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16. Abstract

High-visibility enforcement (increased police presence supported by paid and earned media) was implemented in the Sacramento area of California and in Delaware in support of laws banning the use of handheld cell phones while driving. Three waves of enforcement were conducted from November 2012 to June 2013. Paid and earned media featured the tagline, *Phone in One Hand, Ticket in the Other.* The program evaluation included analyzing media and enforcement activity data, administering an awareness survey, conducting roadside observations of driver electronic device use, and analyzing crash data. Crash data analyses did not reveal any apparent effect on the incidence of distraction-related crashes in the same periods. This is likely due to the overall small percentage of crashes coded as distraction-related. Driver surveys showed an increase in awareness that cell phone laws were being enforced. Observed handheld driver cell phone use dropped by one-third from 4.1 percent to 2.7 percent in California (a 34% reduction); and from 4.5 percent to 3.0 percent in Delaware (a 33% reduction). It was concluded that high-visibility enforcement can be implemented over widespread, multijurisdictional areas and may reduce the number of people who use handheld cell phones while driving.

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TECHNICAL SUMMARY

Background

The National Highway Traffic Safety Administration estimates that 10 percent of fatal crashes (3,328), 18 percent of injury crashes (421,000), and 16 percent of all motor vehicle crashes in 2012 were reported as distraction-affected crashes. According to the Governor's Highway Safety Association (GHSA), as of January 2015 there were 14 States, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands that prohibit drivers of all ages from using handheld cell phones while driving. All of these laws allow primary enforcement. Forty-four States, DC, Puerto Rico, Guam and the U.S. Virgin Islands ban text messaging for drivers of all ages; all but five have primary enforcement.

Previous research indicates that high-visibility enforcement (HVE) programs targeted at handheld cell phone use can reduce observed usage rates. Specifically, distracted driving in Hartford, Connecticut, and Syracuse, New York, produced handheld phone use reductions of 57 percent (from 6.8% to 2.9%) and 32 percent (from to 3.7% to 2.5%), respectively over the course of the campaign. Drivers who were manipulating their phones (texting) while driving declined 72 percent in Hartford (from 3.9% to1.1%), and 32 percent in Syracuse (from 2.8% to 1.9%) (Chaudhary, Casanova-Powell, Cosgrove, Reagan, & Williams, 2012). After demonstrating the program at the community level, the next step was to determine if the program would be effective when implemented on a larger scale, covering larger geographic and demographic areas. To take this next step, three waves of distracted driving HVE following a similar methodology were conducted in the Sacramento Valley region of California and across the State of Delaware.

Program Description

Both demonstration areas have primary enforcement laws banning the use of handheld cell phones while driving and making it a violation to write, send, or read text-based communication on an electronic wireless device while driving.

Three enforcement waves were conducted in each State: Wave 1 in November/December 2012, Wave 2 in February/March 2013, and Wave 3 in June 2013. California's Office of Traffic Safety and Delaware's Office of Highway Safety conducted the programs. The enforcement area in California covered nine counties in the Sacramento Valley region, encompassing almost four million residents (roughly 10% of California's population) including El Dorado, Sacramento, San Joaquin, Stanislaus, Solano, Sutter, Placer, Yuba, and Yolo counties. Enforcement was conducted statewide in Delaware, covering close to 900,000 residents.

Comparison (control) areas were selected for each enforcement program with selection based on reasonable demographic similarity (i.e., total population, population density and median income). Media market boundaries and potential for media isolation was also considered important to avoid program messages from reaching the comparison area. Portland, Oregon, was selected as the comparison area for Sacramento whereas Atlantic County, New Jersey, and New Haven County, Connecticut, were selected as Delaware's control areas. Enforcement data (i.e., tickets issued, officer hours worked) were gathered in the intervention areas while observed cell phone use and program awareness data were collected for both the intervention and comparison areas.

Enforcement

Enforcement in California was conducted by 37 local police departments in the Sacramento area (93% of the 40 departments that were invited to participate) and by the California Highway Patrol. Over the course of the entire program, California allocated $472,973 to finance overtime roving patrols where officers actively sought out distracted drivers and reported 10,781 distracted driving citations were issued by California law enforcement officers.

As part of the first HVE program in Delaware to reduce distracted driving, 98 percent of local police departments in the State of Delaware (41 out of 42) and the Delaware State Patrol participated in the enforcement campaign. Delaware allocated $352,387 to finance enforcement efforts and reported 6,291 distracted driving tickets were issued by Delaware officers.

Media

Paid media material was adapted from the earlier programs in New York and Connecticut and included use of the *Phone in One Hand, Ticket in the Other* slogan and logo.

Substantial amounts of television, radio and online advertising were purchased. Well-publicized kick-off events were held in each State followed by extensive earned media efforts to ensure that local news outlets covered the story. (Earned media refers to publicity gained through promotional efforts other than paid advertising.) The target audiences were adults 18 to 49 years old for California and Delaware, with Hispanic people as part of the overall mix. Heightened enforcement took place in three distinct waves in the two intervention areas.

Awareness

Due to the particularities of each State awareness survey data were collected in slightly different ways in the two intervention areas. Awareness surveys in Delaware and its comparison areas were collected from motorists visiting Division of Motor Vehicle (DMV) offices. A different strategy was designed for California since a high percentage of DMV business is conducted online. Instead, survey respondents in California and its comparison site were collected from drivers at pre-selected gas stations.

California Results

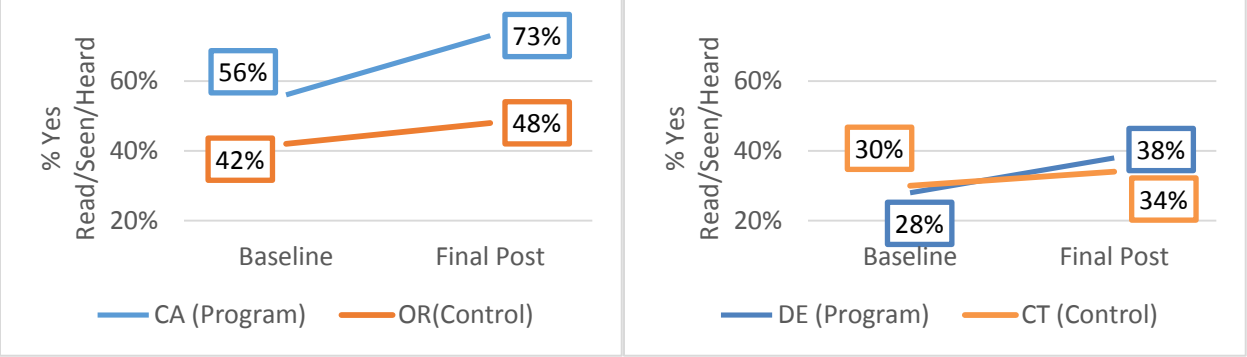
The percentage of respondents in the Sacramento area who heard about enhanced police enforcement (i.e., media accounts or personal accounts of distracted driving police enforcement activities) increased significantly, from 56 percent at baseline to 73 percent at the end of the third and final wave. Small increases in awareness were present in the comparison area as well, but none was significant.

Awareness of the advertising slogan *Phone in One Hand, Ticket in the Other* demonstrates the extent to which respondents remembered the program catch phrase promoted in both paid and earned media efforts. Awareness of the slogan increased significantly in California, going from 16 percent at baseline to reach a high of 57 percent at the conclusion of the program. The equivalent percentages in the Portland control area were 8 percent at baseline and 7 percent after the third and final enforcement wave.

Delaware Results

The percentage of respondents reported having read, seen, or heard about enforcement in Delaware also increased significantly (28% to 38% over the course of the program) with a smaller and non-significant increase in New Haven County over the same period (30% to 34%).

Phone in One Hand, Ticket in the Other slogan recognition increased significantly in Delaware, from 7 percent at baseline to 19 percent after the final Wave. Recognition in New Haven County remained stable at 19 percent in both baseline and post Wave 3.

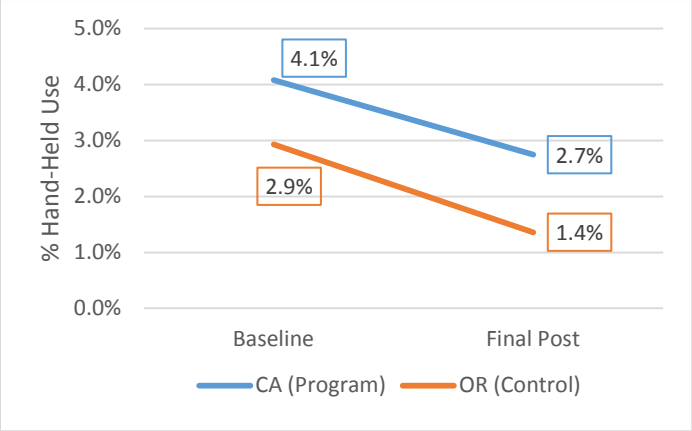


Observed Cell Phone Use

Cell phone use observations were conducted at 15 sites in each intervention and control area. Across all sites and all waves, close to 35,000 drivers were observed in Sacramento, CA (and close to 19,000 in Portland, OR). More than 50,000 drivers were observed in Delaware (and over 30,000 in the Connecticut control area).

California Results

The baseline handheld cell phone use rate in California decreased significantly from baseline to final post (4.1% to 2.7%, respectively). The comparison area of Portland also showed a significant decrease (from 2.9% to 1.4%) over the same period. Further analysis indicated that the decrease in California was likely related to this program; the decrease in Oregon coincided with legislative efforts to raise the cell phone use fine. The Oregon State Senate proposed to increase the maximum penalty to $1,000 while the Oregon House of Representatives attempted to increase the maximum penalty to $2,000.

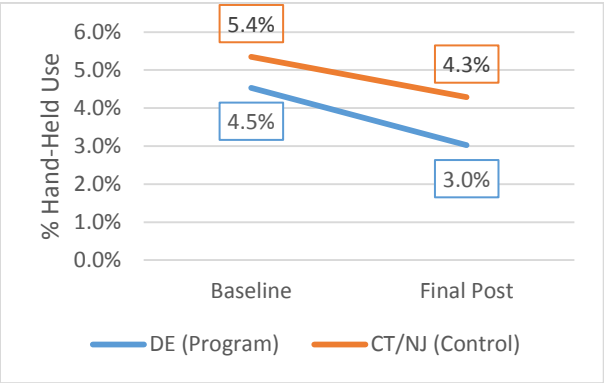


After breaking down changes in observed use by age group, handheld cell phone use by the youngest drivers in California (the main target of the media campaign) was shown to decrease significantly from baseline (4.1%) to final post (1.6%). Use among the middle age group also decreased significantly, from 4.2 to 2.9 percent. Young drivers in the Portland control area showed little change (2.1% to 1.9%) but middle aged drivers showed a significant drop (3.6% to 1.4%).

There was no observed change from baseline to final post in phone manipulation (3.8% to 3.6%). There was a significant decrease in the control area (6.7% to 5.2%) but the interaction between areas was not significant. Observations in California showed no baseline to final post change in the use of an earpiece (2.2% to 2.4%). There was an observed increase in Oregon (2.2% to 3.2%) but the interaction between areas was not significant.

Delaware Results

Drivers in the Delaware enforcement area showed a significant decrease in handheld use from baseline to the end of Wave 3 (from 4.5% to 3.0%) as did drivers in the New Jersey and Connecticut areas combined (5.4% to 4.3%). The Connecticut control area examined independently had a non-significant drop, from 5.1 to 4.0 percent.



Overall, the baseline to final post interactions between Delaware and the combined control areas showed a significant effect, indicating that the decrease in use in Delaware was significantly greater than the decrease in the combined control areas. That is, the decrease in the program area was significantly greater than the decrease in the control areas. The youngest drivers in Delaware showed the largest drop over the course of the program, going from 9.1 percent use to 4.8 percent. This and the drop for middle aged drivers were both significant. Only the youngest group in Connecticut showed a significant decrease.

Delaware observations showed a decrease in phone manipulation from baseline (4.5%) to the final post (3.7%). There was also a significant decrease in New Jersey (5.1% to 3.7%); there was no such effect in Connecticut. There were no interactions between program and comparison areas.

There was also a significant decrease from baseline to final post in Delaware (3.9% to 3.0%) and New Jersey (3.0% to 1.8%) in earpiece use, with no interaction effect between the States. There was a significant increase in earpiece use in Connecticut (3.0% to 3.7%) and the interaction between Delaware and Connecticut was also significant.

Discussion

The campaign's slogan, *Phone in One Hand, Ticket in the Other,* was shown to be effective in conveying the message of increased cell phone enforcement to the public. A significant proportion of drivers recognized the slogan in California (57%) and a near doubling in awareness in Delaware occurred (to 19%), thus indicating that the public did recognize the message by the

end of the program. Combined with increased slogan recognition in those reporting that they heard about enforcement in the past 30 days, there is a clear indication that drivers in the program sites were aware of the rise in enforcement.

The reduction in observed handheld use in Delaware was greater than in the respective control areas. It was concluded that the Delaware enforcement and publicity program was effective. The California program also led to a significant drop in cell phone use while driving. However, while unknown at the time of control site selection, the threat of a drastically increased distracted driving fine (as high as $1,000 to $2,000) in Oregon could have contributed to a drop in observed cell phone use in Portland.

Overall, these demonstration programs show larger-scale high-visibility enforcement distracted driving programs can be conducted and support the effectiveness of high-visibility enforcement programs as one countermeasure in reducing handheld cell phone use while driving. Target behaviors were reduced to a point below the baseline level by the end of the program for both California and Delaware. Survey data indicated that motorists showed widespread support for cell phone and texting enforcement.

The results indicate that cell phone use decreased during the program period in the program area. The same effect, however, existed in the control area. The decrease in the Portland area was significantly greater than those in the Sacramento area suggesting that there was no relative decrease in California. That said, there were numerous media reports related to the possibility of a large ($1,000) fine for cell phone use in Portland that coincided with the final measures which may have confounded the study. The decreases in handheld cell phone use in both New Jersey and Connecticut were significantly less than the decrease in handheld phone use in Delaware. Thus we can be somewhat confident that there is an effect but less confident regarding the magnitude of the effect. Nonetheless, these demonstrations reaffirm earlier results obtained with occupant protection, impaired driving, aggressive driving, and speeding, and show that high-visibility enforcement campaigns do encourage compliance with State laws and help modify driver behavior.

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I. BACKGROUND

Cell Phone Prevalence and Use While Driving

Eighty-five percent of adults in the United States have a cell phone (Duggan & Rainie, 2012). Cell phones are the primary source of telephone communication for more than half of the households in the United States. Recent wireless estimates show that 38.2 percent of households are cell phone-only households (i.e., households with no landline telephone) and another 16 percent of households receive all or most of their calls via cell phone (Blumberg & Luke, 2012).

Cell phone use for other activities is also increasing. The percentage of cell phone users that engage in texting has increased from 58 to 80 percent from 2007 to 2012 (Smith, 2013). The percentage of cell phone users accessing the Internet (56%) and sending or receiving e-mail (50%) were also at all-time highs in 2012. This is likely related to the increase in "smart phone" ownership, with 61 percent of cell phone users owning a smart phone.

It's estimated that 10 percent of fatal crashes (3,327) and 18 percent of injury crashes (421,000) in 2012 were attributable to all forms of distracted driving (e.g., cell phone use, eating, shaving, etc.) (NCSA, 2014). The prevalence of cell phone use while driving can be measured in multiple ways, including: self-reports of behavior, observational studies and naturalistic studies. According to the 2012 National Survey on Distracted Attitudes and Behaviors, 48 percent of drivers reported answering the phone while driving at least sometimes, 24 percent reported making calls at least sometimes, and 10 percent reported texting at least sometimes (Schroeder, Meyers, & Kostyniuk, 2013). Observational data from the 2012 National Occupant Protection Use Survey (NOPUS) showed that handheld use remained at 5 percent from 2011 to 2012 while observed text-messaging or visible phone manipulation increased from 1.3 percent in 2011 to 1.5 percent in 2012 (Pickrell & Ye, 2014).

Laws and Campaigns Against Cell Phone Use While Driving

The U.S. Department of Transportation has made distracted driving and cell phone/texting laws a national priority. According to the Governor's Highway Safety Association (GHSA), as of January 2015, 14 States, DC, Puerto Rico, Guam and the U.S. Virgin Islands have primary enforcement laws that prohibit drivers of all ages from using handheld cell phones while driving. That is, a vehicle can be stopped for an observed cell phone violation alone. Additionally, some States ban use by novice or teen drivers, truck drivers, bus drivers, etc. Text messaging is banned for drivers of all ages in 44 States and the District of Columbia, and novice drivers are banned from texting in 48 States.

Braitman and McCartt (2010) found that 48 percent of drivers in States with universal texting bans were unaware of the law, or were unsure of its existence. This shows that laws by

themselves are only part of the solution, highly publicized enforcement programs focused on distracted driving enforcement can help spread awareness and increase the effectiveness of distracted driving laws. Highly publicized enforcement programs have played a major role in increasing seat belt use in the United States (Nichols & Ledingham, 2008; Williams & Wells, 2004). There is evidence that some drivers are not familiar with handheld and texting bans that apply to them.

Previous research shows well publicized handheld cell phone law enforcement programs, including public information and education programs, impact use rates and help to inform motorists about these laws. Prior HVE distracted driving demonstrations conducted in New York and Connecticut showed the effectiveness of targeted programs. Handheld phone use and texting dropped 32 percent in Syracuse while in Hartford handheld phone use dropped 57 percent over the course of the campaign. Driver surveys also showed increased awareness that cell phone laws were being enforced (Chaudhary, Casanova-Powell, Cosgrove, Reagan, & Williams, 2012).

Purpose of Present Study

The present study follows successful projects in Syracuse (fifth-largest city in NewYork) and Hartford (fourth-largest city in Connecticutt) that applied an HVE model to increase driver awareness of cell phone laws and reduce cell phone and texting rates among drivers. The current project was conducted in the Sacramento area of California and all of Delaware, thus allowing a test of the model's efficacy when used in much larger demographic and geographic areas requiring larger scale enforcement and media efforts across multiple communities.

