



TRAFFIC SAFETY FACTS

Research Note

DOT HS 811 376

September 2010

High Visibility Enforcement Demonstration Programs in Connecticut and New York Reduce Hand-Held Phone Use

By Linda Cosgrove, Neil Chaudhary, and Scott Roberts

Driving while distracted increases the likelihood of a crash (NHTSA, 2010), and recent well-publicized events have brought this unsafe driving behavior to the forefront of the public eye. According to CTIA-The Wireless Association (2009) about 285 million Americans (91% of all Americans) now own cell phones, compared to only 1 million in 1987. The National Health Interview Survey (Blumberg & Luke, 2010) found that nearly one in four households were wireless only (no land line), up nearly 2 percentage points from the year before. The popularity of text messaging is increasing, and videotaped footage of drivers who were texting immediately before a crash has circulated widely on television and the Internet.

The National Highway Traffic Safety Administration estimates that 6% of drivers nationwide were using an electronic device at any given time in 2008 (Pickrell & Ye, 2009). A meta-analysis (Horrey & Wickens, 2006) of 23 experiments that measured the effects of cell phone use on driving performance found that, across all studies, reaction times were consistently slower when using a cell phone than when not using a phone.

To address this problem, NHTSA initiated distracted driving demonstration programs in two communities to test whether a high visibility enforcement (HVE) model could reduce two specific instances of distracted driving -- talking or texting using a hand-held cell phone. The HVE model combines dedicated law enforcement during a specific period, paid and earned media emphasizing an enforcement-based message, and evaluation before and after. *Click It or Ticket*, NHTSA's best known and most successful HVE campaign for seat belt use, has also been effective in areas of aggressive driving and impaired driving. This report summarizes results from the first two of four waves of enforcement and media for distracted driving high visibility enforcement campaigns in two communities.

Background

Over the past several years legislatures have introduced laws banning hand-held cell phone use and texting in a number of States. New York and Connecticut passed laws banning hand-held cell phone while driving in 2001 and 2005 respectively. At the time of this report, 8 States and the District of Columbia have banned hand-held cell phone use for all drivers, and 30 States and the District have banned texting for all drivers (GHSA, 2010). Many States also ban any use of a cell phone (even with a hands-free device) for novice teen drivers. The demonstration projects were aimed to test whether HVE would be effective in persuading drivers not to use hand-held phones to talk or text, whether law enforcement would be able to observe violations, and whether an HVE campaign would increase drivers' perceived risk of receiving a citation for violating the law.

Hand-held cell phone use while driving dropped 56% in Hartford (from 6.8% to 3.1%) and 38% in Syracuse (from 3.7% to 2.3%).

Texting while driving declined 68% in Hartford (from 3.9% to 1.4%) and 42% in Syracuse (from 2.8% to 1.6%).

Under the leadership of the U.S. Department of Transportation Secretary Ray LaHood, NHTSA awarded cooperative agreements to Connecticut and New York to implement and evaluate demonstration programs that apply the high visibility enforcement model to distracted driving at the community level. Syracuse, New York, and Hartford, Connecticut, (a combination of three contiguous cities -- East Hartford, Hartford, and West Hartford) conducted the demonstrations.



Program Description

NHTSA worked with the Connecticut Department of Transportation and the New York Department of Motor Vehicles' (DMV) Governor's Traffic Safety Committee to conduct model high visibility enforcement programs in the two selected communities. In Connecticut, the participating law enforcement agencies were the Connecticut State Police and the Hartford, West Hartford, and East Hartford Police Departments. In New York, the New York State Police, the Syracuse Police Department, and the Onondaga County Sheriff's Office participated. Both communities planned to conduct four waves of enforcement over the course of one year.

Under separate contracts, NHTSA provided evaluation and communications support to both sites. Preusser Research Group was the evaluation firm and the Tombras Group was the communications firm.

Table 1
Demonstration Program and Evaluation Schedule

	Wave 1		Wave 2	
	CT	NY	CT	NY
Pre Wave Observations	March 18-22	March 25-27	July 8-12	July 8-10
Pre Wave Awareness	March 23-27	March 15-19	July 6-10	July 5-9
Media Flight	April 4-16	April 4-16	July 22-28	July 20-26
Enforcement Dates	April 10-16	April 8-17	July 24-30	July 22-31
Post Wave Observations	April 15-19	April 15-17	July 29-August 2	July 29-31
Post Wave Awareness	April 15-20	April 19-22	July 29-August 3	August 2-6

The first two waves of focused enforcement took place in April and July 2010. Table 1 shows the timeline for pre and post evaluation data collection, media flights, and enforcement in test and control sites.

