Driving While Distracted
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Driving While Distracted
Washington State

Washington State’s cell phone and driving law: A continuing journey

Forth Worth Texas
March 2015
Washington’s Law

• Passed first cell phone/texting law in 2007
  – Secondary violation
  – Phone must be “held to ear” to be illegal
  – Texting, the newest rage, is referenced specifically in the language
• Apple introduced it’s first iPhone almost simultaneously….
Then & Now – What does the future hold
Washington’s Law

- Law was updated in 2010
  - Primary enforcement now allowed
  - Same “phone to ear” and “texting “ language
  - Law is confusing to law enforcement and the public
Are police writing tickets?

Washington Case Filings for Hand Held Cell Phone Use or Text Messaging Violation

( RCW 46.61.667 and 46.61.668 )
From July 2008 through December 2013

Data source: Administrative Offices of the Courts (AOC). Number of cases filed under RCW 46.61.667 (using wireless telecommunications device while driving) and RCW 46.61.668 (sending, reading, or writing a text message). Does not include cases filed in Seattle Municipal Court (SMC).
Senate Bill 5656

SB 5656 - Distracted Driving Agency Request Legislation

Cell phones are great for convenience and efficiency, but they're a dangerous distraction for drivers.

- Distracted driving is a factor in 30 percent of fatal collisions.
- Talking on a cell phone increases crash risk four times.
- Texting increases crash risk 23 times.
- A recent UW survey showed nearly 1 out of 10 WA drivers were using a cell phone.

Cell phone technology has advanced since the state's original cell phone laws were legislated in 2007. These advances have made enforcing the current laws difficult. Clarity in the laws will help in raising public awareness and changing driver habits. The National Safety Council estimates a minimum of 28 percent of crashes involve drivers talking and texting on cell phones.

- Ban handheld use. The current law only applies to drivers who are "holding a wireless communications device to his or her ear."
- Address all forms of electronic data. The new definition would cover messaging, texting, emailing, or any other form of electronic communication.
- Emergency exemptions. Allow use for calling emergency services and for emergency services personnel.
- Make it serious. The new law would double fines for subsequent offenses in five years, and the infraction would go on the driver's record reported to insurance companies.
- Test on it. Include distracted driving questions in the written portion of the driver's examination.

Need more information?

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Measuring The Problem

- 1 in 10 WA drivers are using their phone; half of those are texting
- Washington law enforcement takes the law seriously: 4,000 cell phone, 200 texting citations each month
- UW Harborview Injury Prevention & Research Center’s work
- WTSC will continue to measure statewide use and citations each year.
Questions?

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California Highway Patrol
Deputy Commissioner Mona Prieto

Adult Distracted Driver

Teen Distracted Drivers Education and Enforcement
Adult Distracted Driving

- OTS funded Adult Distracted Driving traffic safety campaign started in 2010/2011

- Statewide Collisions
  - 2009 - 23,235
  - 2012 - 18,279
  - Educational and Public Awareness
  - Enforcement

-Reduces Injury and Mileage Death Rate-
Teen Distracted Driving Education and Enforcement

- Partnership program: CHP and Impact Teen Drivers
- Strategies to keep your kids safe on the roads
- Graduated Driver Licensing (GDL) Laws
- How to help stop the #1 killer of teens in America -reckless and distracted driving-
More People are Using Cell Phones

1985  340,213 subscribers  
      (1.4% of total U.S. population)

2012  326.4 million subscribers  
      (U.S. population = 312.7 million)
“Home in 10”

Average text = 4.6 seconds
4.6 seconds @ 65mph = 100 yards
The Multitasking Myth

“Contrary to popular belief, the human brain cannot multitask.”

“The Great Multitasking Lie” Infographic: National Safety Council
In a Matter of Seconds
APRIL

Distracted Driving Awareness Month

- CHP & OTS Statewide Campaign
- Education
- Enforcement
Coming Soon!

Teen Safety in 3D...

- New Drivers
- Distracted Driving
- Driving Under the Influence
Office of Community Outreach and Media Relations
(916) 843-3210
www.chp.ca.gov

Impact Teen Drivers
Kelly Browning
www.impactteendrivers.org
Measuring the risk of driver distraction and devising countermeasures to reduce it

David Kidd, Ph.D.
AAMVA’s 2015 Workshop & Law Institute • March 18, 2015
Drivers engage in numerous types of secondary behavior
Distraction-affected fatal crashes
Fatality Analysis Reporting System, 2013

- In 2013, there were 30,057 fatal crashes in which 32,719 people were killed
- At least one driver was coded as distracted in 2,910 fatal crashes in which 3,154 people were killed
  - Cellphones were a contributing factor for 14% of these deaths
- These statistics almost certainly underestimate the role of distraction in fatal crashes
  - Unless a driver volunteers that he/she was distracted, there is little evidence of distraction at the scene of the crash
  - It is rare that cellphone billing records are subpoenaed and examined
Mixed research evidence on risks of talking on cellphones

• Laboratory studies found that dialing and talking on cellphones degrade at least some measures of simulated or instrumented driving

• Epidemiologic studies in Canada and Australia found four-fold increase in crash risk when drivers are talking on their phones, based on cellphone billing records of crash-involved drivers

• Naturalistic studies using video recordings of daily driving suggest talking on a phone is not associated with increase in safety-critical event risk but manipulation of phone is (e.g., dialing, texting)

• Main limitations:
  – Phone and driving tasks in experimental studies are specified by researchers and the relationship to real-world crash risk is unknown
  – Epidemiological studies depend on drivers’ recollections of driving during crash and control periods
  – Most naturalistic studies have small samples of volunteer drivers and few crashes necessitating use of crash surrogates to estimate risk
Secondary behaviors associated with driver cellphone use
IIHS, 2014