Research Questions

To further test the efficacy of distracted driving HVE conducted over large demographically and geographically diverse areas, NHTSA proposed the following research questions.

1. Does the public perception of the risks of distracted driving change?
2. Did drivers see and hear the messages?
3. Did drivers see or experience increased enforcement of cell phone laws?
4. Does self-reported use of cell phone while driving change?
5. Does observed handheld cell phone use change after each enforcement wave and over the course of the demonstration campaign?
6. Does the number of cell phone and texting citations change?
7. Is there a change in the frequency of cell-phone- related crashes?
8. What are the characteristics (age, sex, zip codes, past citations) of the people cited for driving while using a handheld cell phone? Are these characteristics different from the general driving population?

II. PROGRAM DESCRIPTION

Program Selection

States with primary enforcement handheld cell phone bans interested in participating in a test of the HVE model for distracted driving submitted applications to through a competitive selection process. Applications from California and Delaware were selected. The enforcement area in California included nine counties in the Sacramento area, El Dorado, Sacramento, San Joaquin, Stanislaus, Solano, Sutter, Placer, Yuba, and Yolo. The population of this region is nearly 4 million, which is roughly 10 percent of California's population. The entire State of Delaware, with a population of approximately 900,000, also participated.

According to the California Office of Traffic Safety, three laws in California govern the use of cell phone communications while driving. Effective July 1, 2008, California drivers are prohibited from talking on a cell phone without a hands-free device while driving (a(a sunset clause for the use of two-way "push-to-talk" phones while driving ended July 1, 2011). California statute further prohibits all drivers from sending, reading, or writing of text messages while driving. Drivers younger than 18 are banned from using any "mobile service" technology while driving, even with a hands-free device. The first offenses incur a $20 fine, with subsequent violations incurring a $50 fine. Administrative and court fees raise the costs substantially to about $160 and $285 respectively.

According to the Delaware Office of Highway Safety, legislation passed in 2011 prohibits a driver from texting or using a handheld cell phone while a motor vehicle is in motion unless the driver employs a hands-free device. The use of the phrase "in motion" in the law means that vehicles stopped at intersections are excluded from ticketing. A first offense is subject to a civil penalty of $50. Subsequent offenses are subject to civil penalties of not less than $100 or not more than $200. Administrative and court fees raise the costs to about $106 for first offenses and up to about $350 for subsequent offenses.

California and Delaware's highway safety offices each agreed to conduct three waves of enforcement during the period of November 2012 through June 2013.

The same chronological order of measures was attempted for each wave within each State.
1. Awareness surveys were administered and cell phone use observations were conducted to establish pre measures of awareness and actual cell phone usage.
2. These were followed by a period of media content delivery and enforcement.
3. Once media and enforcement activities are concluded, post measures of awareness and cell phone use observations were collected to establish a post measure.

Enforcement

Enforcement in California was conducted by 38 out of 41 invited police departments in the Sacramento area, including the California Highway Patrol (CHP). Within the participating counties there were seven cities with populations over 100,000 including Fairfield, Vallejo, Roseville, Elk Grove, Modesto, Stockton, and Sacramento. Another 12 cities had populations between 50,000 and 100,000, with the remaining cities (21) having populations of less than 50,000. Only four cities had populations of less than 10,000.

California allocated funds to departments to finance overtime-hour roving patrols where officers actively sought out distracted drivers. These patrols were conducted between waves as well as during the program waves. A few of the larger departments used spotters (plainclothes or uniformed officers observing traffic who radio infractions to other officers to make a stop). Motorcycle patrols were particularly effective in identifying violators.

Participating Law Enforcement Agencies - California

Auburn	Manteca	South Lake Tahoe
Ceres	Marysville	Stockton
Citrus Heights	Modesto	Suisun City
Colfax	Newman	Tracy
Davis	Oakdale	Turlock
Dixon	Patterson	Vacaville
Elk Grove	Placerville	Vallejo
Fairfield	Rancho Cordova	West Sacramento
Folsom	Ripon	Winters
Galt	Riverbank	Woodland
Lathrop	Rocklin	Yuba City
Lincoln	Roseville	
Lodi	Sacramento	California Highway Patrol

The Delaware campaign represented the first HVE effort to reduce distracted driving in the State. Nearly all police departments in Delaware participated (42 out of 43), including the Delaware State Patrol participating. The State is largely comprised of small cities with populations of less than 5,000 residents. There are six Delaware cities cities with populations between 5,000 and about 10,000 residents and four cities with more than 15,000 residents, including Middletown (18,871), Newark (31,454), Dover (36,047), and Wilmington (70,851). The four larger cities and the State Highway Patrol were given extra resources for enforcement. Law enforcement agencies reported their ticketing data for both overtime and regular-hour enforcement. Delaware used both stationary and roving patrols to identify violators, with some additional efforts focused

where previous violators were cited or previous distracted driving crashes occurred. During the first wave some enforcement was conducted using spotters where an officer radios ahead to another officer when a violator is observed however, the phrasing of a Delaware statute led Delaware law enforcement to question whether this form of enforcement for cell phone use was permissible under State law. Subsequent waves did not use spotters.

Participating Law Enforcement Agencies - Delaware

Bethany	Felton	Newark
Blades	Fenwick	Newport
Bridgeville	Frankford	Ocean View
Camden	Georgetown	Rehoboth
Cheswold	Greenwood	Seaford
Clayton	Harrington	Selbyville
Capitol	Kenton	Smyrna
Dagsboro	Laurel	S. Bethany
Delaware City	Lewes	Wilmington
Delmar	Middletown	Wyoming
Dewey	Milford	New Castle County
Dover	Millsboro	DE River and Bay Authority
Ellendale	Milton	University of Delaware PD
Elsmere	New Castle City	Delaware State Police

Creative Materials and Earned Media

NHTSA developed and tested new TV, radio, and online creative material for the campaign conducted in Hartford and Syracuse. This material was adapted and used again for the current project. NHTSA's *Phone in One Hand, Ticket in the Other* HVE message targeted all drivers 18 to 49 years old in California, and 18 to 54 in Delaware (see Figure 1).

In July 2013, then-U.S. Secretary of Transportation Ray LaHood and senior State and local officials launched the campaign with separate press events in California and Delaware (U.S. DOT, 2012). Each demonstration site received sample earned media templates so that it could develop localized press releases, fact sheets, and post-wave press releases. Outreach with the news media and various partners during each wave resulted in scores of articles and events in both States. Coverage included television and newspaper stories in local communities as well as national coverage.

Figure 1. *Phone in One Hand, Ticket in the Other* Logo

Paid Media

NHTSA purchased air time to promote the program activity and emphasize the enforcement component to the audience. This was a straightforward process for Sacramento which has its own designated market area (DMA). Because Delaware does not fall squarely within a DMA (areas of the State are partially covered by the DMAs for Philadelphia, Baltimore, and Salisbury, Maryland), cable advertising was used as the primary medium for media delivery. Both locations also used radio and Internet advertising.

For the first wave of enforcement in November/December 2012, NHTSA purchased two weeks of advertising in each demonstration location. Stronger media for the first wave helps jumpstart the program in that it allows for a lot of media penetration and awareness at the start. In theory, "maintenance" level media could then be used to maintain awareness (noting that maintenance levels at the start may not be sufficient to increase awareness). The gross rating points (GRP) measure is used by advertisers to determine the proportion of their target audience reached by a specific advertisement multiplied by the number of times the target audience sees it. GRPs for television/cable and radio, and the number of online impressions (on Web sites like USAToday.com) are presented in Table 1.

Table 1. Media Buy GRPs

	Wave 1		Wave 2		Wave 3	
	Sacramento	Delaware	Sacramento	Delaware	Sacramento	Delaware
GRP Purchase TV	429.8	100.1	428.4	71.1	428.8	70.5
GRP Purchase Radio	578.2	573	573.7	402.1	572.7	402.9
Internet Impression Purchase	1,875,000	3,750,000	1,875,000	3,750,000	1,875,000	3,750,000

For the next two enforcement waves - the first in February/March 2013 and the second in June 2013 - NHTSA purchased one week of advertising in each demonstration location. The media expenditures were $1,029,288 in both Sacramento and Delaware over the course of the year (see Table 2).

Table 2. Media Buy Costs

	Wave 1 (2 weeks)		Wave 2 (1 week)		Wave 3 (1 week)		Total
	Sacramento	Delaware	Sacramento	Delaware	Sacramento	Delaware	
TV Cost	$259,581.50	$16,740.75	$227,971.75	$12,736.40	$251,013.50	$12,957.40	$781,001.30
Radio Cost	$42,809.75	$27,710.85	$36,758.25	$20,430.18	$42,555.85	$20,300.55	$190,565.43
Online Cost	$7,500.00	$15,220.90	$7,500.00	$10,000.00	$7,500.00	$10,000.00	$57,720.90
Total Cost	$309,891.25	$59,672.50	$272,230.00	$43,166.58	$301,069.35	$43,257.95	$1,029,287.63

III. EVALUATION METHOD

Control Area Selection

Identification of comparison (control) areas for each program was based on law (i.e., having a primary enforcement handheld cell phone ban for all drivers) and on demographic similarity based on the review of 2010 Census Data (i.e., total population, population density and median income). Portland, Oregon was selected as the comparison area for the Sacramento demonstration program. Table 3 shows the demographic characteristics of the two areas.

Table 3. Demographic Characteristics of the Sacramento Area and Portland

Characteristics	Sacramento Area	Portland, OR
White	61%	76%
Black	8%	6%
Native American	1%	1%
Asian/Pacific Islander	12%	7%
Other races	12%	5%
Two or more races	6%	5%
Hispanic of any race	27%	11%
Population	3,834,385	735,334
Median family income	59,827	49,618

The entire State of Delaware participated in the current program. Two potential comparison areas were identified, including New Haven County, Connecticut, and Atlantic County, New Jersey (See Table 4).

Table 4. Demographic Characteristics of Delaware, New Haven County and Atlantic County

Characteristics	Delaware	New Haven County, CT	Atlantic County, NJ
White	69%	75%	65%
Black	21%	13%	16%
Native American	0.5%	0.3%	0.4%
Asian/Pacific Islander	3.2%	3.5%	7.5%
Other races	3.4%	6%	7.4%
Two or more races	2.7%	2.6%	3.2%
Hispanic of any race	8%	15%	17%
Population	897,934	862,477	274,549
Median family income	$57,599	$61,114	$54,766

Process Evaluation

Media activity data were collected for each Wave by NHTSA and its media contractor (The Tombras Group). Tombras gave NHTSA "post-buy" reports, which evaluate the strength of the media in terms of actual GRPs delivered (versus purchased).

Enforcement data were also collected for each wave of activity. Specifically, participating police departments were asked to submit their estimated number of *hours worked* on cell phone enforcement; and *number of citations issued* for "distracted driving" violations. The State agencies (California Office of Traffic Safety and Delaware Office of Highway Safety) also provided historical citation data that were to be used to compare program activity with pre-program levels.

Cell Phone Usage Observations

Cell phone use observations were conducted at 15 sites in each intervention area and 15 sites in each control area. (Site maps and site lists for the program States are given in Appendix A-D). Sites were selected from road segments based on traffic volume estimates. Three of the 15 sites in each area were expressway or Interstate off-ramps. The rest of the sites were identified from the high volume segments, assuring that they were geographically dispersed throughout the areas. The main goal of site selection was to capture the bulk of the traffic streams in a given area rather than create a weighted estimate of cell phone use.

Use of handheld cell phones was observed for 60 minutes at each site. Interstate traffic was observed at off ramps. All data were recorded on a paper form (See Appendix E). Three types of cell phone use were recorded: handheld phone, in-ear device, or manipulating a device.

Handheld was coded when a cell-phone was held in the general proximity of the driver's ear. Ear devices were coded when the visible ear contained an "ear bud" (e.g., wired headset or wireless/Bluetooth). Manipulation was coded when the device was held in the driver's hand but not in the general vicinity of the head. Manipulating could include texting, dialing, checking e-mail, using a mobile GPS application or other activities. No attempt was made to distinguish between these activities and categories were not mutually exclusive. For instance, several drivers were observed manipulating devices with ear devices present or talking on their phones while wearing ear devices. Observers also recorded "high" and "low" manipulation based on the placement of the phone relative to the steering wheel of the vehicle. Information on type of vehicle (car, pickup truck, SUV, or van), driver's sex, and approximate age category (<25, 25-59, >59) were also coded.

Vehicles to be observed were selected by identifying a reference point far enough down the road so that the vehicle, but not the driver, could be observed. This reference point was used to select each vehicle in turn. Only one vehicle at a time was recorded. Once the data for the target vehicle was recorded, the observer would start recording data from the next vehicle to pass the reference point. This procedure insured that the next vehicle to be observed was randomly selected from the traffic stream without prior knowledge of cell phone use. Only passenger vehicles were observed (excluding police, fire, or ambulance).

The main analyses were based on the average percent use at each observation site. Data were weighted to maintain the original number of observations while giving each site an equal weight in the analysis. Wald chi-square analyses, obtained via binary logistic regressions, were used to evaluate significance of differences for weighted data and Pearson chi-square analyses were conducted on raw data for subsets of the data (e.g., age categories). Chi-square (χ^2) values are reported for both statistics noting that the χ^2 for logistic regressions is a Wald χ^2.

In order to maximize power for the key analysis), data were collected at each site twice for these waves. That is, for each round of data collection, each site was visited twice and data were collected for an hour at each visit (i.e., 2 distinct hours per site).

Self-reported Use and Awareness Surveys

Delaware awareness data were collected using a method akin to the one used in the Hartford/Syracuse study. Awareness surveys explored respondent awareness of distracted driving programs, enforcement, and messaging as well as self-reported respondent cell phone use while driving. These surveys were collected from motorists visiting Division of Motor Vehicle (DMV) offices in both the test and comparison communities. Data were collected at four DMV offices in Delaware (test communities) and at four offices in New Haven County, CT (comparison communities) (DMV offices included in the surveying can be found in Appendix F). Awareness survey collection plans were designed to maximize the power of the analyses for

the baseline to final post (i.e., pre-Wave 1 to post-Wave 3). Specifically, the baseline had a target of 1,000 respondents, as did the final post. All other waves had a target of 500 respondents. All DMV survey respondents were motorists who were visiting the selected licensing centers.

The Delaware survey form was a one-page, paper-and-pencil survey developed by NHTSA (see Appendix G). This basic survey was adjusted to reflect locally used slogans and distracted driving program material. Surveys were completed as these drivers were either waiting to be called for service or for photos to be taken.

A high percentage of California DMV customers do not visit DMV offices since many services are delivered through the DMV's online system. Therefore, a different data collection strategy for awareness data was devised for California. The State had previously relied on gas station users as respondents in data collection efforts. Strategic methodological details were shared with evaluators so that a similar data collection process could be designed for the current project. Gas stations were selected such that the three major population areas (Sacramento, Modesto, and Stockton) were included as well as a rural area (Yuba City). For the high-population areas, selection included one site within the city limits and one site outside the limits (i.e., suburban). Gas stations were limited to those on higher volume roadways to maximize the sample size. Appropriate stations were approached and asked for their willingness to participate. Establishments were approached in a random order and the first station owners to agree to participate were chosen.

Survey respondents were drivers patronizing participating gas stations. Surveys were distributed and completed on site. Respondents were intercepted upon entering or exiting the convenience store or while pumping gas. Data were collected from drivers at gas stations in the Sacremento Valley test area and in the comparison area, Multnomah County, Oregon. Test area surveys were collected at six gas stations in Modesto (2), Stockton (1), Sacramento (2), and Yuba City (1). (Due to safety concerns, one of two stations initially sampled in Stockton was dropped after Wave 1 pre, with all of the data collection occurring at the single remaining station for the remaining awareness surveys.) Comparison area awareness surveys were collected at two gas stations, one inside the Portland city limits and one in the suburb of Gresham. The target number of respondents in the program area was 150 to 200 surveys per area (75 to 100 per station) for baseline and final post. For the remaining waves, the target was 50-100 surveys per Area (25-50 per station) per wave. The goal for the control area was 200 surveys per wave (see Table 5 for totals). Collection times were divided into morning and afternoon. Each wave of surveys was collected on the same days of week and time of day - with the noted exception of baseline and final post where data collection was extended an additional half-day. In the comparison area, surveys were collected in the morning and afternoon for three full days in each wave. The goals for the program and control areas were met or exceeded for all waves.

The California survey was shortened from the standard instrument generally used in DMV offices so that drivers only needed to commit a short amount of time to the survey. This shorter instrument was developed in collaboration with NHTSA, the States and Preusser Research Group. It is a half-page paper-and-pencil instrument written in English with Spanish translation on the opposite side. The survey was designed to collect respondent demographic information as well as information about awareness of the distracted driving program. Respondents were asked about the perceived risk of receiving a ticket and if they had recently received a ticket for using a handheld cellular phone while driving. A copy of the survey instrument can be found in Appendix H.

Table 5 shows the number of awareness surveys collected during the evaluation in both target areas and all comparison areas.

Table 5. Awareness Surveys Sample Sizes

			Wave 1	Wave 2	Wave 3	Total
California	Sacramento	Pre	1,099	983	n/a	2,082
		Post	1,022	943	1,236	3,201
	Portland	Pre	223	237	n/a	460
		Post	265	248	323	836
Delaware	Delaware	Pre	1,404	756	n/a	2,160
		Post	806	777	1,472	3,055
	New Haven	Pre	672	576	n/a	1,248
		Post	677	654	743	2,074
Total			6,168	5,174	3,774	15,379

A. California Respondents

A total of 5,283 awareness surveys were collected in California. Sixty-one percent of respondents were male (39% were female). Six percent of respondents were 18 to 20 (drivers younger than 18 were not given the survey), 81 percent were 21 to 59, and 12 percent were 60 or older. Seventy-one percent (71%) of participants described themselves as "White" and 11 percent described themselves as "Black or African American,," with the remainder reporting various other race categories. Thirty-eight percent of participants indicated they were of Spanish/Hispanic origin.