Development of the Creative Material

In September 2009 NHTSA explored a variety of project themes and held focus groups in Syracuse and Hartford (four in each city). Six potential taglines were selected for assessment. The line "A phone in one hand leads to a ticket in the other" received the highest marks. Based on additional comments, the line for the demonstration project was shortened to *Phone in One Hand, Ticket in the Other*.

The creative material was designed to generate high awareness of stepped-up enforcement efforts regarding local cell phone laws and convince drivers to adhere to those laws. In December 2009, eight more focus groups were held in Hartford and Syracuse to test four TV commercial ideas. The "BAM!" concept received the highest marks, and became the ad for the demo project.

Earned Media

Secretary LaHood and NHTSA Administrator David Strickland launched the campaign with press events (U.S. DOT, 2010) in each State on April 8, 2010. These events generated considerable coverage from local and national media outlets including a feature on ABC-TV's *Good Morning America* (Clarke, 2010) and a feature on ABC News (San Miguel, 2010).

Each of the demonstration sites received sample earned media templates so that they 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. In Connecticut and New York, more than 100 news organizations developed news stories about the demonstration projects. Syracuse and Hartford actively generated opportunities to earn additional media for the program. For instance, New York initiated a media tour and the Connecticut DMV joined with Traveler's Insurance Company to sponsor a teen driving video contest.

Paid Media

NHTSA's Office of Communications and Consumer Information purchased air time to promote the program activity and emphasize the enforcement component among the target audience of men and women 18 to 45 years old. The television spots are available online at distraction.gov/hartford and distraction.gov/syracuse. Figure 1 shows a still shot from one of the animated Internet ads also located on the Web site.

Advertisers use "gross rating points" (GRPs) to determine how much of their target audience is reached by a specific advertisement multiplied by the number of times the target audience sees it. For the first wave in April 2010, NHTSA purchased two weeks of advertising in each demonstration location at a level of about 535 GRPs for television/cable, 400 GRPs for radio, and an additional 2 million online impressions on Web sites like USA Today.com. This was considered a strong buy that would reach the target audience enough times that the ad's message would resonate with them. For the second wave in July 2010, NHTSA purchased one week of advertising in each demonstration location at a level of about 300 GRPs for television/cable, approximately 240 GRPs for radio, and an additional 1.5 million online impressions. The media expenditures were \$219,290 in Hartford and \$88,904 in Syracuse for both waves combine (see Table 2).

The Connecticut Highway Safety Office also ran the *Phone in One Hand, Ticket in the Other* slogan on variable message boards in and around the pilot area and purchased digital billboards on major Hartford Interstate Highways I-84 and I-91. The billboard message also ran at the XL Center, a sports and concert venue in downtown Hartford. This message ran on the XL Center digital billboard and outdoor marquee.

Enforcement

Hartford and Syracuse chose enforcement strategies tailored to their communities. Hartford preferred a spotter technique, where an officer, usually standing on the side of the road, radioed ahead to another officer whenever a passing motorist using a hand-held cell phone was observed. The second officer made the stop and wrote the ticket. The Connecticut Highway Safety Office prepared citation holders, short brochures that officers used to hold the tickets to provide specific information about Connecticut's cell phone law, the fine amount, and the risks associated with distraction.

Syracuse preferred roving patrols where officers drove through their jurisdiction actively seeking out distracted drivers using cell phones or texting. Officers reported that higher vantage points, SUVs, and unmarked vehicles were particularly effective in identifying violators. Both States found that having the flexibility to schedule overtime shifts as needed was critical to the successful implementation of the enforcement mobilizations.

Figure 1
Scene From Animated Internet Banner Ad



Table 2
Media Buy

	Wave 1 (2 weeks)		Wave 2 (1 week)	
	Hartford	Syracuse	Hartford	Syracuse
TV Cost	\$108,651	\$36,898	\$57,098	\$21,517
Radio Cost	\$108,651	\$36,898	\$57,098	\$21,517
Online Cost	\$5,000	\$5,000	\$3,750	\$3,750
Total Cost	\$140,855	\$54,159	\$78,435	\$34,745

Table 3
Enforcement Hours and Citations Issued

	Wave 1		Wave 2	
	Hartford	Syracuse	Hartford	Syracuse
Dedicated Hours	1,345	1,370	1,856	1,337
Hand-Held Phone Use	2,329	2,185	2,327	1,977
Text/E-mail/Distracted	279	115	21	169
Citations/10k Population	107	167	100	156

Both Hartford and Syracuse dedicated officers to vigorously enforce the hand-held cell phone ban during the two waves, exceeding benchmarks based on previous high visibility enforcement campaigns. Table 3 shows the number of enforcement hours and phone and texting citations issued in each site, along with the rate of citations per 10,000 of each city's population.

Evaluation Methodology

Before and after each enforcement wave, NHTSA conducted observations of driver cell phone use and collected public awareness surveys at driver licensing offices in each test and comparison site.

