



Distracted Driving High-Visibility Enforcement Demonstrations in California and Delaware

The National Highway Traffic Safety Administration estimates 10% of fatal crashes (3,328) and 18% of injury crashes (421,000) were attributable to distracted driving in 2012. Previous research indicates dedicated law enforcement over a specified period coupled with enforcement-based messaging can reduce observed electronic device use rates. A demonstration, consisting of four high-visibility enforcement (HVE) waves, conducted from April 2010 to April 2011 in Syracuse, New York, and Hartford, Connecticut, saw hand-held phone use drop 32% (from 3.7% to 2.5%) in Syracuse and 57% (from 6.8% to 2.9%) in Hartford (Chaudhary et al., 2014; Cosgrove et al., 2011).

Having evidence that high-visibility enforcement is effective in a controlled community setting, the next step was to examine the effectiveness of implementing distracted driving HVE campaigns over a widespread, multi-jurisdictional area. Following a methodology similar to the Connecticut and New York studies, NHTSA initiated two large-scale HVE demonstrations in California and Delaware to examine whether distracted driving-focused HVE can be applied to larger geographic and demographic areas.

In November 2012, NHTSA selected the California Office of Traffic Safety (OTS) and the Delaware Office of Highway Safety (OHS) for the demonstration effort. The States were selected among those that banned the use of hand-held cell phones while driving and made it a violation to write, send, or read text-based communication on an electronic wireless device while driving. Both California and Delaware allow for primary enforcement and their bans apply to all drivers.

NHTSA, California, and Delaware developed and implemented the HVE programs. The enforcement area in California covered nine counties in the Sacramento Valley Region, encompassing nearly 4 million residents (roughly 10% of California's population). Enforcement was conducted statewide in Delaware, covering close to 900,000 residents.

For each program site, comparison (control) areas were selected based on demographic similarity (i.e., population, density, median income). Media isolation was also considered important to avoid program messages from reaching the comparison area. Portland, Oregon, was selected as the comparison site for Sacramento, and Atlantic County, New Jersey, and

New Haven, Connecticut, were selected as Delaware's control areas.¹ The evaluation of the program was conducted by Preusser Research Group.

California and Delaware each coordinated and oversaw enforcement efforts. The Highway Safety Offices recruited participating law enforcement agencies, formed agreements, developed enforcement plans, and put reporting systems in place to gather program-related information. Each of the participating law enforcement agencies agreed to conduct three HVE waves within an 18-month project period. The three waves of distracted driving HVE took place from November 2012 to June 2013.

California and Delaware highway safety officials worked closely with NHTSA's Office of Communication and Consumer Information and its contracted media firm. NHTSA was responsible for the development of television and radio advertisement spots and the placement of all media buys. NHTSA also assisted both States with content development for earned media material. The creative material used in this project was identical to that developed and tested for the Hartford and Syracuse pilot projects. The paid media and earned media in California and Delaware used the tag line, *Phone in One Hand, Ticket in the Other*.

Enforcement in California was conducted by 37 of 40 local police departments in the Sacramento area as well as by the California Highway Patrol. The Delaware campaign represented the State's first HVE effort to reduce distracted driving. Ninety-eight percent of police departments in Delaware participated in the enforcement campaign (41 out of 42 departments).

California law enforcement reported nearly 10,800 tickets for violations involving drivers talking or texting on cell phones and Delaware police reported more than 6,200 tickets, over the course of the three enforcement waves.

Results

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 (and close to 19,000 in Portland). More than 50,000 drivers were observed

¹ Due to the impact of Hurricane Sandy, two control areas were selected for the Delaware program area.

in Delaware (and over 30,000 in the Connecticut control area and close to 20,000 in the New Jersey control area).

The observed hand-held cell phone use rate in California decreased significantly from 4.1% at baseline (pre-wave 1) to 2.7% at final post (post-wave 3). 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 the program; the decrease in Portland may have been due to a proposed legislative effort to raise the cell phone use fine to \$1,000 that coincided with this demonstration.

Drivers in Delaware showed a significant decrease in observed hand-held phone use from 4.5% at baseline to 3.0% at the end of the third enforcement wave. However, drivers in the combined comparison area of Atlantic County, New Jersey, and New Haven, Connecticut, also showed a decrease during the same period (from 5.4% to 4.3%). Further analyses showed that the decrease in hand-held cell phone use in Delaware was significantly greater than the decreases in the combined control areas in New Jersey and Connecticut.

Due to the particularities of each State, awareness survey data were collected in slightly different ways in the two intervention areas. Surveys in Delaware and its comparison areas were collected from motorists visiting Division of Motor Vehicle (DMV) offices. A different strategy was designed for the California site, 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.

The percentage of respondents in the Sacramento area who heard about enhanced police enforcement increased significantly from 56% at baseline to 73% at the end of the third and final wave. Small increases in awareness were present in the comparison area as well, but none was statistically significant. Awareness of the campaign slogan, *Phone in One Hand, Ticket in the Other* increased significantly in California, going from 16% at baseline to reach a high of 57% by program end. The equivalent percentages in the Portland control area were 8% at baseline and 7% after the third wave.

The proportion of respondents reporting that they had 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%). Over the course of the program, recognition increased significantly in Delaware, from 7% at baseline to 19% after the final wave. Recognition in New Haven County remained stable at 19% in both baseline and post-wave 3.



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Conclusion

Both awareness surveys and behavioral observations were conducted in this demonstration program. The awareness surveys indicate that awareness of the enforcement and of the slogan increased significantly in both demonstration sites. The results of the behavioral observations suggest that conducting high visibility enforcement over statewide or large multi-jurisdiction areas is feasible and may be effective in modifying driver behavior by reducing hand-held cell phone use. However, as declines were also observed in the comparison sites, other factors may have contributed to some of the observed declines. The greater declines in observed hand-held phone use in Delaware compared to the comparison sites lend support for the program. The fact that awareness of enforcement and of the slogan increased significantly in California and Delaware, but not in the comparison sites also provides support for the effectiveness of the program.

References

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Note: This Traffic Tech was prepared by Amy Schick and Maria Vegega of the National Highway Traffic Safety Administration with input and comment from Neil Chaudhary of Preusser Research Group, which conducted the evaluation of the demonstration program.

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