B. Delaware Respondents

A total of 5,215 awareness surveys were collected in Delaware. Fifty-four percent of participants were male (46% were female). Twenty percent of respondents were 18 to 20 (drivers younger than 18 were not given the survey), 70 percent were 21 to 59, and 10 percent were 60 or older. Sixty-six percent of respondents reported being "White," 23 percent were "Black or African American," and 8 percent of respondents reported being of Spanish/Hispanic descent. Fifty-five

percent (55%) drove cars, 14 percent drove pickup trucks, 18 percent drove SUVs, 6 percent drove minivans and 1 percent drove full vans as their primary vehicles (5% reported "other" types of vehicles as their primary vehicles).

Awareness data were analyzed using chi-square tests primarily examining pre to post changes within Waves and from baseline (i.e., pre Wave 1) to final post (i.e., post Wave 3). If questions offered more than two response options, categories were combined to create two options (i.e., combined "Always" and "Nearly Always" versus other responses, combined "Very Strict" and "Strict" versus other responses).

Crash Data

Crash data were obtained from both States. States provided both crashes designated as having a causal factor of distracted driving and those from all other types. Injury severity was not a limiting factor and thus crashes could range from property damage only crashes to fatal crashes. The data from California were provided by a subset of the participating departments participating in the enforcement campaign. A spreadsheet with requested data fields were sent to all 37 agencies by OHS and the data were returned by 20 (of 37) agencies (CHP did not provide data). Delaware data came from the statewide e-crash data system resulting in all crashes being available for analysis. Four crash categories were created according to the time period in which they occurred: (1) during enforcement and a week following enforcement; (2) the same time period (matching day of week) for the year prior; (3) the time period immediately preceding media and enforcement (matching days of week) and; (4) the same time period 1 year prior (matching day of week). These data were compiled for Wave 1 and Wave 3. A binary logistic regression explored the proportion of distraction-related crashes occurring immediately before and after the enforcement period compared to distraction-related crashes occurring at the same time periods the year before. That is, we examined the 2 (year) by 2 (pre/post enforcement) interaction. Analyses explored pre to post changes during Wave 1 (when the largest change in observed handheld use rates occurred) and the overall baseline to post Wave 3 effects.

IV. RESULTS

Enforcement and Media Activity

A. Earned Media

Earned media strength is determined by the number of "clips" per wave for each area. A clip is a news story, usually from television news programs or newspaper articles. The service typically used for gathering clip data (CustomScoop) was not available during this campaign, thus no earned media information was collected for California. Delaware used its own internal resources to gather clip data (from television, radio and Internet sources), and reported 24 clips for Wave 1, 16 clips for Wave 2, and 25 clips for Wave 3, for a total of 65 clips.

B. Paid Media

The number of GRPs purchased is not the best indicator of paid media activity because the GRPs purchased can differ from the actual GRPs delivered. The number of GRPs purchased for television spots are based on ratings of television programs airing the same month of the previous year. Differences in the television airing schedule can lead to disparity between GRPs purchased and actual GRPs delivered. "Post Buy" analyses conducted after spots are aired serve as a better measure of the actual strength of a media purchase. A GRP purchase is considered successful if the actual delivery is within 10 percent of the buy. That is, when 90 percent to 110 percent of the goal purchase is actually delivered.

Table 6 shows the television media GRP goals for each area, by wave. The goals across waves for TV, radio, and Internet were relatively stable for California across the three waves. The number of radio spots actually increased from wave to wave. Delaware's GRP goals, number of radio spots and number of Internet impressions were higher for the first wave, and lower but consistent for Waves 2 and 3.

Table 6. Paid Media Strengths

	WAVE 1		WAVE 2		WAVE 3	
	Sacramento	Delaware	Sacramento	Delaware	Sacramento	Delaware
GRP Purchased	353.9	100.1	353.1	71.1	353.5	70
GRP Actual	368.3	109.4	405.9	65.1	351	70.5
% Goal	104%	109%	115%	92%	99%	100%
Radio Spots	714	775	762	573	785	574
Internet Impressions (millions)	1.9	3.2	1.9	2.5	1.9	2.5

C. Enforcement

Department Provided Citation Data

Law enforcement overtime grants were used to promote enforcement in the Sacramento area during the HVE program waves, with some coverage also occurring between waves. The use of saturation patrol methods included increased motorcycle patrols, spotters (where an officer radios ahead to another officer when a violator is observed), and photographing violators. Traffic commanders used roll call training sessions to encourage distracted driving enforcement. Delaware used stationary and roving patrols, and also used overtime funding to facilitate the extra enforcement activities.

Both California and Delaware dedicated officers to vigorously enforce the handheld cell phone ban during the three waves. Tables 7 and 8 show the number of enforcement hours worked at each site, the number of handheld use and texting tickets issued, and ticketing rates per hour and per 10,000 of each site's population.

Table 7. Enforcement* Data California

	Wave 1	Wave 2	Wave 3	Average
Handheld Tickets	2,696	2,684	3,564	2,981
Texting Tickets	276	273	558	369
Younger Than 18 Tickets	58	51	21	43
Total Tickets	3,030	3,008	4,143	3,594
Hours Worked	3,056	2,962	3,430	3,149
Tickets Per Hour	1.0	1.0	1.2	1.0
Tickets Per 10k Population	7.7	7.7	10.5	8.6

* California tickets included all tickets written during the enforcement period whether written during overtime funded activity or regular patrol.
** Department provided citation data.

Table 8. Enforcement Data Delaware*

	Wave 1	Wave 2	Wave 3	Average
Campaign Tickets	1,830	2,183	1,628	1,880
Regular Patrol Tickets	322	211	117	217
Total Tickets	2,152	2,394	1,745	2,097
Saturation Patrols	527	713	570	603
Hours Worked	2,062	2,877	2,493	2,477
Tickets Per Hour	1.0	0.8	0.7	0.9
Tickets Per 10k Population	24.0	26.7	19.4	23.4

* Department provided citation data.

Program Awareness in the Sacramento Area

A. Messaging Awareness

Respondents were asked if they had read, seen or heard anything about police enforcement for handheld cellular phone use during the past month. Each California wave showed statistically significant increases from pre to post (see Figure 2), with the largest increase occurring pre to post Wave 1 (from 56% to 75%; $\chi^2 = 82.625$, $p < .001$). The overall program enforcement awareness change from baseline to final post was 56 percent to 73 percent ($\chi^2 = 68.995$, $p < 0.001$). Smaller increases in awareness were present in the comparison area for each Wave, none of which was significant.

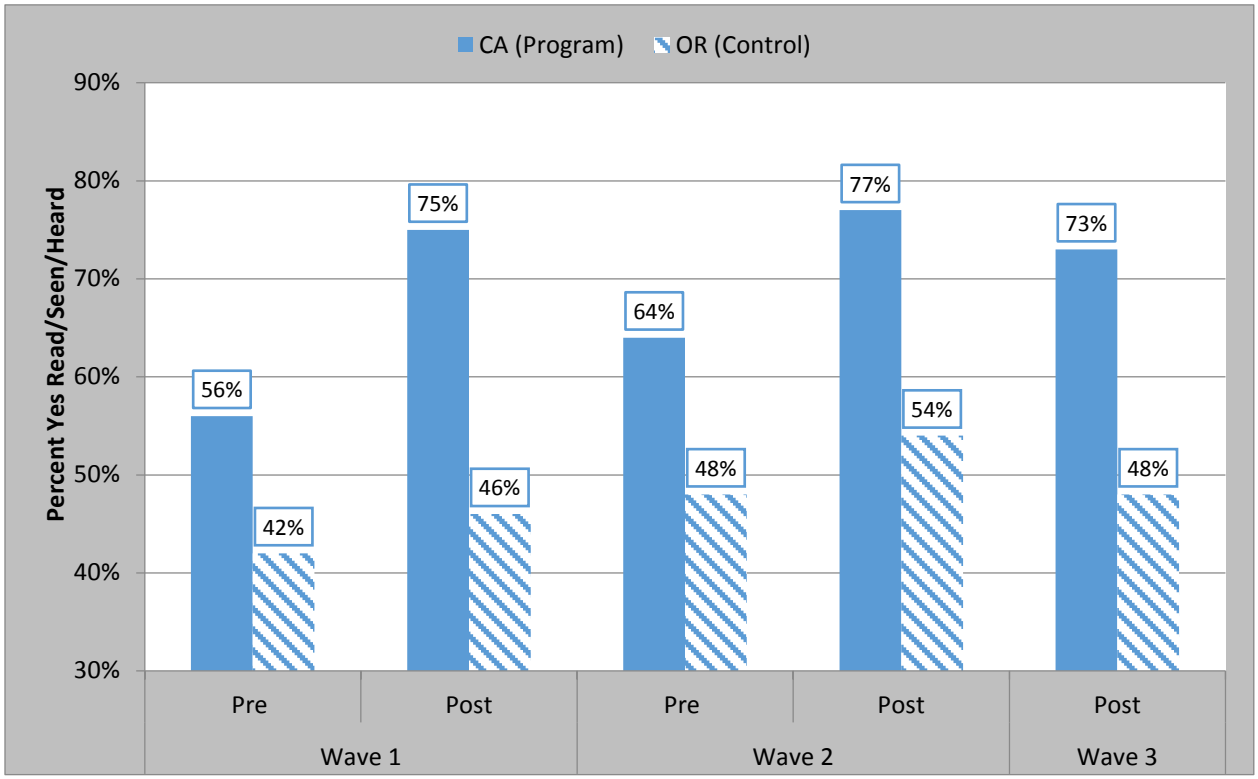


Figure 2. California Read/Seen/Heard About Enforcement in the Past 30 Days

Degree of recognition for both the campaign slogan and previously used distracted driving slogans was assessed. Recognition of the campaign tagline *Phone in One Hand, Ticket in the Other* increased significantly in each wave in the enforcement area (all $\chi^2 > 93.512$; $ps < 0.001$) and showed an overall increase from baseline to final post (16% to 57% ; $\chi^2 = 408.320$, $p < 0.001$) (see Figure 3). Awareness of the slogan in the comparison location remained low throughout the campaign.

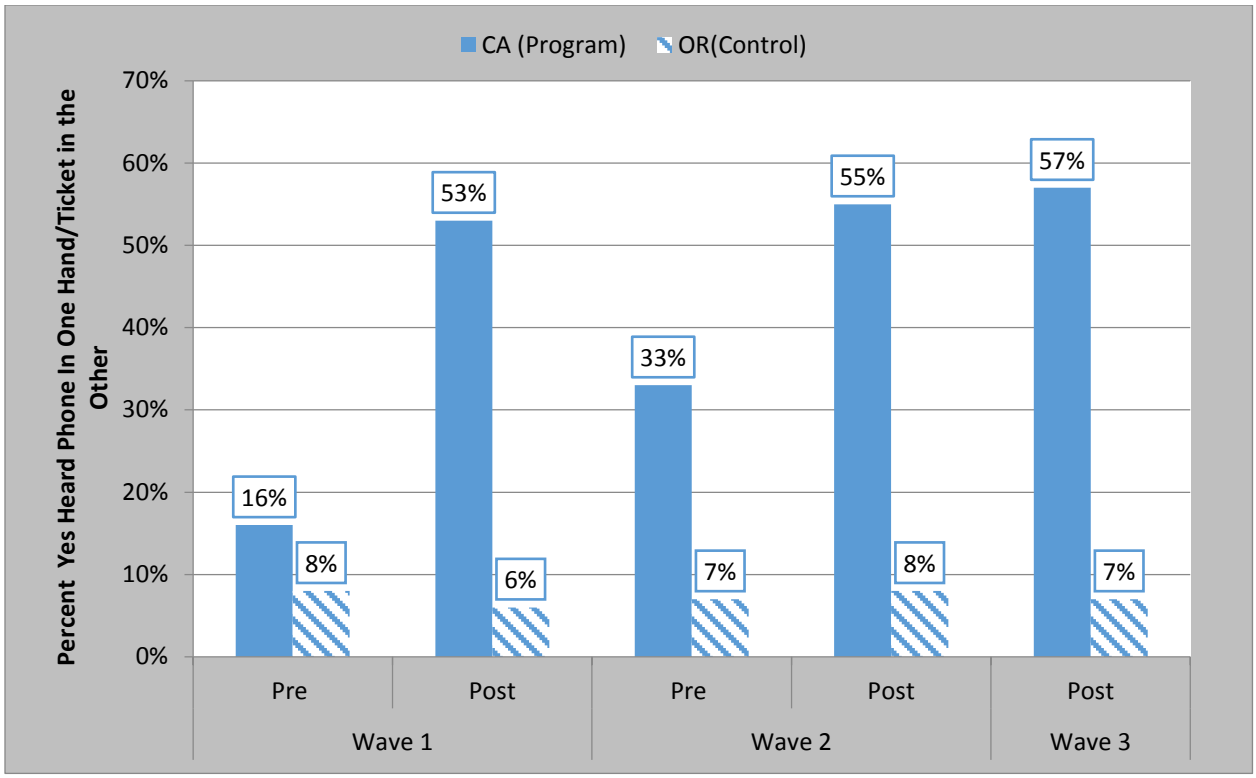


Figure 3. California Awareness of *Phone in One Hand, Ticket in the Other*

Both States were asked to suggest what other distracted campaigns, State and nationwide, should be assessed for driver awareness along with the slogan for the current campaign. California added its pre-existing statewide distracted driving campaign called *It's Not Worth It*. That campaign was first employed in 2011, and ran again in 2012. (*It's Not Worth It* campaign activities were suspended during the timeframe of the *Phone in One Hand, Ticket in the Other* campaign in the targeted counties to avoid mixed messaging effects.) The popularity of zombies in popular culture led to the decision for the California Office of Traffic Safety to develop media programming in 2012 using the message *Don't Be a Cell Phone Zombie*. That campaign slogan was also added to the list of slogans for which awareness would be measured.

The national AT&T distracted driving campaign *It Can Wait* began in 2009, but has since grown into a major initiative backed by several major cell phone carriers and numerous major retailers such as Walmart. Social media campaigns, distracted driving simulator demonstrations, and other strategies are being employed nationwide, with over 4 million people having signed a pledge to refrain from texting and driving.

Other campaigns included in California's awareness question were *Great Hang Up*, sponsored by a local Sacramento TV station (several stations in the country sponsor *Great Hang Up* campaigns), and *Stop the Texts, Stop the Wrecks*, a national campaign launched in 2011 to educate young drivers about the dangers of texting behind the wheel.

Phone in One Hand showed some significant increases in awareness as did the *It Can Wait* AT&T campaign slogan (Table 9).

Table 9. California Messaging Awareness

In the past month heard…	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Pre	Post
Phone in One Hand	Sacramento Area	**16%**	**53%**	**33%**	**55%**	**57%**
	Portland	8%	6%	7%	8%	7%
Great Hang Up	Sacramento Area	5%	4%	4%	3%	4%
	Portland	4%	2%	3%	4%	4%
It's Not Worth It	Sacramento Area	**23%**	**19%**	19%	21%	**27%**
	Portland	9%	8%	9%	11%	9%
It Can Wait	Sacramento Area	40%	37%	36%	38%	**44%**
	Portland	**31%**	**20%**	23%	23%	28%
Stop the Texts/Stop the Wrecks	Sacramento Area	**18%**	**15%**	16%	19%	18%
	Portland	**16%**	**8%**	11%	12%	15%
Don't Be a Cell Phone Zombie	Sacramento Area	8 %	8%	**9%**	**11%**	**13%**
	Portland	6%	6%	6%	5%	7%

Bold text indicated significant ($p < 0.05$) difference between the pre and post values for a given wave.
Bold values in Wave 3 indicate a significant change from pre-Wave 1.

B. Awareness of Enforcement

Drivers in the enforcement area showed no significant increase in perception of enforcement severity. This was the case for all waves (see Table 10). Self-reports of being ticketed for handheld use increased slightly, albeit not significantly, in the enforcement area during Wave 1 and from baseline to final post. The control area showed no consistent pattern.

Table 10. California Attitudes and Experience Regarding Enforcement

Question	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Pre	Post
Chance of being ticketed if use HH cell (% Always/Nearly Always)	Sacramento Area	40%	38%	37%	35%	37%
	Portland	31%	26%	21%	27%	29%
In Past month got ticket for HH cell? (% Yes)	Sacramento Area	1.6%	2.7%	2.1%	1.9%	1.9%
	Portland	2.7%	2.7%	1.3%	2.8%	1.6%

Program Awareness in Delaware

A. Messaging Awareness

There were significant increases in Delaware drivers' awareness of distracted driving enforcement (in the past 30 days) in all waves (see Figure 4) (all $\chi^2 > 7.657$, all $ps < 0.05$). New Haven County also showed an increase in awareness from pre to post in Wave 1. The increased awareness from baseline to final post in Delaware was significant ($\chi^2 = 32.377$, $p < 0.05$). Overall enforcement awareness levels for both locations were similar.