Albany, New York, served as the comparison area for Syracuse. Bridgeport and Stamford, Connecticut, were non-contiguous control areas to match the demographics of the three Hartford area cities. Control sites allow evaluators to separate the effect of the demonstration program from extraneous influences that may be going on in the State. None of the control sites received the paid media advertising and law enforcement officers continued their usual enforcement activities without special emphasis on cell phone laws.

Cell Phone Observations

Cell phone observations were taken at 15 sites in each intervention area, plus 15 sites in Albany, 15 in Stamford, and 7 sites in Bridgeport. Sites were selected from road segments based on traffic volume estimates. Three of the sites in each area were highway off-ramps. The rest of the sites were identified from the highest 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 the given area.

Observation protocols were based on NHTSA's National Occupant Protection Use Survey (NOPUS) observation protocols, adapted to increase sample size. An earlier formulation of the method, consistent with NOPUS observation protocols, had observers sampling from traffic stopped at red lights. Therefore all selected sites were at traffic light controlled intersections. Pilot testing of this method resulted in few observations and NHTSA modified its method to observe moving traffic only. Observations were made from

street corners observing one direction of traffic (the vehicles traveling in the lanes nearest the observer) for one hour at each site. When traffic signals turned red, observers pivoted and sampled vehicles from the moving traffic on the cross street. Observers coded vehicle type, sex, estimated age (16-24, 25-59, 60+) and whether the driver was holding a hand-held phone to her or his ear, manipulating a cell phone (other than by holding to one's ear) and if the driver had a hands-free headset (e.g., Bluetooth) in the visible ear.

The main analyses were the average percentage of each of the three cell phone use categories separately for each test and control area. Weighting of data occurred prior to analysis so that each site held equal weight. That is, for a 15-site survey in which the number of observed drivers varied between sites, the percentage use recorded in each site contributed an equal 1/15 of the total use rate for that area. Binary logistic regressions analyses evaluated the significance of differences and chi squares were conducted for raw data for subsets of the data (e.g., age). Over 121,000 vehicles were observed for the first two waves of the demonstration program.

Self-Reported Use and Awareness Surveys

Motorists who visited driver licensing offices in the test and comparison sites completed a single page questionnaire asking whether they had seen or heard of the distracted driving program, enforcement, or messaging. They were asked about their cell phone use while driving and whether they had changed their cell phone use in the past 30 days, among other topics. Surveyors collected more surveys for the first (pre Wave 1) administration and will do the same for the final (post Wave 4) administration to increase the power of analyses for both baseline and final data. Over 11,000 self-report surveys were collected for the first two waves of the demonstration program.

Researchers collected some data a bit later than originally planned (Table 1). In Syracuse there was a clerical error on the final question about slogan recognition. For this question, the analyses report data from another survey administered two weeks later in both Syracuse and Albany. There were inexplicable fluctuations in the Wave 2 results (pre and post) in the Albany surveys compared to Wave 1. For example there were 14% (pre) and 11% (post) of the respondents who reported having gotten a ticket for using a hand-held phone in the past month for Wave 2. This value was only 1% in both pre and post Wave 1 surveys. The data collected two weeks later were more comparable to Wave 1 results. For this reason the researchers deemed the original data from Albany Wave 2 unreliable. The analyses report only the re-sampled post wave data for Albany.

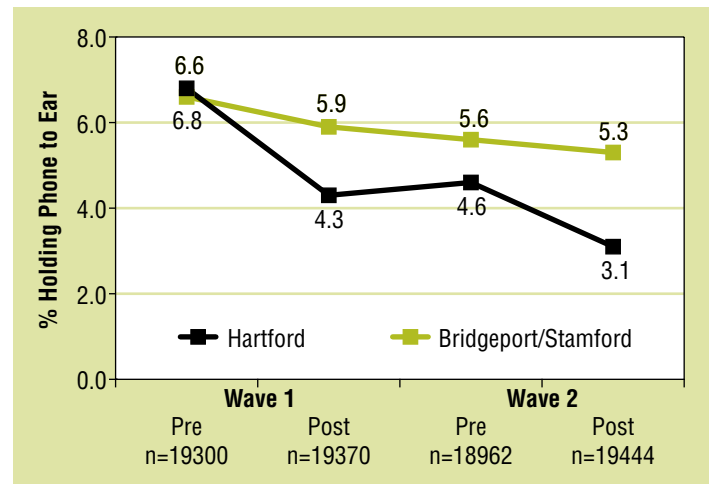
Results

Observed Phone Use in Connecticut

The results of Wave 1 showed a significant decrease ($p < .01$) in hand-held cell phone use in the Hartford areas from 6.8%

before the program to 4.3. afterwards (see Figure 2). The control areas also showed a slight decrease in hand-held cell phone use, but this was not statistically significant (6.6% to 5.9%, $p > .05$).