• Examined video and other data (e.g., vehicle speed) for sample of trips

• Calculated percent of driving time using cellphones or engaging in other potentially distracting behaviors

• Compared cellphone use rates to other distractions and to rates of crashes and near-crashes
  – Crashes – any contact between vehicle and another vehicle, person or other object
  – Near-crashes – conflict situations requiring rapid evasive maneuvers or braking

Analyzed data from naturalistic driving study involving 105 cars driven by commuters in Northern Virginia during 2003-2004
### Secondary behaviors coded for sampled trips

7 observations per second

<table>
<thead>
<tr>
<th>Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interacting with cellphone</td>
</tr>
<tr>
<td>Interacting with PDA</td>
</tr>
<tr>
<td>Interacting with other electronic device</td>
</tr>
<tr>
<td>Interacting with passenger</td>
</tr>
<tr>
<td>Talking/singing/dancing alone</td>
</tr>
<tr>
<td>Reading/viewing pictures</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Interacting with moving object</td>
</tr>
<tr>
<td>Interacting with insect</td>
</tr>
<tr>
<td>Interacting with pet</td>
</tr>
<tr>
<td>Reaching for object</td>
</tr>
<tr>
<td>Eating</td>
</tr>
<tr>
<td>Drinking</td>
</tr>
<tr>
<td>Smoking cigar/cigarette</td>
</tr>
<tr>
<td>Lighting cigar/cigarette</td>
</tr>
<tr>
<td>Adjusting radio/climate control</td>
</tr>
<tr>
<td>Adjusting other device integral to vehicle</td>
</tr>
<tr>
<td>Personal hygiene</td>
</tr>
<tr>
<td>Holding object in lap or hand without interacting</td>
</tr>
<tr>
<td>Looking at something outside the vehicle</td>
</tr>
</tbody>
</table>
Association of cellphone use and near-crash/crashes

Near crash/crashes per 1,000 hours of driving
Association of talking on phone and other secondary behaviors

Percent of driving hours engaging in other secondary behavior

percent of driving hours talking on cellphone
Talking on a phone, other secondary behaviors, and time spent looking away from road

Percent of driving hours with eyes off road and vehicle mirrors

- Talking on cellphone
- Other secondary behaviors
Conclusions

• The risk of crash/near-crash did not increase significantly during periods when drivers used their cellphones more frequently

• Some possible reasons:
  – Drivers engaged in fewer other secondary behaviors during periods where they talked on the phone more
  – Drivers looked away from the road less during periods where they talked on their cellphones more
  – Drivers looked away from the road more during periods with greater engagement in other secondary behaviors

• To have maximum effect on safety, countermeasures should address all forms of distraction
Legislation found to be effective for reducing hand-held cellphone use but effect on crashes is unclear
Actual hand-held phone use less than what would be expected without hand-held cellphone bans

Percent phone use, April 2009

The effects of bans on drivers’ hand-held phone use differ considerably, but bans can result in long-term reductions in drivers’ hand-held phone use.
Inconsistent changes in collision claim frequencies following enactment of hand-held cellphone bans

<table>
<thead>
<tr>
<th>State</th>
<th>Estimated Effect vs. Control States</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>-1%</td>
<td>0.26</td>
</tr>
<tr>
<td>Connecticut</td>
<td>+4%</td>
<td>0.03 *</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>-5%</td>
<td>0.18</td>
</tr>
<tr>
<td>New York</td>
<td>+3%</td>
<td>0.01 *</td>
</tr>
</tbody>
</table>
Drivers may modify potentially distracting behaviors based on roadway situation
Secondary behaviors more common in less-demanding roadway situations
Percent of drivers engaged in any secondary behavior

![Bar chart showing the percent of drivers engaged in secondary behaviors in different road situations.](chart)
Voice interfaces help keep drivers eyes on the roadway when they interact with technology
Average total number of seconds driver’s eyes were off forward roadway when calling a contact

IIHS, 2015
‘One-shot’ voice input resulted in more errors than menu-based voice input when entering address.

Percent of trials

<table>
<thead>
<tr>
<th></th>
<th>MyLink</th>
<th>Sensus</th>
<th>Smartphone (Chevrolet)</th>
<th>Smartphone (Volvo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>user error</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>system error</td>
<td>30</td>
<td>3</td>
<td>30</td>
<td>10</td>
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</tbody>
</table>
Front crash prevention technologies can mitigate or prevent crashes where drivers are distracted.
Forward collision warning, with and without autonomous braking, is preventing collisions. Relative changes in property damage liability claim rates.

<table>
<thead>
<tr>
<th></th>
<th>Warning with Autobrake</th>
<th>Warning Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acura</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercedes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volvo (Lane Departure Warning)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercedes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volvo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honda Accord (Lane Departure Warning)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-20%  -10%   0%    10%    20%
Current front crash prevention rating distributions
2014 and 2015 models

<table>
<thead>
<tr>
<th>Category</th>
<th>2014</th>
<th>2015</th>
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</thead>
<tbody>
<tr>
<td>Not qualified/not available</td>
<td>117</td>
<td>70</td>
</tr>
<tr>
<td>Basic</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>Advanced</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>Superior</td>
<td>19</td>
<td>27</td>
</tr>
</tbody>
</table>
Dedicated to reducing deaths, injuries, and property damage on the highway
Distraction and near-crash/crash rates over time
Subject #1086: 51-year-old female

- percent driving time using phone
- percent driving time on other secondary behavior
- crashes/near crashes per 1,000 hours