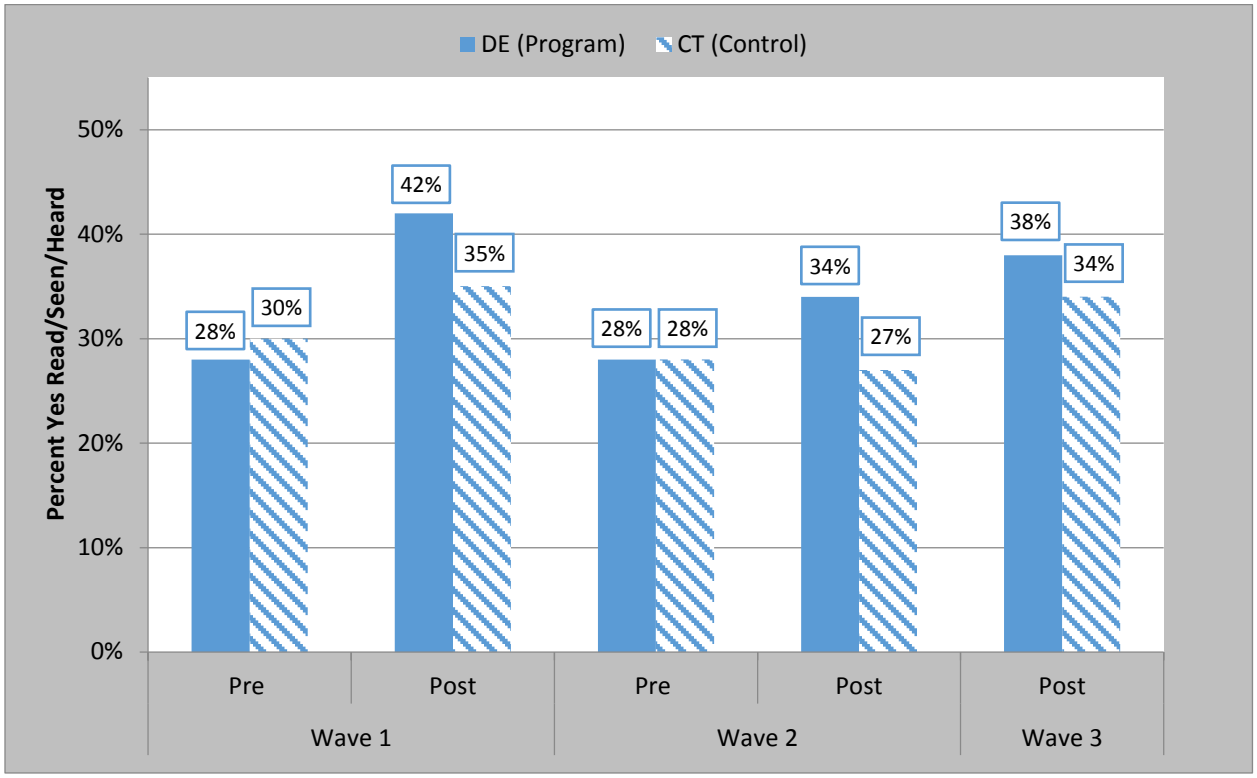


Figure 4. Delaware Read/Seen/Heard About Enforcement in the Past 30 Days

Respondents were also asked if they had seen, read or heard about media related to enforcement of handheld cellular phone laws in general. Table 11 indicates that Delaware showed increased enforcement awareness for Wave 1 pre-post (51% to 59%: $\chi^2 = 12.116$, $p < .001$) and for the program overall (baseline to final post, 51% to 61%, respectively, $\chi^2 = 27.4$, $p < .001$). The increase in New Haven, while significant (54% to 61%; $\chi^2 = 6.042$, $p < .01$) was not as big as it was in Delaware based on percentage point change.

Table 11. Awareness of Enforcement

In the past month heard…	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Pre	Post
Read/seen/heard any messages about enforcement	Delaware	**51%**	**59%**	51%	55%	**61%**
	New Haven Co.	54%	57%	48%	52%	**61%**

Bold text indicated significant ($p < 0.05$) difference between the pre and post values for a given Wave.
Bold values in Wave 3 indicate a significant change from pre-Wave 1.

Delaware showed consistent increases across all Waves in proportion of respondents having heard about *Phone in One Hand, Ticket in the Other* (all $\chi^2 > 6.718$, ps $< .05$ – see Figure 5). There was a smaller but significant increase on this item for Wave 1 in New Haven County from 19 to 23 percent (pre to post, respectively, $\chi^2 = 3.029$, $p < 0.05$). Overall baseline to final post results only showed a significant increase in awareness for Delaware (from 7% to 15%, $\chi^2 = 47.028$, $p < 0.01$).

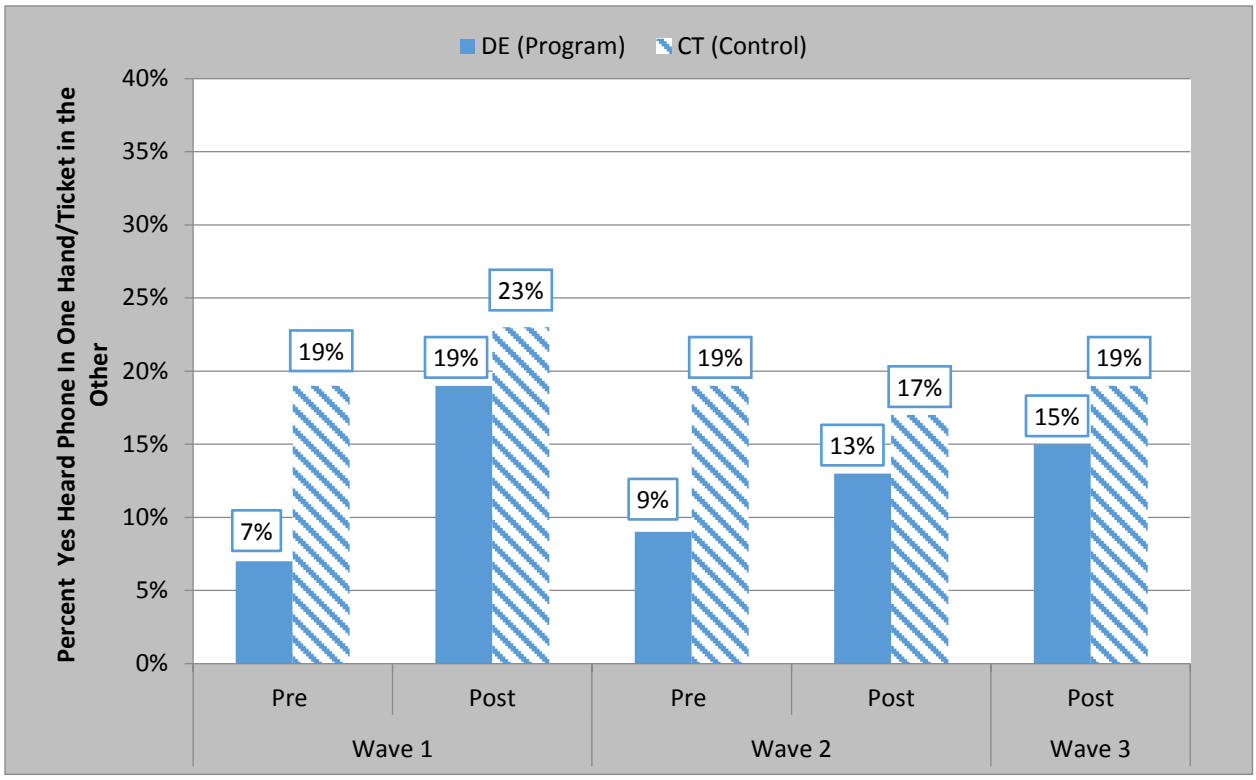


Figure 5. Delaware Awareness of *Phone in One Hand, Ticket in the Other*

Significant awareness changes also occurred for other campaign slogans (Table 12). There were significant increases in awareness for *The Great Hang Up* (Wave 1 in Delaware) and *It Can Wait* (Delaware Wave 2, New Haven County baseline to final post). Decreases in awareness also occurred for *Stop the Texts/Stop the Wrecks* (Delaware Wave 1) and the Delaware-sponsored media campaign *One Text or Call Could Wreck It All* (Delaware baseline to final post). The

largest of these changes was for the national *It Can Wait* distracted driving campaign sponsored by AT&T. No significant changes were found in awareness for *Arrive Alive* (a Delaware distracted driving media campaign slogan) or for *Decide to Drive*, a national campaign sponsored by the American Academy of Orthopedic Surgeons (AAOS) in partnership with the Orthopedic Trauma Association (OTA) and the Auto Alliance.

Table 12. Delaware Messaging Awareness

In the past month heard…	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Pre	Post
Phone One Hand	Delaware	**7%**	**19%**	**8.9**%	**13**%	**15%**
	New Haven Co.	**19%**	**23%**	19%	17%	19%
Great Hang Up	Delaware	**1.5%**	**3.2%**	1.3%	1.0%	1.1%
	New Haven Co.	1.3%	1.2%	2.3%	1.5%	0.7%
It Can Wait	Delaware	22%	24%	**19**%	**25**%	24%
	New Haven Co.	29%	29%	33%	29%	**37%**
Stop Texts/ Stop Wrecks	Delaware	**16%**	**13 %**	16%	14%	14%
	New Haven Co.	10%	8 %	10%	8%	8%
Arrive Alive	Delaware	12%	11 %	11%	11%	11%
	New Haven Co.	3.6%	2.2 %	4.9%	5.4%	4.6%
One Text Call Wreck All	Delaware	7.9%	7.2 %	5.7%	5.5%	**5.0%**
	New Haven Co.	6.4%	5.3 %	6.9%	5.7%	5%
Decide to Drive	Delaware	-	-	2.2%	2.7%	1.6%
	New Haven Co.	-	-	2.8%	1.7%	-

Bold text indicated significant ($p < 0.05$) difference between the pre and post values for a given wave.
Bold values in Wave 3 indicate a significant change pre-Wave 1.

B. Awareness of Enforcement

There were no significant pre to post differences in perceived chance of being ticketed or perceptions of strictness of enforcement for Delaware, and only one significant change was found for the control (see Table 13). From pre- to post-Wave 1, more respondents reported that it was important for police to enforce the cell phone law in Delaware ($\chi^2 = 3.929$, $p < 0.05$).

A larger proportion of control respondent reported ever having been ticketed for handheld cell use in post-Wave 2 compared to pre-Wave 2 ($\chi^2 = 4.426$, $p < 0.05$). No other comparisons showed a significant change for either question concerning getting ticketed.

Table 13. Delaware Attitudes and Experience Regarding Enforcement

Question	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Post	Post
Chance of being ticketed if use HH cell (% Always/Nearly Always)	Delaware	29%	27%	30%	32%	28%
	New Haven Co.	25%	27%	25%	28%	27%
How strictly do police enforce HH law (% Very Strict/Strict)	Delaware	42%	45%	45%	44%	45%
	New Haven Co.	42%	39%	**37%**	**41%**	39%
Important for police to enforce HH cell law (% Yes)	Delaware	**90%**	**92%**	89%	90%	91%
	New Haven Co.	90%	88 %	87%	90%	90%
Ever get a ticket for HH cell use (%Yes)?	Delaware	4.7 %	3.7%	4.0%	4.5%	4.4%
	New Haven Co.	8.8%	7.7%	**6.0%**	**9.2%**	9.1%
Past month got ticket for HH cell use? (% Yes)	Delaware	0.9%	1.3%	0.8%	0.8%	0.8%
	New Haven Co.	0.9%	1.4%	0.5%	1.1%	0.8%

Bold text indicated significant ($p < 0.05$) difference between the pre and post values for a given Wave.

There were no measurable changes in self-reported use of handheld cell phones while driving in Delaware or the control area (see Table 14). Respondents in Delaware reported a significantly lower incidence of texting while driving in final post, relative to baseline ($\chi^2 = 3.857$, $p < .05$).

Table 14. Delaware Self-Reported Use

Question	Area	Wave 1		Wave 2		Wave 3
		Pre	Post	Pre	Pre	Post
How often talk on a handheld cellular phone when you drive (Always or Nearly Always)	Delaware	5.9%	4.9%	5.5%	5.2%	5.6%
	New Haven Co.	4.2%	6.1%	8.4%	6.1%	4.6%
How often send text messages or e-mails on a handheld cellular phone when you drive (Always or Nearly Always)	Delaware	3.5%	2.3%	4.1%	2.7%	**2.3%**
	New Haven Co.	3.1%	2.4%	5.4%	3.9%	2.7%

Bold values in Wave 3 indicate a significant change from pre-Wave 1.

Observed Use in California

Close to 35,000 California drivers (n=34,608) were observed (see Table 15). Fifty-four percent of the drivers were in passenger cars, 17 percent were in pickup trucks, 22 percent were in SUVs, and 8 percent were in vans. Seven percent of the drivers were estimated to be younger than 25, 85 percent were 25 to 59; and 8 percent were judged to be older than 59. Fifty-four percent of the drivers were men (46% women). Approximately 19,000 drivers (n=18,972) were observed in Portland. Sixty-one percent of these were in passenger cars, 13 percent in pickup trucks, 17 percent in SUVs, and 8 percent in vans. Sixteen percent were judged to be younger than 25, 72 percent 25 to 59, and 11 percent over 59. Fifty-eight percent of the drivers were male and 42 percent female.

Table 15. Ns for Observed Use

State	Wave	Pre	Post	Total
California	1	9,642	5,082	14,724
	2	4,919	5,016	9,935
	3		9,949	9,949
Oregon	1	3,754	3,704	7,458
	2	3,542	4,222	7,764
	3		3,751	3,751

A. Handheld Cell Phone Use

The baseline handheld cell phone use rate in California (4.1%) decreased significantly to 3.3 percent (χ^2 =4.927, $p < .05$) following the first wave of enforcement (Figure 6). There was no change in use from pre to post Wave 1 in Oregon. California's use rate decreased significantly between Wave 1 and Wave 2 (χ^2 =4.684, $p < .05$) – there was no change during the same period in Portland. There was no pre to post decrease in Wave 2 in California but the change in Portland (2.8% to 2.0%) was significant (χ^2 =4.288, $p < .05$). The decrease from baseline to final post in California was significant (χ^2 =26.133, $p < .001$) as was the same change for Oregon (χ^2 =21.046, $p < .001$). The interaction effect was significant (χ^2 =3.956, $p < .05$) suggesting a larger baseline to final post decrease in the control area over the enforcement area.

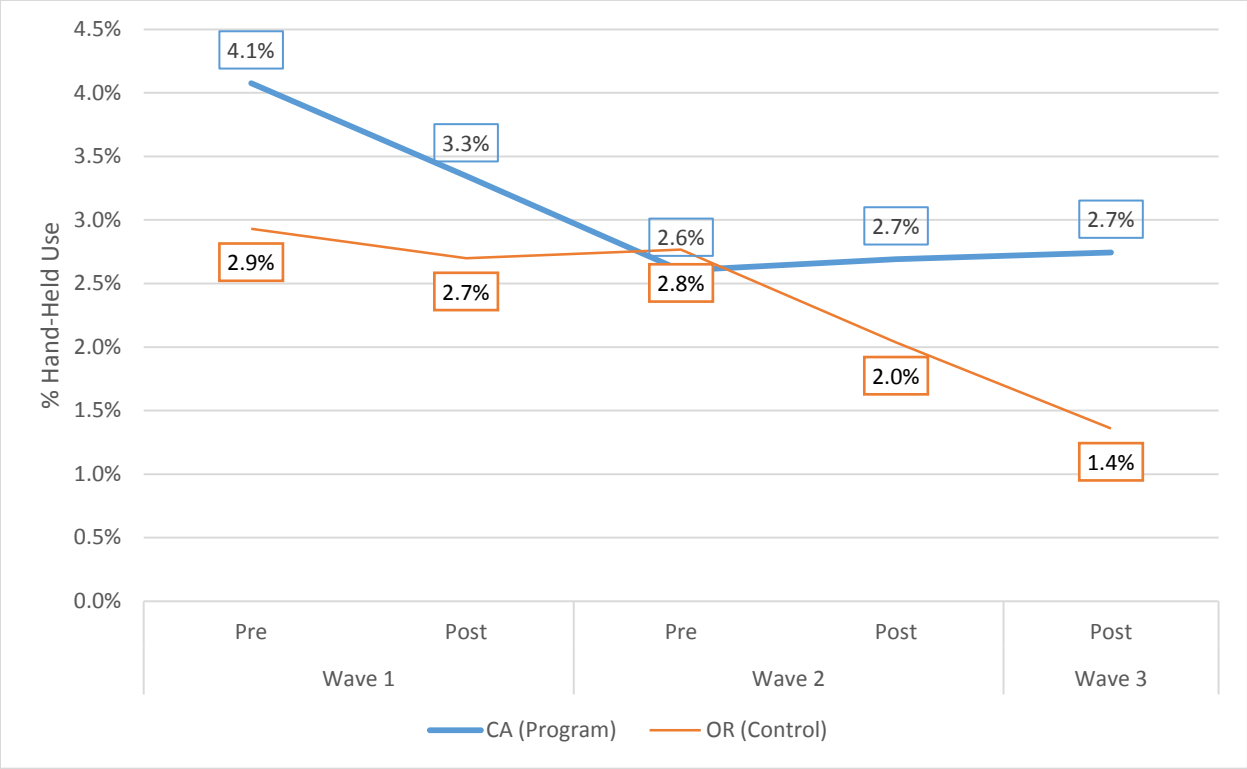


Figure 6. California Handheld Phone Use

Handheld phone use in California decreased for drivers of all vehicle types, but only significantly so for cars and SUVs (see Table 16). From baseline to final post, handheld use decreased among car drivers (3.6% to 2.1%; $\chi^2 = 19.421$, $p < 0.001$), pickup truck drivers (4.1% to 3.5%; $\chi^2 = 0.686$, $p > 0.05$), SUV drivers (4.6% to 2.7%; $\chi^2 = 11.395$, $p < 0.01$), and van drivers (3.3% to 2.9%; $\chi^2 = 0.174$, $p > 0.05$). In Portland, car drivers' handheld use significantly decreased (from 2.1% to 1.2%, $\chi^2 = 5.645$, $p < 0.05$), as did pickup truck drivers' handheld use (from 3.8% to 1.5%, $\chi^2 = 7.301$, $p < 0.01$). SUV and van drivers' use did not change significantly (SUV: 4.8% to 2.1%, $\chi^2 = 0.174$, $p > 0.05$; Van: 3.6% to 1.3%; $\chi^2 = 3.371$, $p > 0.05$).

Handheld cell phone use by the youngest drivers in California decreased significantly from baseline (4.1%) to final post (1.6%; $\chi^2 = 9.146$, $p < 0.01$) (see Table 17). Use among the middle age group also decreased significantly (4.2% to 2.9%; $\chi^2 = 20.528$, $p < 0.001$). There was no change among the oldest drivers given that only two drivers were observed talking on a handheld cell phone in each of the baseline and final post (pre: 0.3%; post: 0.2%). Young drivers in the control area showed no baseline to final post change (2.1% to 1.9%). There was a significant decrease (from baseline to final post) in use for the middle age group in the control area (3.6% to 1.4%; $\chi^2 = 26.869$, $p < 0.001$). The control area also had minimal observations of the oldest drivers using a handheld cell phone with only two (0.3%) and five (0.7%) observations in the baseline and final post respectively.