Figure 2
Observed Hand-Held Phone Use in Connecticut



There were further reductions in observed hand-held cell phone use in the second wave in the Hartford intervention area. In between waves, there was minimal increase in hand-held cell phone use in the Hartford areas, when the program was silent. Observed use was 4.6% at the pre measurement of the second wave, dropping to 3.1% in the post measurement ($p < .01$). Use in the control areas continued a slight, although not statistically significant, downward trend, starting at 5.6% and dropping to 5.3% ($p > .05$).

From the baseline (pre Wave 1) to the end of the second wave (post Wave 2) hand-held cell phone use dropped 56% (from 6.8% to 3.1% in the Hartford areas compared to 20% (6.6% to 5.3%) in the control areas.

Most of the decrease in cell phone use was attributed to drivers age 25 to 59 in the Hartford area. Young drivers 16 to 24 dropped 5.3 percentage points (from a pre of 9.0% to a post of 3.7%) following enforcement during Wave 1. However, relatively small sample sizes for this group made this drop only marginally significant ($p < .06$). There was no change for the second wave for the young drivers and there was also no change in use among this group for control areas in either wave. For the 25- to 59-year-old age group, there were significant pre to post drops for both waves in the Hartford area. The changes in the control areas were not significant for either wave and there were no significant effects for the oldest drivers in either wave in either area.

There were significant drops in observed phone use for men and women in both waves in the Hartford area. Surprisingly, there were significant (p 's $< .05$) pre to post decreases among female drivers in the control area for both waves but no change for male drivers.

For Wave 1, headset use significantly decreased from pre to post in both the Hartford area (3.5% to 2.8%) and in the control area (4.1% to 2.7%). For Wave 2, none of the pre to post differences were significant in either the test or control sites.

The percentage of people observed manipulating their phones decreased significantly in Wave 1 from pre to post. There was a larger decrease in the Hartford area (3.9% to 2.7%) than in the control area (2.8% to 2.1%). For Wave 2 there was another significant pre to post decrease without much of an increase between waves in the Hartford area (2.6% to 1.4%). There was no change in the control area for the second wave (2.6% to 2.6%).

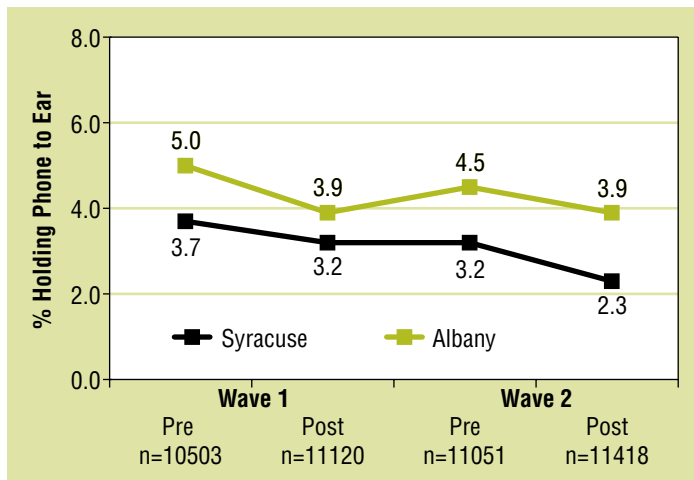
Observed Phone Use in New York

The results of Wave 1 showed a non-significant decrease in hand-held cell phone use in Syracuse going from 3.7% to 3.2% ($p > .05$) (see Figure 3). There was an unexpected decrease in use in the control area that did reach significance. In Albany use started at 5.0% and dropped to 3.9%.

Wave 2 results were more in line with expectations. Between waves there was no increase in hand-held cell phone in Syracuse and use remained at 3.2%. After the second wave there was a significant drop in use to 2.3% ($p < .01$). Use in Albany rebounded between waves and was 4.5% prior to Wave 2. There was a drop in hand-held cell phone use in Albany (to 3.9%) but this decrease was not significant.

Figure 3

Observed Hand-Held Phone Use in New York



From the baseline (pre Wave 1) to the end of the second wave (post Wave 2) hand-held cell phone use dropped 38% (from 3.7% to 2.3%) in Syracuse compared to a 22% decline (from 5.0% to 3.9%) in Albany.

Drivers 25 to 59 accounted for most of the decrease in cell phone use in Syracuse in Wave 1, but not enough to influence the overall observation rate. None of the other age categories in Syracuse showed a decrease for this wave. The same age group was also the only significant decrease for the Albany

drivers in Wave 1. For Wave 2, this group was again the only age group showing a significant decrease in Syracuse. In Albany, despite no overall significant drop, the drivers under 25 showed a significant decrease in driving while using a hand-held phone.

