.2-26.9%	1,204	12.6%	10.2-15.1%	650	4.0%	1.5-6.5%
Kittitas	289	20.1%	14.8-25.3%	310	13.9%	9.2-18.6%	218	15.6%	10.9-20.2%
Lewis	473	5.7%	4.0-7.4%	376	5.9%	4.1-7.6%	504	9.3%	5.5-13.1%
Pierce	1,353	18.4%	11.7-25.2%	3,114	14.4%	12.7-16.1%	2,169	5.8%	4.5-7.0%
Skagit	551	9.1%	7.5-10.7%	471	6.4%	3.9-8.8%	492	5.1%	2.9-7.3%
Snohomish	1,945	9.4%	7.7-11.0%	1,732	8.5%	7.2-9.8%	1,823	6.4%	5.3-7.5%
Spokane	4,811	7.2%	6.3-8.2%	4,909	5.9%	4.8-6.9%	4,094	11.6%	10.1-13.0%
Thurston	782	9.0%	6.5-11.4%	1,876	11.0%	9.0-13.0%	1,044	4.2%	2.8-5.6%
Walla Walla	237	7.2%	4.1-10.3%	174	8.6%	4.6-12.6%	320	7.5%	3.1-11.9%
Whatcom	1,396	8.8%	7.6-10.0%	1,353	8.7%	6.6-10.9%	815	3.7%	2.6-4.8%
Whitman	353	7.6%	5.4-9.9%	665	4.7%	4.0-5.3%	328	7.6%	4.5-10.7%
Yakima	462	7.6%	6.3-10.9%	1,045	8.3%	5.4-11.3%	1,228	7.4%	4.8-10.1%
TOTAL	22,322	9.2%	8.4-10.1%	27,638	9.2%	8.5-9.9%	23,533	8.2%	7.6-8.9%

APPENDIX A: Methodology

Selecting Intersections

The observation survey demanded site locations at high-traffic intersections. To fit these criteria a list of intersections was developed in ArcGIS. Roads were queried out from the densest available network (a statewide transportation geodatabase published by Washington Department of Natural Resources). The Unsplit Line functionality of ArcGIS was used to remove inadvertent road segments created by the digitizing process. Next, the unified road dataset was intersected with itself, generating a spatial dataset of points at intersections. The road name, where it existed, was transferred to these points.

Points that fell within municipal boundaries (obtained from incorporated municipalities as recorded by Washington State Office of Financial Management) were extracted and labeled with the county name and the municipality name and tagged with major city (a county seat or one of the two largest cities in a given county). Data fields for latitude and longitude were added and populated with each point's geographic coordinates in decimal degrees. Duplicate points were removed by deleting all instances of identical latitude and longitude values past the first occurrence.

A field was added to the spatial data detailing the resulting list of 6,279 sites and populated with random numbers between 0 and 1 (0.000001 – 0.999999). Organizing the sites within each municipality by ascending number enabled the selection of the first N intersections, where N is a number that reflects each county's proportional share of the total number of candidate sites.

Weighting Observations

A probability of selection was derived for each intersection within selection counties by dividing the number of sampled intersections by the total number of intersections. During the intersection site mapping, a primary trafficway was provided for determining the direction of travel that would observed. The probability of observing a direction of traffic travel was constant 0.5 (considering two possible directions of travel). A constant probability of observation time was also considered and set at 0.0303 (1 20-minute period divided by all 20-minute periods during the 11 hours per day of observation collection time). The final weight is the inverse of the product of the three probabilities.

$$Weight = \frac{1}{P_S * P_D * P_T}$$

SAS survey procedures were used to conduct domain and ratio analyses using the final derived weights.

APPENDIX B: Data Collector Procedures

Each pre-selected site was observed by a two-person team for a 20-minute period between the hours of 7 a.m. and 6 p.m. during the month of May. Teams collected driver behavior data on passenger vehicles and commercial vehicles with a gross vehicle weight of 10,000 pounds or less (such as a pizza delivery driver), including cars, vans, pickups, and SUVs at pre-selected controlled intersections. Controlled intersections included roundabouts, stop signs, yield signs, and stop lights.