California male drivers showed a drop in handheld phone use, from a baseline rate of 3.3 percent to 2.5 percent in the final post (Table 18). This difference was small but statistically significant ($\chi^2 = 5.655$, $p < 0.05$). Female drivers started with a higher use rate than the male drivers but ended at the same level as males, decreasing from baseline rate of 4.5 percent to 2.5 percent in the final post ($\chi^2 = 24.795$, $p < 0.001$). Both male and female drivers in the control area showed significant declines in use from baseline to final post. Men's handheld use decreased from 2.8 percent significantly to 1.4 percent ($\chi^2 = 9.902$, $p < 0.01$) and women's handheld use decreased from 3.0 percent pre to 1.3 percent post ($\chi^2 = 10.820$, $p < 0.01$).

Table 16. California Observed Handheld Use by Vehicle Type

Wave	Veh. Type		California Pre	California Post	Oregon Pre	Oregon Post
Wave 1	Car	% Use	3.6%	2.6%	2.1%	2.8%
		N	5129	2705	2255	2246
	Pickup Truck	% Use	4.1%	4.0%	3.8%	4.1%
		N	1620	870	499	491
	SUV	% Use	4.6%	3.3%	4.8%	2.3%
		N	2137	1083	692	643
	Van	% Use	3.3%	4.5%	3.6%	2.8%
		N	756	424	308	324
Wave 2	Car	% Use	2.3%	2.6%	2.4%	2.2%
		N	2659	2697	2128	2651
	Pickup Truck	% Use	2.3%	2.6%	3.2%	3.5%
		N	833	843	493	518
	SUV	% Use	3.4%	2.7%	3.2%	2.3%
		N	1048	1090	619	724
	Van	% Use	3.2%	1.8%	2.7%	1.5%
		N	378	386	301	329
Wave 3	Car	% Use		2.1%		1.2%
		N		5335		2341
	Pickup Truck	% Use		3.5%		1.5%
		N		1593		467
	SUV	% Use		2.7%		2.1%
		N		2238		634
	Van	% Use		2.9%		1.3%
		N		783		309

Table 17. California Observed Handheld Use by Age

Wave	Age		California		Oregon	
			Pre	Post	Pre	Post
Wave 1	Young	% Use	4.1%	4.4%	2.1%	3.5%
		N	773	385	616	652
	Middle Aged	% Use	4.2%	3.3%	3.6%	3.2%
		N	8109	4306	2682	2596
	Older	% Use	0.3%	0.5%	0.2%	0.0%
		N	758	390	453	455
Wave 2	Young	% Use	3.4%	2.7%	2.7%	2.2%
		N	290	301	595	581
	Middle Aged	% Use	2.7%	2.7%	2.9%	2.5%
		N	4362	4375	2587	3189
	Older	% Use	0.0%	0.3%	0.8%	0.9%
		N	266	340	358	450
Wave 3	Young	% Use		1.6%		1.9%
		N		765		677
	Middle Aged	% Use		2.9%		1.4%
		N		8334		2634
	Older	% Use		0.2%		0.7%
		N		849		437

Table 18. California Observed Handheld Use by Sex of Driver

			California		Oregon	
Wave	**Sex**		**Pre**	**Post**	**Pre**	**Post**
Wave 1	Male	% Use	3.3%	3.0%	2.8%	3.0%
		N	5153	2768	2165	2200
	Female	% Use	4.5%	3.3%	3.0%	2.5%
		N	4487	2313	1587	1502
Wave 2	Male	% Use	2.0%	1.9%	2.3%	2.3%
		N	2716	2768	2128	2364
	Female	% Use	3.3%	3.4%	3.2%	2.4%
		N	2202	2248	1413	1857
Wave 3	Male	% Use		2.5%		1.4%
		N		5433		2213
	Female	% Use		2.5%		1.3%
		N		4514		1533

Phone Manipulation in California

Neither Wave 1 nor Wave 2 showed any significant change in proportion of drivers manipulating their phone while driving in the California enforcement area (Figure 7). The baseline to final post change in California also failed to reach significance. Oregon showed a significant decrease in phone manipulation from pre Wave 2 to post Wave 2 ($\chi^2 = 6.622$, $p < 0.05$), as well as from baseline to final post ($\chi^2 = 7.656$, $p < 0.01$). The 2-way interaction was not significant, indicating that the baseline to foal post change was not different in the program and control areas.

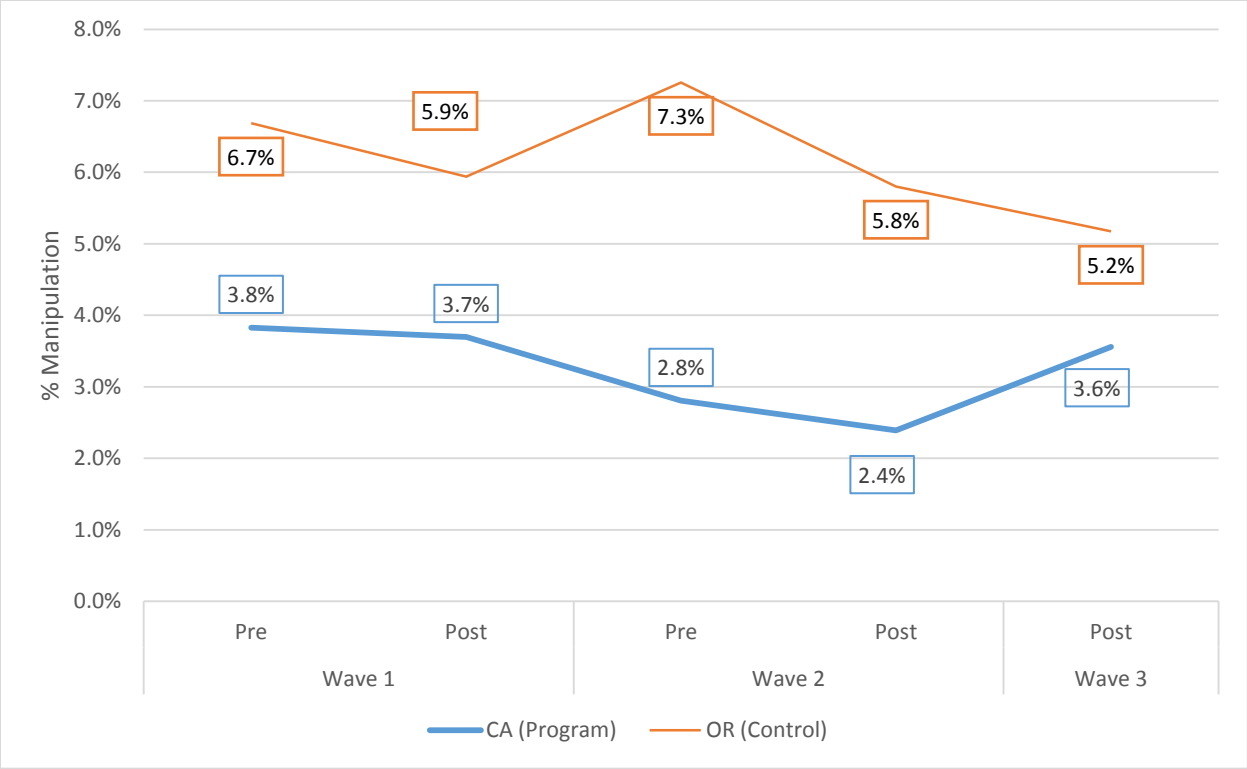


Figure 7. California Observed Cell Phone Manipulation

A. Earpiece Use in California and Oregon

Waves 1 and 2 pre to post changes in use of an earpiece failed to reach significance in both California and Oregon (Figure 8). The change from baseline to final post in California also failed to reach significance ($\chi^2 = 0.979$, $p > 0.05$) but the increase in Oregon was significant ($\chi^2 = 7.393$, $p < 0.01$). The interaction between State and Baseline/Final post was not significant; that is the baseline to final post change was not different in the program (Sacramento) and control (Oregon) areas.

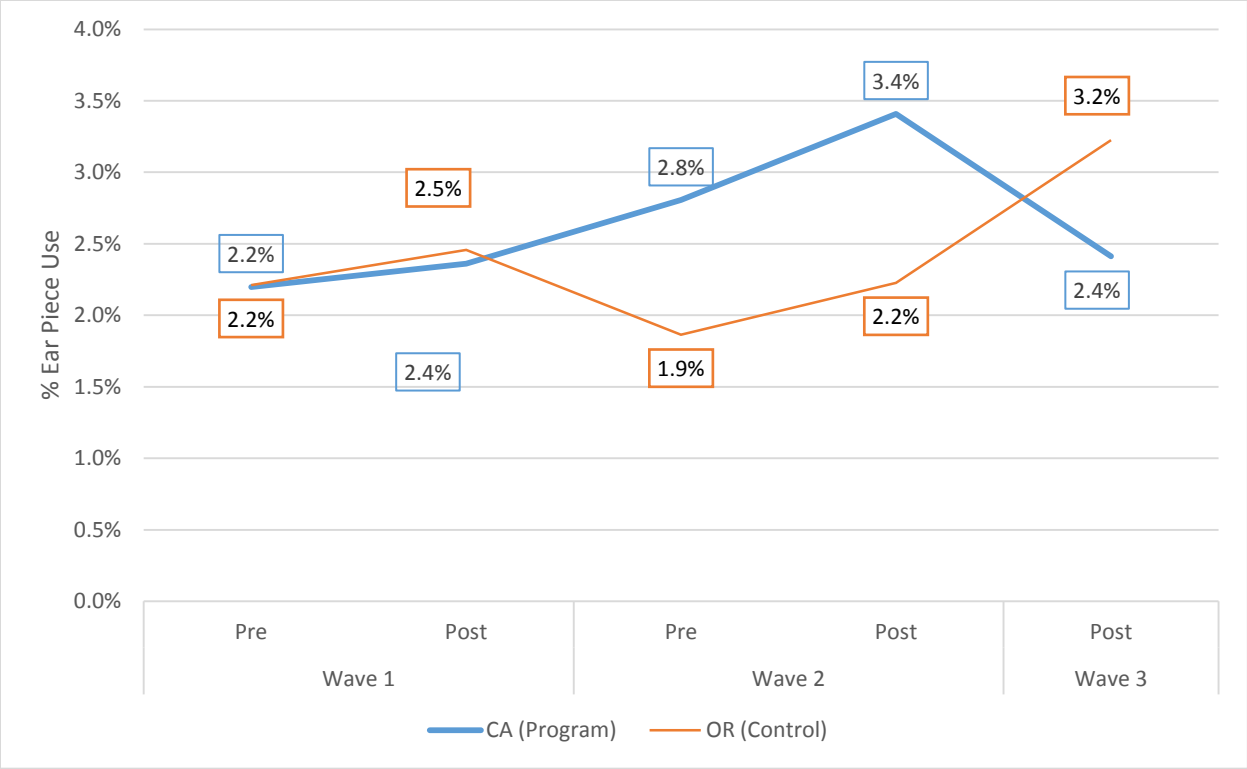


Figure 8. California Observed Earpiece

Observed Use in Delaware

Table 19 shows the number of vehicles observed by wave and location. Over 50,000 drivers (n=53,729) were observed in Delaware. Fifty percent of the vehicles observed were passenger cars, 13 percent were pickup trucks, 27 percent were SUVs, and 10 percent were vans. Ten percent of the drivers were estimated to be younger than 25, 85 percent were 25to 59 years old, and 5 percent were older than 59. Fifty-six percent of the drivers were male and 44 percent were female.

Over 30,000 drivers (n=32,316) were observed in Connecticut. Fifty-six percent of the vehicles observed were passenger cars, nine percent were pickup trucks, 26 percent were SUVs, and nine percent were vans. Close to 20,000 vehicles (n=19,676) were observed in New Jersey (48% cars, 15% pick-up trucks, 27% SUVs, and 10% vans). Ten percent of Connecticut and New Jersey drivers were deemed to be younger than 25, 85 percent of Connecticut drivers were 25 to 59 years old (86% in New Jersey), and five percent were 60 or older (4% in New Jersey). Fifty-eight percent of the drivers in Connecticut were male (42% female) and 60 percent of the drivers in New Jersey were male (40% female).

Table 19. N's for Observed Use

State	Wave	Pre	Post	Total
Delaware	1	16,408	8,150	24,558
	2	7,656	7,658	15,314
	3		13,858	13,858
Connecticut	1	6,787	6,557	13,344
	2	6,403	6,397	12,800
	3		6,172	6,172
New Jersey	1	3,979	3,953	7,932
	2	3,907	3,867	7,774
	3		3,977	3,977

Baseline handheld use was slightly higher in New Jersey than in Delaware or Connecticut (see Figure 9). There was a significant decrease from pre to post in the percentage of drivers using a handheld cell phone in Delaware during Wave 1 ($\chi^2 = 6.400$, $p < 0.05$). The pre to post decrease in observed use for Wave 1 in the Connecticut control area was not significant whereas the New Jersey control area showed a significant increase in handheld use in the same period ($\chi^2 = 5.097$, $p < 0.05$). Neither Delaware nor the control areas showed any significant change in Wave 2. Analyses comparing baseline (pre-Wave 1) to final post (post Wave 3) showed a significant decrease in handheld cell phone use in Delaware ($\chi^2 = 64.886$, $p < 0.001$), in Connecticut ($\chi^2 = 12.441$, $p < 0.001$), and in New Jersey ($\chi^2 = 13.302$, $p < 0.001$).

A 2 (Pre/Post) X 2 (Program/Control) interaction between Delaware and Connecticut comparing baseline to final post shows that the decrease in Delaware was nearly significantly greater than the decrease in Connecticut ($\chi^2 = 3.426$, $p = 0.06$). However, there was no statistically significant difference between the decrease in Delaware and New Jersey. Combining data from both control areas (thereby adding power to the analysis) resulted in a significant interaction (2 (Delaware, Control) X 2 (Pre, Post); ($\chi^2 = 4.363$, $p < 0.05$). Thus, the decrease in use in Delaware was significantly greater than the decrease in use in the combined control areas.

The effects of the campaign were generally similar across vehicle types in Delaware (see Table 20). All baseline to final post use rates decreased significantly within each vehicle type (all *p*s< .01). However, the decrease in use in Connecticut appears to have been driven by a drop in use among SUV drivers alone ($\chi^2 = 11.12$, $p < 0.01$). None of the other vehicle types in Connecticut showed a significant decrease. Similarly, the decrease in New Jersey was driven by one vehicle type alone (vans). The decrease in use by van drivers was the only vehicle type to show a significant decrease (χ^2=7.439, p <.01).

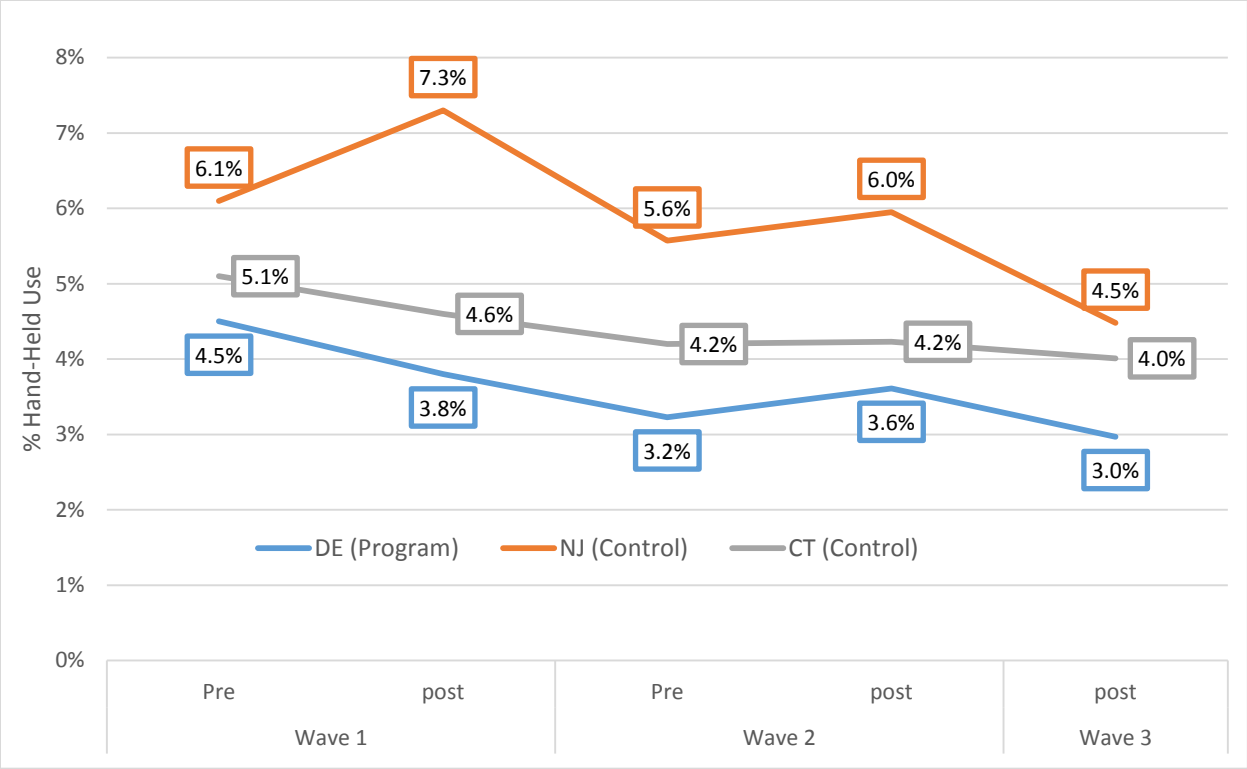


Figure 9. Delaware Handheld Phone Use

Across all waves and States handheld cell phone use was highest among younger drivers and lowest among the oldest drivers (see Table 21). The largest percentage point change from baseline to final post in Delaware was for the youngest drivers (-4 percentage points, $\chi^2 = 23.277$, $p < 0.001$). The drop for the middle age group was also significant ($\chi^2 = 28.073$, $p < 0.001$). The youngest age group was the only one to show a significant decline in use in Connecticut ($\chi^2 = 11.076$, $p < 0.01$) whereas in New Jersey, only the middle age group showed a significant decline in use ($\chi^2 = 5.841$, $p < 0.05$).