During Wave 1, male drivers showed a significant decrease in driving while on a hand-held phone in Syracuse while women did not. This effect for men was also the only significant drop in Albany. In the second wave men again significantly reduced their use in Syracuse while women did not. Conversely, there was a small but significant decrease in use by women in Albany but not men.

Observations of phone manipulation (e.g., texting, dialing) significantly decreased ($p < .05$) in Syracuse in Wave 1 (2.8% to 2.2%). There was also a decrease in Wave 2 (2.2% to 1.6%), but this decrease was not significant. The observed rate of manipulating a phone while driving was much higher in Albany than Syracuse. In both waves there was a significant pre to post decrease in observed phone manipulation in Albany (Wave 1: 6.3% to 5.3%; Wave 2: 5.7% to 3.0%). Both cities showed an overall decrease of 43% in observed phone manipulation from the baseline to the end of the second wave, with an absolute change of 1.2 percentage points in Syracuse and 3.3 points in Albany.

There were no significant changes in Syracuse in the percentage of drivers observed with hands-free headset. In both waves (pre and post) the rate was about 2% (ranging from 1.7% to 2.3%). Albany's rate of hands-free use was more variable ranging from 4.4% to 2.6%. There was a significant decrease between pre and post use rates during Wave 1 (4.4% to 2.8%).

Self-Reported Cell Phone Use and Program Awareness in Connecticut

Respondents in Connecticut were aware of and knowledgeable about the program and enforcement. From pre to post in Wave 1, Hartford area respondents reported increased chances of getting tickets while there was no effect in the control area. In both Syracuse and the control site, Albany, respondents also reported hearing more general distracted driving information after Wave 1 than before. In Wave 1 there was a decrease in the percentage reporting that it is important for police to enforce the hand-held cell law in both Hartford and control areas, but much of the decrease was restored by Wave 2. There was a pre to post increase in the Hartford area in Wave 1 for reports of having ever gotten a cell phone ticket. Similarly there was a pre to post (Wave 1 only) increase in reports of getting a ticket in the past month (for the control area also).

During Wave 2 there was an increase in the percentage of respondents in the Hartford area who heard about enhanced police enforcement. There was no such increase during Wave 1, but there was an overall gain between the waves. There were no significant effects for the control area.

During Wave 1 there was actually a decrease in the percentage of people having heard about distracted driving in general (both areas) but in Wave 2 there was a large increase (pre to post) in recognition for the Hartford area (but not the control area).

Awareness of the *Phone in One Hand, Ticket in the Other* slogan started at 5% in the pre of Wave 1. Following the first wave, recognition rose significantly to 32%. There was also a significant increase in the control area but not of the same magnitude (5% to 11%). Wave 2 led to further increases in recognition in the Hartford areas (27% to 47%). There was no increase in the control areas (8% to 10%).

Recognition of other slogans was not as high. The other most recognized slogan in the Hartford area following Wave 2 was *I-Promise Not to Drive Distracted* which was recognized by 15% of respondents. A local TV station (WFSB) has been running messages with this slogan between enforcement waves. Ten percent of the respondents recognized *Hang Up or Pay Up*, an enforcement type distracter slogan not in use in the area. Recognition of Oprah Winfrey's *No Phone Zone* was at 8%.

There was an increase in Wave 1 for judgments of frequency of cell phone use while driving, with no effect for the control group. The effect dissipated by Wave 2 -- the Wave 2 pre and post measures were much lower than the post of Wave 1. There was also a significant increase in self-reported texting during the first wave in the Hartford area. During the second wave there was a significant decrease in reported use by the control area respondents.

Self-Reported Cell Phone Use and Program Awareness in New York

Overall, Syracuse respondents knew about the enforcement and messaging campaign. Drivers in Syracuse reported having heard about the cell phone enforcement with significant pre to post increases for each wave. They also reported hearing about distracted driving (in general) more in the post of Wave 1 than in the pre of Wave 1 and this was also true in Albany. There was also an increase in self-reported tickets within the last month for Wave 1 in Syracuse. There was an increase in both waves for perceived strictness of police enforcement in Syracuse while there was a significant decrease during Wave 1 in Albany, the control site.

Unexpectedly, self-reported hand-held cell phone use increased from pre to post in Wave 1 in Syracuse. Albany's rates stayed the same. There were no changes in self-reported texting while driving.

Recognition of the main message, *Phone in One Hand, Ticket in the Other*, increased 32 percentage points in Syracuse (5% to 37%). The rates were flat in Albany, going from 4% to 5%.

Slogan recognition for Syracuse went from 5% to 21%. It is likely that recognition would have been even higher immediately following the campaign. Indeed, the recognition was

at 37% following Wave 1. Rates in Albany, the control site, stayed the same going from 4% to 5%.