Each team was comprised of two positions: an Observer and a Recorder. Teams could alternate positions when moving between sites, but could not change positions when in the middle of a site observation. The team proceeded to the location per the site data sheet and observed the predetermined traffic flow. If the team reached a site that included multiple lanes eligible for observation then traffic was observed for a few minutes in order to make an assessment of how many lanes could accurately be observed.

During data collection, the Recorder was positioned either in front of or parallel to the Observer so they could best hear the observations as they were called out. The Observer called out the initial observation to the Recorder who entered the data in the iPad survey app. In addition, field training revealed that the presence of the observers obviously looking inside vehicles was in and of itself causing distraction. Having the observer and recorder facing each other made it appear that they were in conversation rather than observing vehicles. This technique significantly reduced the amount of driver attention diverted to the observer team.

Data was only collected on drivers. Data collected on each driver included whether the vehicle was moving, slowing/starting, or stopped and whether the driver had no distraction, cell phone to ear, holding/manipulating phone, or other distraction (such as eating, radio, and pets). Drinking a beverage or smoking did NOT count as distractions so long as the driver was not clearly distracted otherwise. Only the initial behavior at the observation point was recorded. If the driver changed behavior while being observed, only the initial observation was recorded.

Quality Control (QC) Monitors made unannounced visits to at least 5 percent of the total survey sites. During these visits, the QC Monitor first evaluated the data collector team's performance from a distance (if possible), and then observed from beside the team to monitor data recording. The QC Monitor ensured that the data collector team was following all survey protocols including: being at the assigned sites, making accurate observations, and accurately entering the data into the iPad survey app. For every visit, the QC Monitor prepared a site report indicating data collector team names, date and time of observation, site ID, photo of team in action, and any problems with data collection site locations and data collector team performance.

Observer Guidelines

The team remained fixed at the intersection for the duration of the observation period. Vehicles were recorded as moving, slowing/starting, or stopped. A vehicle was considered moving if it maintained speed above 10 mph (through subjective assessment) through the

intersection. A vehicle was considered slowing/starting if it was just starting from a stopped position or coming to a stop position. A vehicle was considered stopped when it had come to a complete rest. The following guidelines were provided to the observer teams and were used in determining when to make the initial observation.

Stop Signs, Yield Signs, and Roundabouts

If traffic is light, then try to catch the initial observation while the driver is approaching the intersection (as opposed to when the driver is stopped). The observer might choose a point just before the intersection to focus observations. If traffic is heavy (three or more vehicles lining up to pass through the intersection), then record the initial observation of the vehicle in position one or two when the vehicles are stopped.

Intersections with Signals

At intersections with signals, the observer will always be capturing some initial observations as vehicles move through the intersection (when the light is green). If traffic is light and the signal turns yellow or red and the vehicle will not proceed through the intersection, then capture the initial observation as the vehicle approaches the signal. In heavier traffic (three or more vehicles lining up to pass through the intersection), capture the initial observation of the first two vehicles as they approach the intersection (as opposed to when the driver stops). The team may move down the line of cars up to two car lengths to capture a 'stopped' observation of the third and fourth vehicles. The team should then return to the primary observation spot. Once the light turns green, wait until the fourth or fifth (depending on how many 'stopped' observations were recorded while the light was red) to reach the observation point and record the 'moving' observation. Repeat the steps above for each light cycle.

Quality Observations

The team should find the approach that works best for them. Observations should be captured on moving (as opposed to stopped) vehicles when possible; however, if traffic is moving fast and/or is heavy, it is OK to collect mainly stopped observations. The most important thing is quality (accurate) observations, so find the approach that works best for the team while still following the protocol. Observing the presence of an earpiece will be the most challenging and is likely to be infrequent. It may be most efficient for the observer to only call out the vehicle movement and the observed distraction, and call out the earpiece status only when one is observed. You may also consider a callout for the recorder indicating the completion of the observation, such as "next!" or "done!"

APPENDIX C: iPad Driver Distraction Data Collection Application