Sex differences in handheld use in Delaware were small (Table 22). Both sexes showed a significant baseline to final post decline in use (Men: $\chi^2 = 22.489$, $p < 0.001$; Women: $\chi^2 = 24.781$, $p < 0.001$). Use among women in Connecticut was a bit higher than among men and only women showed a decline in use over the course of the program ($\chi^2 = 4.987$, $p < 0.05$). Male and female phone use in New Jersey was comparable in the baseline and only male drivers showed a significant decline over time ($\chi^2 = 6.300$, $p < 0.05$).

Table 20. Delaware Observed Handheld Use by Vehicle Type

Wave	Vehicle Type		Delaware		Connecticut		New Jersey	
			Pre	Post	Pre	Post	Pre	Post
Wave 1	Car	% Use	4%	3%	4%	4%	5%	5%
		N	8178	3953	3788	3639	1982	1863
	Pickup Truck	% Use	4%	5%	4%	4%	7%	9%
		N	2359	1166	661	626	570	591
	SUV	% Use	5%	5%	6%	5%	5%	8%
		N	4290	2203	1732	1642	1044	1106
	Van	% Use	6%	4%	7%	6%	8%	8%
		N	1581	828	606	650	381	390
Wave 2	Car	% Use	3%	4%	4%	4%	6%	5%
		N	3847	3835	3584	3510	1941	1800
	Pickup Truck	% Use	4%	3%	5%	4%	5%	7%
		N	1015	910	528	600	526	644
	SUV	% Use	4%	4%	4%	4%	7%	6%
		N	2030	2164	1780	1669	1055	1049
	Van	% Use	3%	3%	4%	6%	7%	6%
		N	764	749	511	618	385	372
Wave 3	Car	% Use		3%		4%		4%
		N		6998		3482		1934
	Pickup Truck	% Use		3%		3%		6%
		N		1722		519		573
	SUV	% Use		3%		4%		5%
		N		3810		1682		1076
	Van	% Use		4%		7%		4%
		N		1327		489		394

Table 21. Delaware Observed Handheld Use by Age

			Delaware		Connecticut		New Jersey	
Wave	**Age**		**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
Wave 1	Young	% Use	9.1%	6.3%	10.2%	7.8%	6.8%	7.7%
		N	1853	741	688	614	572	574
	Middle Aged	% Use	4.1%	3.7%	4.7%	4.4%	6.5%	7.1%
		N	13705	7026	5758	5679	2917	2946
	Older	% Use	1.1%	0.3%	0.9%	0.4%	1.0%	1.4%
		N	850	383	341	264	487	430
Wave 2	Young	% Use	6.9%	7.0%	8.9%	7.1%	8.5%	7.3%
		N	787	696	628	590	447	548
	Middle Aged	% Use	3.0%	3.4%	3.8%	4.0%	6.3%	5.8%
		N	6532	6704	5555	5573	3050	2932
	Older	% Use	0.6%	0.8%	0.9%	0.9%	1.7%	1.8%
		N	337	257	220	234	410	385
Wave 3	Young	% Use		4.8%		5.5%		4.4%
		N		1518		763		549
	Middle Aged	% Use		2.9%		3.9%		5.1%
		N		11743		5147		3085
	Older	% Use		1.0%		1.1%		1.7%
		N		595		262		343

Table 22. Delaware Observed Handheld Use by Sex of Driver

			Delaware		Connecticut		New Jersey	
Wave	**Sex**		**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
Wave 1	Male	% Use	4.3%	3.8%	4.7%	4.2%	5.8%	6.8%
		N	9522	4716	3964	3806	2307	2321
	Female	% Use	4.8%	3.8%	5.5%	5.2%	6.1%	6.1%
		N	6885	3434	2823	2751	1671	1629
Wave 2	Male	% Use	3.1%	3.4%	4.3%	4.0%	5.3%	5.6%
		N	4276	4120	3676	3727	2256	2411
	Female	% Use	3.5%	3.8%	4.0%	4.4%	7.1%	5.6%
		N	3380	3532	2727	2670	1651	1454
Wave 3	Male	% Use		2.9%		3.9%		4.2%
		N		7620		3594		2460
	Female	% Use		3.1%		4.2%		5.5%
		N		6237		2578		1517

A. Phone Manipulation in Delaware, Connecticut, and New Jersey

Analyses explored the effect of the program on cell phone manipulation (e.g. texting). Delaware showed significant decreases in manipulation from pre to post in Waves 1 and 2 (ps < 0.01 – see Figure 10). There was a significant drop in manipulation from baseline to final post in Delaware (χ^2=13.40, p < 0.001). None of the pre to post changes in Connecticut were significant and New Jersey showed no significant change in Wave 1 but showed a small significant decrease in observed manipulation from pre to post in Wave 2 (χ^2=4.791, p < 0.05). The baseline to final post decrease in New Jersey was also significant (χ^2=9.036, p < 0.01). None of the baseline to final post interactions between Delaware and the other two States (individually) was significant. That is, the overall decrease in use in Delaware was not different than the decreases in the control areas.

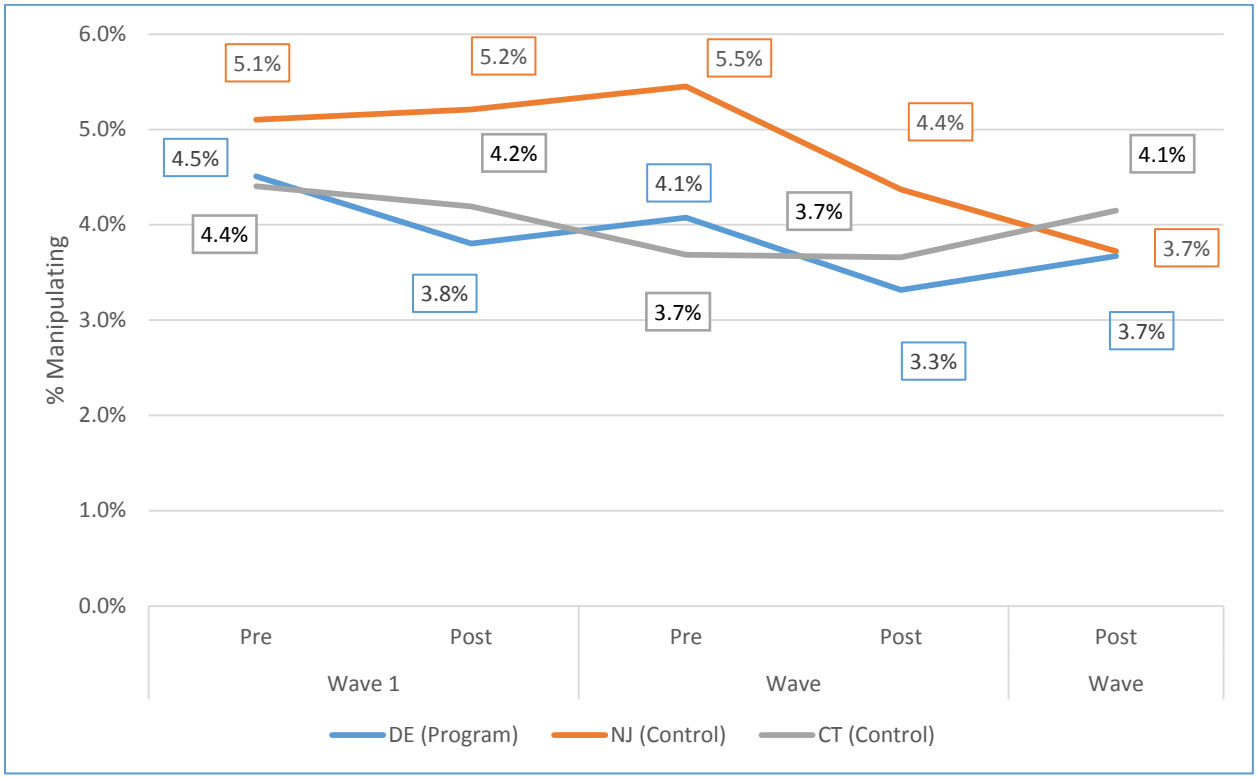


Figure 10. Delaware Phone Manipulation

B. Earpiece Use in in Delaware, Connecticut, and New Jersey

Analyses explored the effect of the program on driving with an earpiece (e.g., blue-tooth device, headphone). There was a significant pre to post decrease (see Figure 11) in earpiece use in Wave 1 for Delaware (χ^2=15.173, p < 0.001) while the pre to post change in Wave 2 was not significant. The baseline to final post decrease in earpiece use was significant (χ^2=25.213, p < 0.001). The pre to post changes for Waves 1 and 2 in Connecticut were not significant but there was there was a significant increase in the percentage of drivers observed with an earpiece

device between baseline and final post (χ^2=5.558, $p < 0.05$). The pre to post changes in earpiece use in New Jersey for Waves 1 and 2 were not significant but the decrease in observed earpiece use from baseline to final post was significant (χ^2=16.912, $p < 0.001$).

Analyses on the interaction between State and baseline to final post showed that the change in use between Connecticut and Delaware was significant (χ^2=21.693, $p < 0.001$). That is, the baseline to final post changes in Delaware and Connecticut were significantly different from each (noting that Delaware's rate decreased while Connecticut's rate increased). The decrease in ear piece use in Delaware was not significantly different from the decrease in New Jersey.

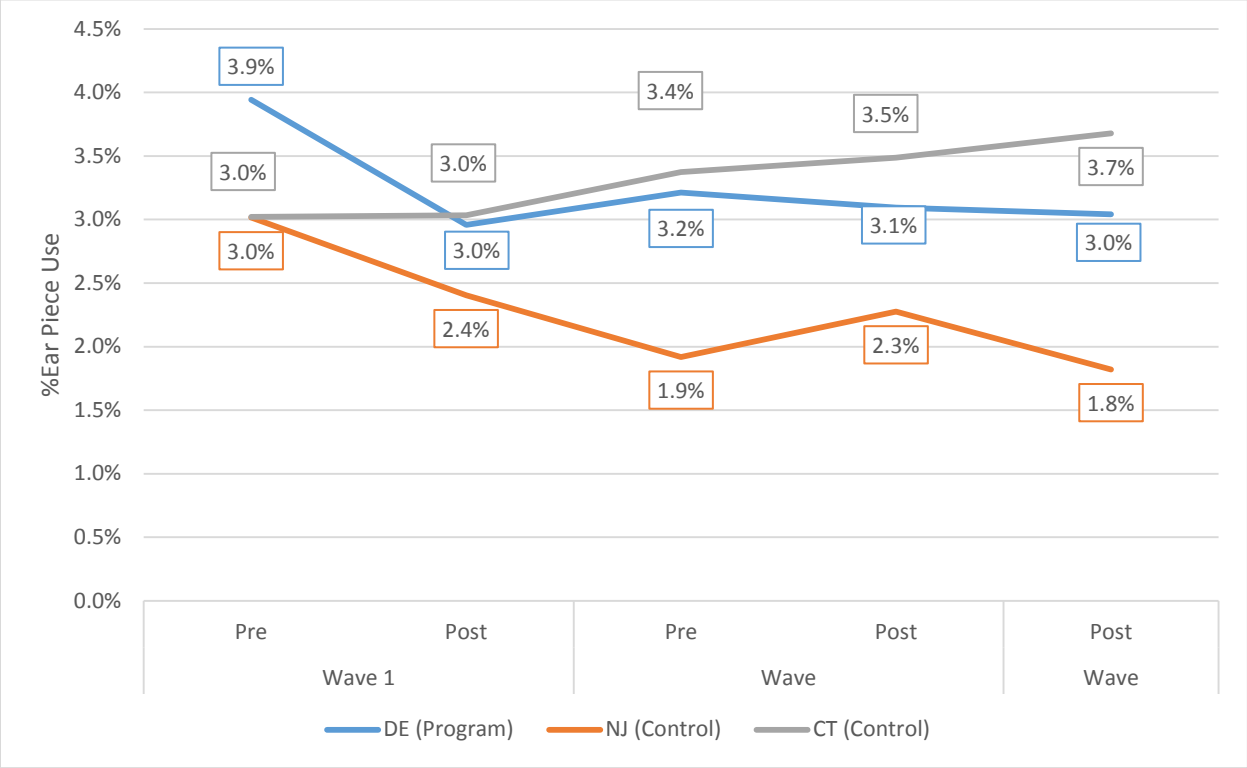


Figure11. Delaware Earpiece Use

Analyses of Crashes

A. California

Close to 10 percent (7.7%) of California's Wave 1 pre media/enforcement crashes were distracted. The rate decreased to 6.9 percent during and after media and enforcement. The same period the year before saw an increase in the proportion of distracted crashes from 5.2 to 6.8 percent. The interaction between pre/post and year was not significant ($p > 0.05$); nor was the simple pre to post change in the enforcement year ($p > 0.05$).

By the end of the program (Wave 3 during and after enforcement/media), 6.6% of the crashes were coded as having distraction as a factor. The rate for the same time period one year prior was 6.2 percent. Neither the simple decrease from baseline to the end of the program (7.6% to 6.6%) nor the interaction between that change and the change for the same time period 1 year earlier were significant (all *p*s > 0.05).

B. Delaware

One percent of Delaware's crashes were coded as distraction-related in the period prior to media and enforcement of Wave 1.The same period a year prior had 0.4% of crashes coded with a distraction factor. Less than 1 percent (0.7%) of crashes in the period during and after enforcement/media were coded with a distraction factor, compared to (0.6% in the corresponding period a year prior. Neither the decrease from pre to post during the treatment year, nor the interaction between year and pre/post" were significant (*p*s > 0.05).

By the end of the program, 0.5 percent of the crashes were coded as distracted, down from 1.0% at the start of the program in Delaware. The end-of-program rate was similar to the 0.6 percent of crashes coded as distracted one year prior. Neither the simple decrease from baseline to the end of the program (1.0% to 0.5%) nor the interaction between that change and the change for the same time period 1 year earlier were significant (*p*s > 0.05).

Table 23. Number of Crashes and % Distracted Related

			Wave 1		Wave 3
State	**Year**		**Pre-Media/Enf.**	**During/Post Media/Enf.**	**During/Post Media/Enf.**
CA	Program	Total n	520	1123	1128
		% Distracted	7.7%	6.9%	6.6%
	Prior Year	Total n	555	1109	1071
		% Distracted	5.2%	6.8%	6.2%
DE	Program	Total n	811	1796	1815
		% Distracted	1.0%	0.7%	0.5%
	Prior Year	Total n	953	1782	1734
		% Distracted	0.4%	0.6%	0.6%

V. DISCUSSION

Public awareness and self-report data indicate that distracted driving is still a "hot button" issue. For example, in its 2013 traffic safety culture index, the AAA Foundation for Traffic Safety indicated that 88 percent of respondents say that distracted driving is more of a problem today than 3 years ago (AAA Foundation for Traffic Safety, 2014). According to the same survey, 83 percent of respondents say that texting and e-mailing while driving is a very serious threat to safety and 85 percent say that it is unacceptable. Ironically, 35 percent report having read an electronic message while driving and 26 percent report having typed an electronic message while driving.

The heightened public awareness is not surprising, especially given recent media attention on the issue. Insurance companies, safety organizations, and advocacy groups have been addressing the dangers of using a cell phone and texting while driving, especially for teens. Mobile phone providers have been very active in discouraging distracted driving behavior and have worked together to move people away from distracted driving (e.g., Drive 4 Pledges Day). AT&T alone has spent millions of dollars on the *It Can Wait* Campaign and it is estimated that they spent $20 million in Northern California alone.

Paid media typically offer easy and effective dissemination of message and this was illustrated throughout this project. Indeed, the campaign's slogan, *Phone in One Hand, Ticket in the Other,* was shown to be effective in conveying the message of increased cell phone enforcement to the public. A significant proportion of drivers recognized the slogan, with close to 60 percent of respondents in the Sacramento area and a near doubling in awareness in Delaware, thus indicating that the public did recognize the message by the end of the program. Along with increased recognition of the slogan, several measures indicated that drivers in the test sites had also heard about the rise in enforcement.

The demonstration in Delaware met some challenges given that its broadcast market (DMA) is part of the Philadelphia market. Providing paid media to this market not only would have been cost prohibitive but also would have been aimed at an audience mostly unexposed to increased enforcement. Given the limits of such a plan, media buys were instead limited to cable and radio. This was done so that paid media efforts could be better focused on the audience targeted by the enforcement. The first buy was small in terms of GRPs purchased and delivered but appeared to have been sufficient to increase awareness in the State. However, the following two waves saw a much lower buy and delivery which may have fallen below the threshold needed to further raise awareness of the program. Data show that the highest level of slogan and enforcement awareness came after Wave 1, only to then decline from that peak (albeit higher than baseline) at the end of the program. Consistently, the majority of the decrease in handheld use was achieved prior to the start of Wave 2 in Delaware.

Control areas are typically not devoid of messaging and enforcement related to distracted driving. This is not surprising given the recent focus on the problem of distracted driving. All control areas had laws banning handheld phone use and texting while driving at the time of data collection. Moreover, there was a National movement toward cell phone awareness with the month of April being designated as distracted driving awareness month by the National Safety Council.

Over the course of the program both California and Delaware motorists reported increased awareness of the slogan—*Phone in One Hand, Ticket in the Other*. Over the same time period there was also an increase in those reporting that they had "read seen or heard" something about distracted driving enforcement. An increase in *Phone in One Hand, Ticket in the Other* message awareness were not present in the control areas. These data indicate that the media was able to reach motorists. This is particularly important for a difficult market like Delaware. That is, Delaware belongs to the Philadelphia media market—paid media in this market would be cost prohibitive (and wasteful as the vast majority of those receiving the message would not be subject to the enforcement). Thus, the more "local" strategy employed in Delaware was still successful in reaching the intended audience.