Recognition of other slogans was considerably lower at the end of Wave 2 in Syracuse. For example *Hang Up or Pay Up*, (not in use in the area) was 11%. Eight percent of the respondents recognized Oprah Winfrey's *No Phone Zone*.

There was an unexpected increase from pre to post in the first wave in Syracuse respondents' judgment of how frequently they use a hand-held phone while driving, similar to the findings in Hartford. This increase was not present in Albany, and was not present in the second wave in either area. Self-reported cell phone use rates for both pre and post in the second wave were lower than the post in the first wave for Syracuse. Figures 4 through 8 show public awareness findings for Syracuse, Hartford, and the control sites over both waves.

Figure 4
In the Past Month, Have You Seen or Heard About Distracted Driving in [Connecticut/New York]?

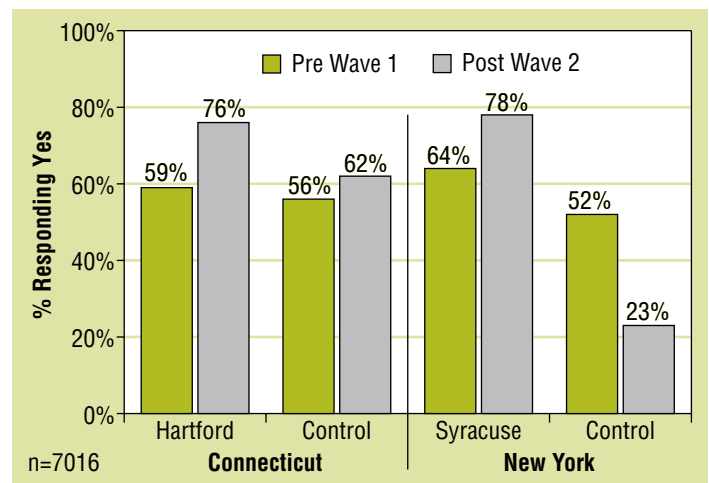


Figure 5
Awareness of "Phone in One Hand, Ticket in the Other" Slogan in Connecticut and New York

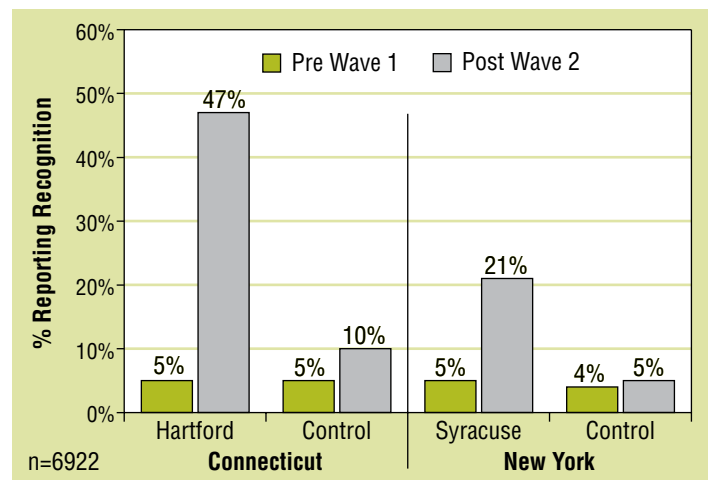


Figure 6

What do you think the chances are of getting a ticket if you use a hand-held cellular phone while driving?

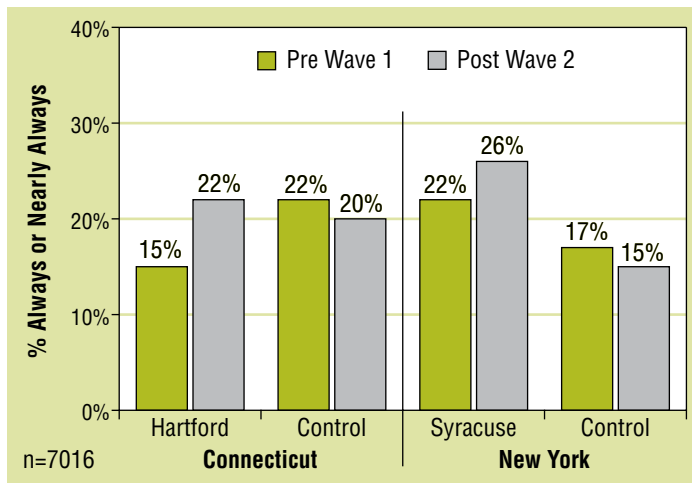


Figure 7

Strictness of Enforcement of Hand-Held Phone Law

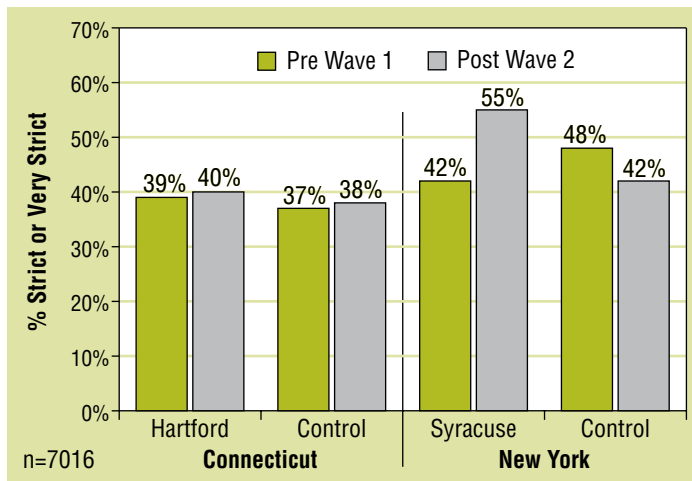
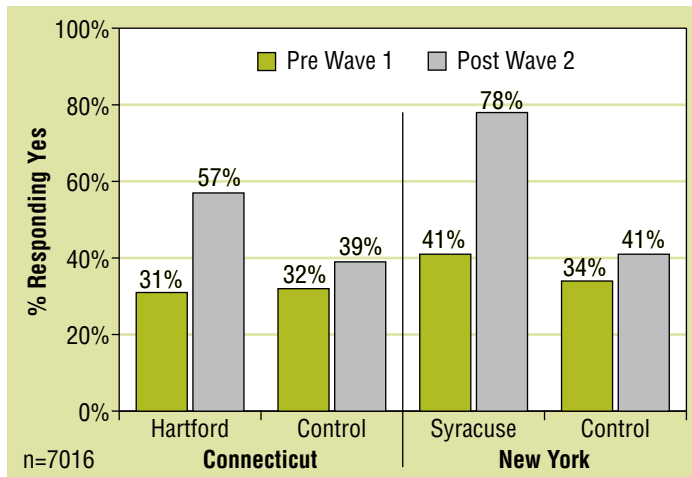


Figure 8

In the past month, have you seen or heard about police enforcement focused on hand-held cellular phone use?



Discussion

The most apparent finding from the first two waves of NHTSA's distracted driving demonstration programs in Syracuse and Hartford is that awareness about cell phone use and texting is remarkably high. About 6 in 10 in both communities had heard something about distracted driving, even before the new *Phone in One Hand, Ticket in the Other* advertisements aired. This most likely reflects the influx in media discussing the issue. Insurance companies, mobile phone providers, and safety organizations have been addressing the dangers of using a cell phone and texting while driving, especially for teens, and have sponsored advertisements on national television. State legislatures have passed texting and cell phone bans. The U.S. Department of Transportation held a summit in Washington, DC, in September 2009 bringing together over 250 researchers, government agencies, industry representatives, public advocates, and elected officials to discuss what could be done to reduce the preventable deaths and injuries that distracted driving is causing in America. The President issued an Executive order advising Federal workers to "put it down." In January 2010 Oprah started the *No Phone Zone* and on April 30, the Oprah Winfrey Show launched a "No Phone Zone Day" with a live TV broadcast, rallies in six cities – Atlanta, Boston, Detroit, Chicago, Los Angeles, and Washington – and a national public service announcement campaign.

Despite the national attention and motorists' beliefs that distracted driving by others is a dangerous activity, surveys show that motorists are willing to engage in the behavior themselves. Changing driver behavior presents a challenge, but high visibility enforcement campaigns are a proven countermeasure in a variety of traffic safety areas. The intent of a high visibility enforcement campaign is not to issue tickets. Rather, the intent is to deter drivers from engaging in that particular behavior in the first place. In other words, if drivers violate a particular law, there should be a high certainty that they will receive a ticket. While issuing one citation to a motorist may persuade that person to avoid that offense in the future (known as specific deterrence), highly visible enforcement seeks to have 100 or 1,000 other drivers know about that one citation so they choose to avoid that behavior (general deterrence).

The new slogan, *Phone in One Hand, Ticket in the Other*, proved effective in conveying the message of increased cell phone enforcement to the public. Nearly 50% of respondents in Hartford and 20% in Syracuse reported that they had seen and heard about the program after just the first wave of the program. People reported having heard about the enforcement, recognized the increased strictness of the police, and thought that their chance of getting a ticket if they used a hand-held cell phone increased. An interesting anomaly in the public awareness data is that self-reported use of a hand-held cell phone actually increased during the first wave, before finally decreasing at the end of the second wave. One

explanation is that drivers were becoming more aware of their cell phone use while driving because of the increased media. There was strong public support for the program, with 8 out of 10 drivers believing that it is important for the police to enforce the hand-held cell phone law.