Declines in use rates and presence of some pre-existing knowledge of distracted driving enforcement were observed in all of the control areas. The relative change in handheld use in the control areas was smaller than the change in Delaware, thus lending support to the position that enforcement combined with media does indeed lower use rates. The case was less clear in the California demonstration. Indeed, the decrease in the control area (Portland, OR) was greater than it was in the Sacramento area. At the time this research was conducted, a two-week state-wide enforcement effort resulted in over 200 stops in the Portland area, with 60 percent of the citations being given for cell phone violations. Oregon law makers were also exploring a very well publicized $1,000 to $2,000 fine for cell phone use while driving. Issues related to distracted driving and the like were thus well on Oregon's driver's minds. Multiple waves of reporting regarding this proposal appear to have coincided almost perfectly with the post Wave 2 and post Wave 3 observations. For instance, several news articles appeared in mid-February and many more appeared at the end of June (sample articles in Appendix I). The first three rounds of observations (i.e., pre and post Wave 1 and pre Wave 2) in Oregon showed no changes in handheld use followed by sharp declines following the enforcement campaign and these news media reports.

There was clear evidence that high-visibility enforcement campaigns can change drivers' behavior quickly in a variety of traffic safety areas. This was particularly evident in Delaware. That said, it is likely that the decreases measured in California were driven by the program as well and that perhaps the lack of a significant interaction was influenced by the ongoing

discussions regarding fines in Oregon. The goal of an HVE campaign is not to issue tickets, but rather to take advantage of motorists' desire to avoid citations. The model seeks to deter drivers from ever engaging in a particular behavior and is most effective when there are robust efforts in each component of the model: laws, enforcement, and publicity. Ticketing in California was lower (M = 8 tickets per 10k population) than the benchmark used for seat belt ticketing[1] (i.e., 20 tickets per 10k population; Nichols & Ledingham, 2008). Yet that level of ticketing, combined with strong media was enough to lower handheld phone use while driving. It should be noted that these levels of ticketing may underestimate the overall effort as California continued enforcement (with a different slogan) between the specific Waves described in this report. In Delaware, the ticketing reached the "benchmark" (M = 23 tickets per 10k population) but only moved the needle for the first wave perhaps indicating the need for stronger media.

Typically, periodic enforcement waves yield a ratcheting effect (see Solomon, Nissen, & Preusser, 1999) or fluctuation between waves where the observed behavior reverts close to previous levels. In the current project, this pattern was somewhat different. There appeared to have been a large effect for Wave 1 which was maintained but not expanded upon in the following waves.

Officers need to fully understand the law enforcement tactics they choose to detect and cite violators. Officers needed to operate within the law when using favored enforcement tactics like unmarked vehicles, using spotters or splitting lanes. For example, unmarked cars can be used for traffic enforcement in Delaware but an unmarked vehicle cannot make a traffic stop in California. Another example is spotters (for distracted driving enforcement) which in this case could only be used in California due to Delaware's statute prohibiting use of spotters for distracted driving enforcement.

The preferred method for detecting unsuspecting violators among Delaware officers was unmarked and low profile police vehicles. California officers preferred splitting lanes at traffic controlled intersections using motorcycle patrols. Lane splitting refers to a two-wheeled vehicle moving between roadway lanes of vehicles that are proceeding in the same direction. More narrowly, it refers to overtaking slow or stopped vehicles by traveling between lanes. Using spotters received attention from local news affiliates, but roving patrols at high traffic times in high volume locations appeared to be the preferred way to find violators in both States.

There was no measurable change in proportion of crashes considered to have distraction as a contributing factor. The most likely reason for this is the relatively low proportion of crashes deemed caused by distracted driving (far less than 10% in the Sacramento data, and barely 1% in Delaware). Thus, there is limited statistical power for the analyses given the small percentages. Also, despite a large percentage change in driving with a handheld phone, the absolute changes

[1] There has not yet been a study to determine a benchmark ticketing rate for handheld phone use.

are relatively small (a few percentage points). In order to measure the impact of these changes on rates of crashes a longer period of time, assuming sustained reduction in use rates, would be needed. It is encouraging that the percentage of crashes described as related to distracted driving decreased over the study period but there was no real change in the overall number of crashes.

These demonstration programs validate the notion that NHTSA's HVE model can be effectively applied to distracted driving enforcement and that various law enforcement strategies can be used to observe and ticket cell phone and texting violations. Target behaviors were reduced to a point below the baseline level by the end of the program. This was true for all sites, both intervention and comparison. Survey data indicated that both motorists and law enforcement officials showed widespread support for cell phone and texting enforcement. These demonstrations confirm earlier results obtained with occupant protection, impaired driving, aggressive driving, and speed and show that HVE campaigns do encourage compliance with State laws and help modify driver behavior.

VI. REFERENCES

AAA Foundation for Traffic Safety. (2014). *2013 traffic safety culture index*. Washington, DC: Author.

Blumberg, S. J., & Luke, J. V. (2012). *Wireless substitution: Early release of estimates from the National Health Interview Survey, July – December 2012*. National Center for Health Statistics. June 2013. Retrieved from www.cdc.gov/nchs/nhis.htm.

Braitman. K. A., & McCartt, A. T. (2010). *National reported patterns of driver cell phone use*. Arlington VA: Insurance Institute for Highway Safety.

Chaudhary, N. K., Casanova-Powell, T. D., Cosgrove, L., Reagan, I., & Williams, A. (2012, August). *Evaluation of NHTSA distracted driving demonstration projects in Connecticut and New York*. (Report No. DOT HS 811 635). Washington, DC: National Highway Traffic Safety Administration. Available at www.nhtsa.gov/staticfiles/nti/pdf/811635.pdf

Duggan, M., & Rainie, L. *Cell phone activities 2012*. Pew Internet & American Life Project, November 25, 2012. Retrieved from http://pewinternet.org/~/media//Files/Reports/2012/PIP_CellActivities_11.25.pdf on October 9, 2013.

Fitch, G. A., Soccolich, S. A., Guo, F., McClafferty, J., Fang, Y., Olson, R. L., Perez, M. A., Hanowski, R. J., Hankey, J. M., & Dingus, T. A. (2013, April). *The impact of handheld and hands-free cell phone use on driving performance and safety-critical event risk*. (Report No. DOT HS 811 757). Washington, DC: National Highway Traffic Safety Administration.

National Center for Statistics and Analysis. (2014, April). *Distracted driving 2012: Summary of statistical findings*. (Traffic Safety Facts Research Note. Report No. DOT HS 812 012). Washington, DC: National Highway Traffic Safety Administration. Available at http://www-nrd.nhtsa.dot.gov/Pubs/812012.pdf

Nichols, J. L., & Ledingham, K. A. (2008). *The impact of legislation, enforcement, and sanctions on safety belt use*. (Project 17-33. NCHRP Report 601). Washington, DC: Transportation Research Board. Available at http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_601.pdf

Pickrell, T. M., & Ye, T. J. (2013, March). *Driver electronic device use in 2011*. (Report No. DOT HS 811 719). Washington, DC: National Highway Traffic Safety Administration.

Schroeder, P., Meyers, M., & Kostyniuk, L. (2013, April). *National survey on distracted driving attitudes and behaviors – 2012*. (Report No. DOT HS 811 729). Washington, DC: National Highway Traffic Safety Administration.

Smith, A. (2013, June 5). Smartphone ownership – 2013 update. Pew Internet & American Life Project, June 5, 2013. http://pewinternet.org/~/media//Files/Reports/2013/PIP_Smartphone_adoption_2013_PDF.pdf, accessed on October 9, 2013

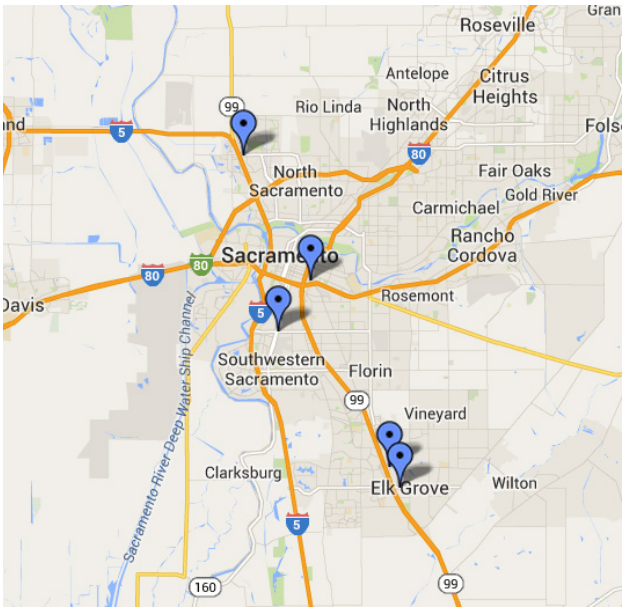
Solomon, M. G., Nissen, W. J., & Preusser, D. F. (1999). *Occupant protection special traffic enforcement program evaluation*. (Report No. DOT HS 808 884). Washington, DC: National Highway Traffic Safety Administration,.

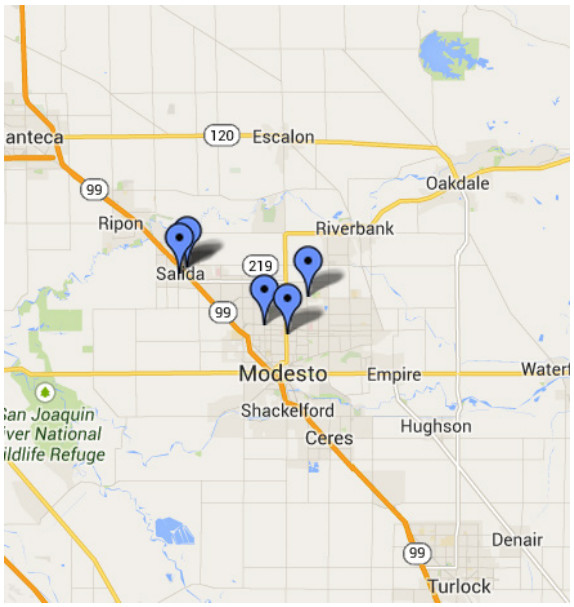
Williams, A.F., & Wells, J. K. (2004). The role of enforcement programs in increasing seat belt use. *Journal of Safety Research, 35*: 175-80.

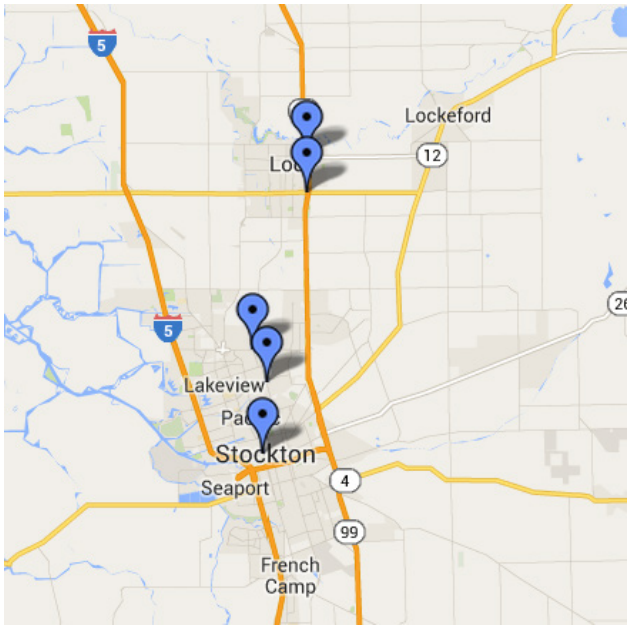
"Police team up in enforcement effort." (2013, February 28). Lake Oswego Review. Retrieved from http://pamplinmedia.com/lor/48-news/129116-police-team-up-in-enforcement-effort

VII. APPENDIXES

Appendix A. California Observation Maps







Appendix B. California Site Lists

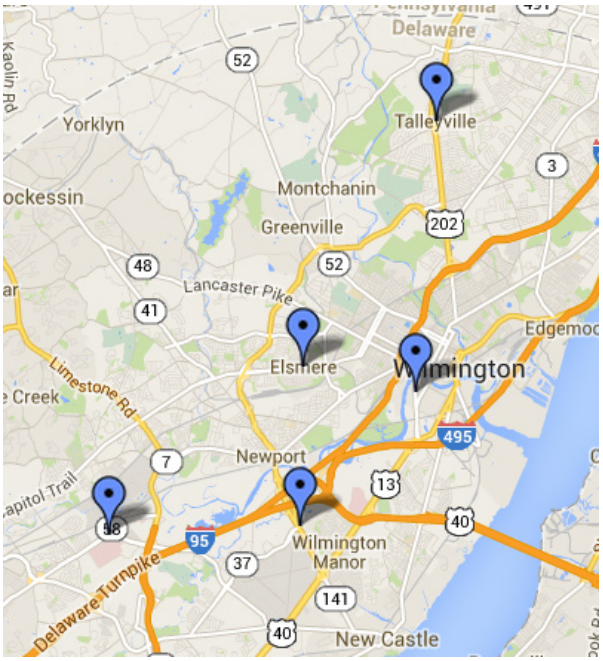
Baseline and Final Post

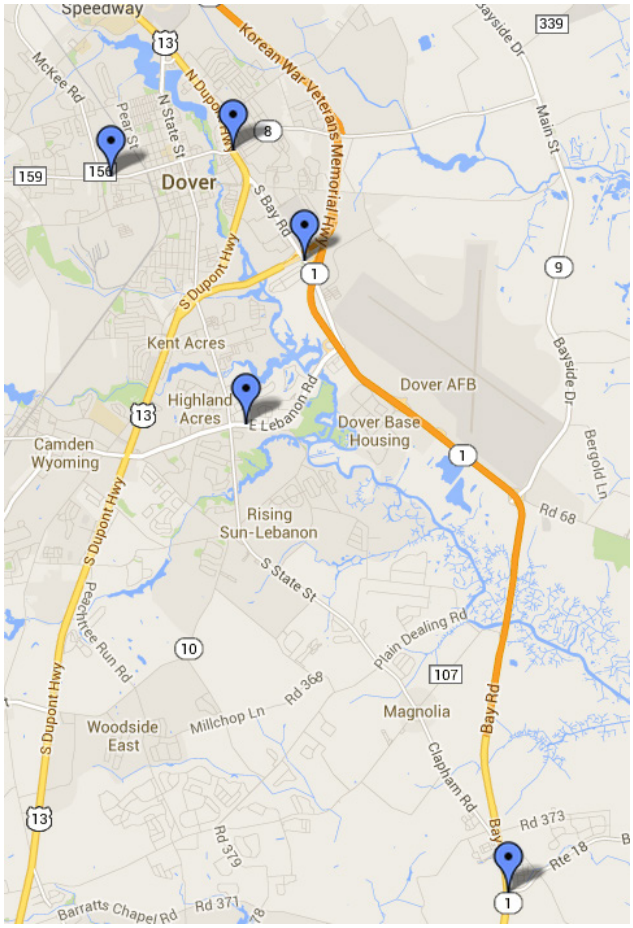
Site	Day	Time	
1	Sat/Sunday	10 a.m. - 11 a.m.	Modesto area
2	Sat/Sunday	11:30-12:30	
3	Sat/Sunday	1:30-2:30	
4	Sat/Sunday	3:30-4:30	
5	Sat/Sunday	5-6	
6	Mon/Wed	8-9a.m.	Stockton Area
7	Mon/Wed	9:30-10:30	
8	Mon/Wed	11-12	
9	Mon/Wed	3-4	
10	Mon/Wed	4:30-5:30	
11	Tuesday	8-9 a.m.	Sacramento Area
12	Tuesday	9:30-10:30	
13	Tuesday	11:30-12:30	
14	Tuesday	1:30-2:30	
15	Tuesday	3:30-4:30	
14	Tuesday	5:30-6:30	
11	Thursday	7:30-8:30a.m.	
12	Thursday	9-10	
13	Thursday	10:45-11:45	
15	Thursday	12:45-1:45	

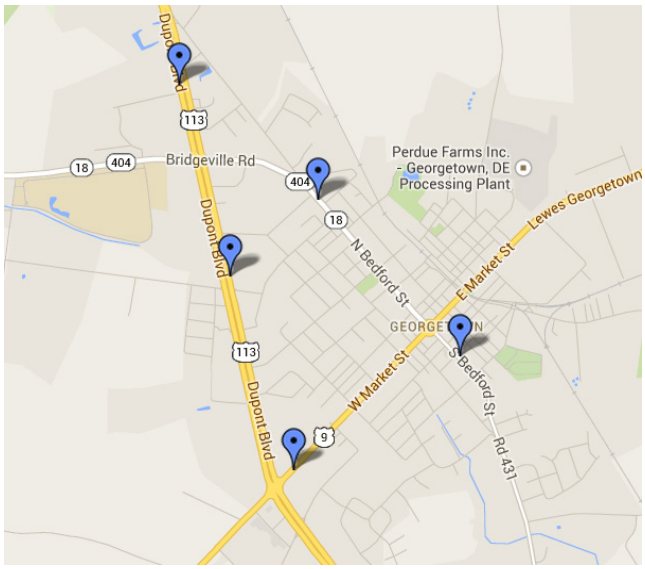
Other Waves

Site	Day	Time	
1	Sunday	10 a.m. - 11 a.m.	Modesto area
2	Sunday	11:30-12:30	
3	Sunday	1:30-2:30	
4	Sunday	3:30-4:30	
5	Sunday	5-6	
6	Monday	8-9a.m.	Stockton Area
7	Monday	9:30-10:30	
8	Monday	11-12	
9	Monday	3-4	
10	Monday	4:30-5:30	
11	Tuesday	8-9 a.m.	Sacramento Area
12	Tuesday	9:30-10:30	
13	Tuesday	11:30-12:30	
14	Tuesday	1:30-2:30	
15	Tuesday	3:30-4:30	

Appendix C. Delaware Observation Maps







Appendix D. Delaware Site Lists

Baseline and Final Post

Site	Day	Time	
12	Sat/Sunday	10 a.m. - 11 a.m.	Georgetown
15	Sat/Sunday	11:30-12:30	
16	Sat/Sunday	1:30-2:30	
14	Sat/Sunday	3:30-4:30	
13	Sat/Sunday	5-6	
11	Mon/Wed	8-9a.m.	Dover Area
10	Mon/Wed	9:30-10:30	
8	Mon/Wed	11-12	
7	Mon/Wed	3-4	
9	Mon/Wed	4:30-5:30	
2	Tue/Thur	8-9a.m.	Wilmington Area
1	Tue/Thur	9:30-10:30	
3	Tue/Thur	11-12	
4	Tue/Thur	3-4	
6	Tue/Thur	4:30-5:30	

Other Waves

Site	Day	Time	
12	Sunday	10 a.m. - 11 a.m.	Georgetown
15	Sunday	11:30-12:30	
16	Sunday	1:30-2:30	
14	Sunday	3:30-4:30	
13	Sunday	5-6	
11	Monday	8-9a.m.	Dover Area
10	Monday	9:30-10:30	
8	Monday	11-12	
7	Monday	3-4	
9	Monday	4:30-5:30	
2	Tuesday	8-9a.m.	Wilmington Area
1	Tuesday	9:30-10:30	
3	Tuesday	11-12	
4	Tuesday	3-4	
6	Tuesday	4:30-5:30	

Appendix E. -Example Observation Form

Distracted Driver #330 Cellular Phone Observation Data Form

SITE ID NUMBER: _____ **OBSERVER:_____**

CITY: _____ LOCATION:_____
(Street) (Cross Street or other landmark)

DATE: _____ - _____ - _____ **DAY OF WEEK: _____**

WEATHER CONDITION:
1 Clear / Sunny 4 Fog
2 Light Rain 5 Clear/Wet
3 Cloudy

START TIME:_____ (Observation period will last exactly 60 minutes)

	Roadway Type 1=primary 2=second	**Vehicle Type** C = Car T= Pick Up S = SUV V = Van	**Age** 1 = Under 25 2= 25-59 3= Over 60 4= Unsure	**Sex** M = Male F = Female U = Unsure	**Handheld use**	**Bluetooth use**	**Manipulating**		**Roadway Type** 1=primary 2=second	**Vehicle Type** C = Car T = Pick Up S = SUV V = Van	**Age** 1 = Under 25 2 = 25-59 3 = Over 60 4 = Unsure	**Sex** M = Male F = Female U = Unsure	**Handheld use**	**Bluetooth use**	**Manipulating**
1								26							
2								27							
3								28							
4								29							
5								30							
6								31							
7								32							
8								33							
9								34							
10								35							
11								36							
12								37							
13								38							
14								39							
15								40							
16								41							
17								42							
18								43							
19								44							
20								45							
21								46							
22								47							
23								48							
24								49							
25								50							

Appendix F-Motor Vehicle Offices Surveyed

Delaware	Connecticut	New Jersey
New Castle DMV	Hamden DMV	Egg Harbor Township MVC
Wilmington DMV	New Britain DMV	
Dover DMV	Wethersfield DMV	
Georgetown DMV		

Appendix G-Delaware Awareness Survey

Intercept Survey DMV Offices

Several Driver Licensing Offices are participating in a study about distracted and unsafe driving in Delaware. Your answers to the following questions are voluntary and anonymous. Please complete the survey and drop it in the box.

1. Your sex: [] Male [] Female

2. Your age: [] 18-20 [] 21-34 [] 35-49 [] 50-59 [] 60 Plus

3. Do you consider yourself Hispanic or Latino? [] Yes [] No

4. Your race: Check all that apply: [] American Indian or Alaska Native [] Asian [] Black or African American
[] Native Hawaiian or other Pacific Islander [] White

5. Your Zip Code: _____

6. About how many miles did you drive last year?
[] Less than 5,000 [] 5,000 to 10,000 [] 10,001 to 15,000 [] More than 15,000

7. What type of vehicle do you drive most often?
[] Passenger car [] Pickup truck [] Sport utility vehicle [] Mini-van [] Full-van [] Other

8. How often do you talk on a hand-held cellular phone when you drive?
[] Always [] Nearly always [] Sometimes [] Seldom [] Never

9. How often do you send text messages or emails on a hand-held cellular phone when you drive?
[] Always [] Nearly always [] Sometimes [] Seldom [] Never

10. Do you think that it is important for police to enforce hand-held cellular phone laws? [] Yes [] No

11. What do you think the chances are of getting a ticket if you use a hand-held cellular phone while driving?
[] Always [] Nearly always [] Sometimes [] Seldom [] Never

12. Do you think the hand-held cellular phone law in Delaware is enforced:
[] Very strictly [] Somewhat strictly [] Not very strictly [] Rarely [] Not at all

13. Have you EVER received a ticket for using a hand-held cellular phone while driving? [] Yes [] No

14. In the PAST MONTH, have you received a ticket for using a hand-held cellular phone while driving?
[] Yes [] No

15. In the PAST MONTH, have you seen or heard about police enforcement focused on hand-held cellular phone use?
[] Yes [] No

16. Have you recently read, seen or heard any messages about the enforcement of hand-held cellular phone laws in Delaware? [] Yes [] No

If yes, where did you see or hear about it? (Check all that apply):
[] Newspaper [] Radio [] TV [] Billboards [] Brochure [] Online [] Police Enforcement [] Other

If yes, what did it say? _____

17. Do you know the name of any distracted driving program(s) in Delaware? (Check all that apply):

[] Phone in One Hand, Ticket in the Other [] Great Hang Up [] Texting and Driving: It Can Wait
[] Stop the Texts. Stop the Wrecks. [] Phone Hand Free: Arrive Alive DE
[] One Text or Call Could Wreck It All [] Decide to Drive

Appendix H-California Awareness Survey

Intercept Surveys Gas Stations

Intercept Survey

California drivers are being asked to participate in a study about distracted and unsafe driving for California's Office of Traffic Safety. Your answers to the following questions are voluntary and anonymous.

1. Your sex: ☐ Male ☐ Female

2. Your age: ☐ 18-20 ☐ 21-34 ☐ 35-49 ☐ 50-59 ☐ 60 Plus

3. Do you consider yourself Hispanic or Latino? ☐ Yes ☐ No

4. Your race: Check all that apply: ☐ American Indian/Alaska Native ☐ Asian ☐ Black/African American ☐ Native Hawaiian or other Pacific Islander ☐ White

5. What do you think your chances are of getting a ticket if you use a hand-held cellular phone while driving? ☐ Always ☐ Nearly Always ☐ Sometimes ☐ Seldom ☐ Never

6. In the PAST MONTH, have you received a ticket for using a hand-held cellular phone while driving? ☐ Yes ☐ No

7. In the PAST MONTH, have you read, seen or heard about police enforcement focused on hand-held cellular phone use in California? ☐ Yes ☐ No

7a. If yes, where did you read, see or hear about it? (Check all that apply):
☐ Newspaper ☐ Radio ☐ TV ☐ Billboards ☐ Brochure ☐ Online ☐ Police Enforcement ☐ Other

8. Do you know the name of any distracted driving program(s) in California? (Check all that apply):

☐ Phone in One Hand, Ticket in the Other ☐ Great Hang Up ☐ It's Not Worth It
☐ Texting and Driving: It Can Wait ☐ Stop the Texts. Stop the Wrecks.
☐ Don't Be a Cell Phone Zombie

9. What is your zip code? _____

Appendix I- Oregon Media for Proposed Fine Increases

Wave 2 (Feb 2013) articles

Driving and texting could turn into $2,000 ticket in Oregon

By **Christian Gaston, The Oregonian**
on February 12, 2013 at 5:19 PM, updated February 12, 2013 at 9:30 PM

Way back in 2009, when this photo was taken, it was still legal in Oregon to drive while talking on a cellphone. Now, anyone caught doing it can get up to a $500 fine. Lawmakers are considering two bills to up the ante, bringing the maximum fine up to $2,000. Don Ryan/The Associated Press
SALEM -- Texting behind the wheel could cost you up to $2,000 if Oregon lawmakers have their way.

Two bills in the Legislature would increase the maximum penalty for using a cellphone while driving, the highest profile effort among a number of legislative attempts to rewrite the rules of the road.

Senate President **Peter Courtney, D-Salem**, says the rise of texting is causing dangerous distractions and has thrown his political weight behind the effort to increase the fines drivers face if caught with their hands on a phone.

"You don't have to drive much to see people texting," Courtney said. "It's everywhere. It's going on all the time. It's just unbelievable."

Accidents on Oregon roads involving cellphones peaked at 312 in 2009, the year lawmakers put a maximum $500 penalty on using a cellphone while driving. (Hands-free use was exempted.) The number of accidents initially dropped, but has been creeping up. In 2011, 269 accidents statewide involved a cellphone.

That's a small share of the average 45,000 auto accidents that occur each year. But Courtney said he introduced **Senate Bill 9** in order to put some teeth in the 2009 law. It would increase the maximum penalty to $1,000 and direct the Department of Transportation to erect signs warning drivers of the law.

A tougher bill on the House side (**House Bill 2790**) would increase the maximum penalty to $2,000.

"If the penalties are great enough, then people will realize," Courtney said, "OK, you can get away with it and get away with it, but the one time you get caught the penalties will be very severe."

The Senate Judiciary Committee voted 3 to 2 in support of the bill Tuesday, with the committee's two Republicans voting against it. It now goes to the full Senate.

Sen. Betsy Close, R-Albany, said she worried the fines would have an unfair impact on young drivers. **Sen. Jeff Kruse, R-Roseburg**, agreed and said he wished the bill affected distracted driving in general.

Sen. Floyd Prozanski, D-Eugene, who works as a municipal prosecutor in Florence and chairs the committee, said most drivers wouldn't face the maximum fine, which is typically reserved for egregious cases or repeat offenders. Usually tickets bear a lower "presumptive fine." The current one for using a cellphone while driving is $110. Under Courtney's bill, it would increase to $260. Under the House measure, it would increase to $435.

Cellphones aren't the only thing that could cost you on the road. Two bills crafted by **Rep. Mitch Greenlick, D-Portland**, would tax studded tires.

Greenlick, who used to live in Portland's west hills, said his goal is to raise money to pay for the damage the tires cause, not to ban them outright. He sympathizes with drivers stuck on snowy passes.

"They ought to be able to get them, but they ought to pay for the damage that they cause," Greenlick said.

Greenlick introduced **House Bill 2278**, which would tax each tire by $10, but said he's focused on **House Bill 2277**, which requires studded tire owners to obtain a permit. The cost of the permit would be based on how much damage studded tires do to Oregon roadways each year. Rough figures suggest it could cost $100 per year, Greenlick said.

Not all the road bills are aimed at extracting fees. **Sen. Ginny Burdick** wants to amend state law to require slow-moving traffic to stay in the right lanes, leaving the left lane for passing. Currently, only "campers, trailers and trucks" are required to reserve the left lane for passing.

Burdick, D-Portland, introduced **Senate Bill 511** in order to speed up traffic flow and improve safety.

"The far left lane is meant for passing," Burdick said. "And you have cars that get in that lane and just use it as a driving lane and it causes other drivers to make unsafe maneuvers to get around them."

Other vehicle-related legislation aims to improve safety. **Senate Bill 527** requires motorists to turn their headlights on when their windshield wipers are active. **Senate Bill 444** bans smoking in a car while children are present. Both concepts have been introduced in the Legislature before, but failed to pass.

The smoking ban wouldn't be "nanny state" regulation, but would protect kids from cigarette smoke, said Sen. **Elizabeth Steiner Hayward, D-Portland**, the bill's sponsor.

"Secondhand smoke in that space is just as bad as smoking themselves."

--Christian Gaston
@christiangaston

http://blog.oregonlive.com/politics_impact/print.html?entry=/2013/02/driving_and_texting_could_turn.html

Television News Spot

http://www.kptv.com/video?clipId=8365457&autostart=true

By **The Oregonian Editorial Board**
on February 17, 2013 at 4:06 PM, updated February 18, 2013 at 4:59 PM

Oregon Senate President Peter Courtney has a knack for putting things in context. Speaking before legislators last week, he recalled the time when drunken driving was not only commonplace but socially endorsed.

"It was considered a sign of manliness," said Courtney.

Well, we know where that went. States sobered up to the hazard, got tough with laws against it, and anyone caught drunk while driving now faces consequences far worse than any hangover. That's a good thing. Highway mortality linked to drunken driving has declined.

Now Courtney wants to get tougher on those who use cellphones while driving. Already the practice is against Oregon law, though folks may chatter away if their device requires no handling. But Courtney would like to bump up the offense from a Class D traffic violation to a Class B violation, which means setting the presumptive fine for the offense at $260, up from $110. The maximum fine could reach $1,000, up from $250.

This, too, seems reasonable when surveys show distracted driving, with cellphone use cited as a major culprit, increasingly accounts for vehicle crashes and consequent injuries and fatalities. The risk, meanwhile, grows: **The Centers for Disease Control and Prevention reports** that roughly 25 percent of all drivers nationwide admitted in 2010 to talking regularly on cellphones while driving. And the young present a particular challenge: Of those drivers surveyed between age 18 and 29, nearly 40 percent reported they regularly talked or texted while under way.

But much remains to be learned. Oregon's law, even with Courtney's strengthening, suffers the common myopia of most state legislation limiting cellphone use while driving. Research increasingly shows hands-free chatting isn't much safer, if at all.

That's because the human brain has to work hard to process a conversation with a person who is not in the car. Carnegie Mellon University researchers measured a 37 percent decrease in activity in the area of the brain that manages spatial tasks, such as driving, when the subject was merely listening to somebody unseen at the other end of a phone conversation. Onboard systems built into most new cars could be as much a problem as a convenience: Leaving the driver hands-free to chat may contribute to distracted driving, a well-documented risk.

Anyone driving today has seen it: The driver who makes a spectacularly bad turn, misses the light, or otherwise creates the near-miss -- all while holding a phone to his or her ear or fumbling at the wheel to send a text message. Courtney's bill would signal Oregonians of the seriousness of the threat and would be a sharp rebuke to those who feel texting, in particular, is merely a nuisance infraction.

A separate measure being floated in the House by Rep. Carolyn Tomei and others would go further, bumping up the maximum penalty for texting while driving to $2,000. While the motivation is right, that figure seems especially punitive and more than needed to serve as reminder that talking or texting via cell phone while driving can be a costly mistake.

Settling the hands-free question will take more time. But legislators should see immediate value in Courtney's proposal. Passage of Senate Bill 9 would be a vote for safer roadways and better driving.

The presumptive fine for those ticketed for cell phone use while driving would be $260, and the maximum fine would be $1,000, under proposed legislation. Judges would have discretion under Oregon law to impose fines ranging from a minimum of $130 to the maximum of $1,000. An editorial in Monday's editions misstated the terms of the proposed bill.

http://blog.oregonlive.com/opinion_impact/print.html?entry=/2013/02/getting_tougher_on_fines_for_p.html

Wave 3 (June articles)

OREGONLIVE

cellphonejpg-03f28c2a0124f062.jpg
A bill that would double the fine for using a cell phone while driving is likely dead, according to its sponsor, Senate President Peter Courtney. *(The Associated Press)*

Christian Gaston | cgaston@oregonian.com By **Christian Gaston | cgaston@oregonian.com**
Email the author | Follow on Twitter
on June 27, 2013 at 6:00 AM, updated June 27, 2013 at 6:26 AM

SALEM -- A bill that would have attached a $1,000 maximum fine to texting while driving is dead, according to **Senate President Peter Courtney**.

Courtney sponsored **Senate Bill 9**, which would have boosted the potential fine well above the current $500 penalty for using a cell phone while driving, but the bill is stuck in committee and Courtney said he thinks the Legislature won't move it before the end of the session.

"It's dying," Courtney said. "I'm very disappointed. It's a serious defeat for public safety in Oregon."

Any bill could regain a second life in the Legislature until lawmakers close out the session. But heading into what lawmakers hope will be their final week in Salem, Courtney's prognosis seems to be accurate.

Courtney was pushing for the bill, which would have also funded roadway signs that warned motorists of the law, to combat texting while driving. Courtney said texting is a growing -- and key -- cause of distracted driving on the roads.

"It's texting," Courtney said, "we know it."

A similar measure, **House Bill 2790**, which would have bumped the maximum fee up to $2,000, sponsored by **Rep. Carolyn Tomei, D-Milwaukie**, is also dead.

Tomei said she was relying on Courtney's bill to be the one to move.

"I put all my money on his bill," Tomei said.

--Christian Gaston

http://blog.oregonlive.com/politics_impact/print.html?entry=/2013/06/1000_fine_for_using_cell_phone.html

Enforcement Blitz Article

Police team up in enforcement effort

Created on Thursday, 28 February 2013 08:00 | Written by The Review |
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Police team up in enforcement effort

As part of a two-week statewide effort targeting texting, speeding and proper safety belt use, police officers from Portland Police Bureau, Multnomah County Sheriff's Office, Clackamas County Sheriff's Office and Oregon State Police teamed up Feb. 20 for a multi-agency joint traffic enforcement effort.

More than 30 police officers focused enforcement efforts along Southeast 82nd Avenue, Interstate 205 and Interstate 84 between 8 a.m. and 5 p.m. During that time officers conducted more than 200 traffic stops and issued 268 citations and 58 warnings.

The citations issued included:

- 125 citations for unlawful use of a mobile communication device (cellphone law violations)
- 58 citations for adult and child safety restraint use
- 14 citations for speed violations
- 71 citations for all other violations including driving while suspended and driving uninsured

Traffic stops also led to:

- Two arrests for driving under the influence of intoxicants — drugs (one each by Portland Police Bureau and Multnomah County Sheriff's Office)
- One recovered unoccupied stolen vehicle (Clackamas County Sheriff's Office)
- An arrest of a 29-year-old Portland man by an Oregon State Police trooper wanted on a felony warrant out of Clark County, Wash. (violation of conditional release agreement)
- An out-of-compliance registered sex offender contacted by an Oregon State Police trooper for a safety belt violation. He was cited to appear on a misdemeanor charge.

http://pamplinmedia.com/lor/48-news/129116-police-team-up-in-enforcement-effort?tmpl=component&print=1&page=

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