Observed cell phone use decreased in both sites by the end of the second wave of the *Phone in One Hand, Ticket in the Other* demonstration program. Before the distracted driving programs began, observed cell phone use in Syracuse was about half that of the rest of the Nation and Connecticut was close to average. Both States have had hand-held cell phone bans while driving for some time – 2001 for New York and 2005 for Connecticut. After the second wave of the high visibility enforcement campaign, hand-held cell phone use decreased 38% in Syracuse (from 3.7% to 2.3%) and 58% in Hartford (from 6.8% to 3.1%). The laws alone may have served to keep these States at or below the national average, but the addition of high visibility enforcement and media emphasizing the enforcement drove the rates down even lower. High levels of national media and celebrity attention to distracted driving, such as by the *Oprah Winfrey Show*, may account for some of the high public awareness of the issue and for the steady declines in observed hand-held cell phone use in the control sites and among women in three of the five sites overall.

Unlike other periodic traffic safety campaigns, there was no rebound or ratcheting effect during the period between waves where the observed behavior reverted close to previous levels. It remains to be seen whether this trend will continue throughout the remaining two waves, but it is promising and suggests that social norms towards phone use and texting are shifting towards finding it as unacceptable as driving while impaired by alcohol.

The law enforcement agencies in both sites exceeded program expectations. Ticketing rates of about 20 citations per 10,000 population are common benchmarks for effective belt enforcement programs, a rate deemed sufficient to change motorists' behaviors. Enforcement rates for the distracted driving demonstration programs in Syracuse and Hartford were more than five times that benchmark. Officers reported that they were enthusiastic about the dedicated advertising that focused on their increased enforcement. They reported that coordinated enforcement activities with neighboring law enforcement agencies expanded the visibility of their enforcement efforts. They reported positive public reactions -- the general theme was that "it was about time."

There are challenges to enforcing hand-held cell phone and texting bans. The most obvious challenge is the difficulty in observing the offense. Syracuse law enforcement officers preferred roving patrols and found higher observation locations or taller vehicles like SUVs useful in seeing down into a pas-

senger vehicle to observe texting offenses. Hartford officers found the spotter, or stationary, strategy effective but both chose strategies that suited their community and resources and both used other strategies as well. Because this was a demonstration program, additional reporting paperwork was required. The Hartford officers felt that their post ticketing paper work was more time consuming than a seat belt ticket but they are working to improve the process in time for the third wave.

There are two additional waves of enforcement planned in Hartford and Syracuse. The third wave will begin in October 2010; the fourth and final wave will occur in the spring of 2011. At the conclusion of the fourth wave, NHTSA's Office of Behavioral Safety Research will prepare a final report detailing all four waves.

References

- Blumberg, S. J., & Luke, J. V. (2010). Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July–December 2009. Hyattsville, MD: National Center for Health Statistics. Available at www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201005.pdf.
- Clarke, S. (2010, April 15). Shut Up and Drive: Feds Target Talking, Texting Behind the Wheel. New York: ABC News Internet Ventures. Available at <http://abcnews.go.com/print?id=10377741>.
- CTIA—The Wireless Association. (2009). Annualized U.S. Wireless Industry Survey Results - June 1985 to June 2009. Available at files.ctia.org/pdf/CTIA_Survey_Midyear_2009_Graphics.pdf.
- Governor's Highway Safety Association (GHSA). (2010). Cell Phone and Texting Laws: September 2010. http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html.
- Horrey, W. J., & Wickens, C. D. (2006). Examining the impact of cell phone conversations on driving using meta-analytic techniques. *Human Factors*, 48, 196-205.
- National Highway Traffic Safety Administration (2010, April). Overview of the National Highway Traffic Safety Administration's Driver Distraction Program. DOT HS 811 299. Washington, DC: National Highway Traffic Safety Administration, Washington, Available at www.distraction.gov/files/dot/6835_DriverDistractionPlan_4-14_v6_tag.pdf.
- Pickrell, T. M., & Ye, T. J. (2009, September). Driver Electronic Device Use in 2008. Traffic Safety Facts Research Note. DOT HS 811 184. Washington, DC: National Highway Traffic Safety Administration. Available at www.nrd.nhtsa.dot.gov/Pubs/811184.pdf.
- San Miguel, M. (Reporter). (2010, April 25). New Program Aims to End Distracted Driving. ABC News Video [Television news broadcast]. New York: ABC News. Available at abcnews.go.com/US/video/program-end-distracted-driving-10738019.
- U.S. Department of Transportation. (2010, April 8). Transportation Secretary Ray LaHood Announces First Enforcement Crackdown Campaign on Distracted Driving. Press release. Washington, DC: Department of Transportation. Available at www.distraction.gov/files/for-media/4.08.10-Demo.pdf.



U.S. Department of Transportation
**National Highway Traffic Safety
 Administration**