

ITSMR Research Note

KEY FINDINGS

Observational Surveys

- 15% of the drivers observed in 2012 were engaged in some type of distracted driving behavior, down from 20% in 2007.
- 4.0% of the drivers observed in the 2012 survey were using a cell phone while driving.
- 51% of the drivers observed using a cell phone in 2012 were holding a phone to their ear, 13% were using a hands-free phone and 36% were manipulating their phone (texting, dialing).
- Women were more likely than men to be observed texting (39% vs. 33%).

Crash Analyses

- Less than 1% of fatal and personal injury (F & PI) crashes had cell phone use reported as a contributing factor over the five years, 2007-2011.
- 19%-21% of the fatal & personal injury (F&PI) crashes had "driver inattention/distraction" reported as a contributing factor each year.

Ticket Analyses

- 257,060 tickets were issued for cell phone violations in 2011, down 23% from 2010.
- The majority of the cell phone tickets were issued in New York City (64%), followed by Upstate (28%), and Long Island (9%).
- Men were more likely to be ticketed than women (66% vs. 34%). Drivers ages 21-49 received 73% of the tickets, but comprise only 51% of drivers.

Driver Behavior Survey

- 49% of the drivers surveyed in 2012 said they send or receive text messages while driving and 65% talk on the phone while driving; 9% reported they text and 9% talk on the phone "always" or "most of the time" while driving.
- 94% thought using a cell phone impairs a driver's ability to drive safely "a great deal" (68%) or "somewhat" (26%).

CONCLUSIONS

- Based on observed and self-reported behavior, texting while driving is increasing.
- Cell phone use continues to be a relatively minor factor in crashes
- Distracted driving continues to be a factor in one out of five F&PI crashes.
- The observed rate of distracted driving is consistent with the reported involvement of distracted driving in crashes.

Cell Phone Use and Other Driver Distractions: A Status Report

ABSTRACT

In 2012, the Institute for Traffic Safety Management and Research (ITSMR) conducted a multi-method study on the effects of cell phone use and other driver distractions on highway safety. The study involved 1) observational surveys of drivers on New York's roadways, 2) analyses of crashes in which cell phones and other driver distractions were a factor, 3) analyses of traffic tickets issued to drivers for non-compliance with New York's cell phone and texting laws, and 4) a driver behavior survey. This research was undertaken to update an earlier study completed in 2005 with subsequent updates in 2006 and 2007. These earlier research efforts concluded that although cell phone use while driving was continuing to increase, it was a relatively minor factor in crashes and that distracted driving was consistently reported as a contributory factor in one out of five crashes. The purpose of the 2012 study was to determine the current status of cell phone use among drivers, the extent to which distracted driving is cited as a factor in crashes, the level of enforcement of the law and public perceptions. Another objective of the study was to compile information on texting while driving and its effects on highway safety. Key findings from the study are noted in the box on the left.

INTRODUCTION

The use of a cell phone and other driver distractions remain a serious traffic safety issue. As of December 2011, there were more than 330 million wireless subscribers in the U.S., representing more than one cell phone per person for the nation's 2011 total population of 311 million.¹ According to the CTIA, U.S. wireless consumers sent and received an average of 6.3 billion text messages per day in 2011.²

In 2010, the National Highway Traffic Safety Administration (NHTSA) estimated that 9% of drivers use a cell phone in some manner at any given time during their daylight driving hours and that 5% of drivers use a hand-held cell phone.³ Recognizing the safety concerns associated with the use of a cell phone while driving, New York became the first state in the nation to prohibit the use of hand-held cell phones while driving, effective November 1, 2001. Since the implementation of New York's law in 2001, nine other states, the District of Columbia, Guam and the Virgin Islands have also enacted legislation banning the use of hand-held cell phones while driving.⁴

Effective November 1, 2009, New York enacted further legislation that prohibited text messaging for all drivers. As of July 2012, a total of 39 states, the District of Columbia, Guam and the Virgin Islands have banned text messaging for all drivers and an additional four states have banned novice drivers from texting.⁵

The legislation enacting New York’s 2001 cell phone law called for a study of the effects of cell phone use and other driver distractions on highway safety. At the request of the NYS Department of Motor Vehicles, the Institute for Traffic Safety Management and Research (ITSMR) conducted the study which included four major components: 1) an analysis of motor vehicle crashes in which the use of a cell phone or some other form of distracted driving was identified as a contributory factor, 2) observational surveys of drivers on New York’s roadways, 3) an analysis of traffic tickets issued to drivers for non-compliance with the cell phone law, and 4) a telephone survey of New York State licensed drivers. The study report was published in October 2005 and is available from either the NYS Governor’s Traffic Safety Committee (GTSC) or ITSMR. The report was updated in 2006 and an abbreviated version was published as an ITSMR *Research Note* in September 2006 and is available on the ITSMR website. The observational survey component of the study was also repeated in 2007.

This *Research Note* updates the three primary components of the earlier studies: observational surveys of distracted driving behaviors and analyses of crash and ticket data. It also includes findings from a 2012 survey of driver behavior with respect to cell phone use. The objectives of these new analyses were to determine the current status of cell phone use and other distracted driving behaviors and their effects on highway safety and whether and to what extent changes have occurred over the past several years.

OBSERVATIONAL SURVEYS OF CELL PHONE USE AND OTHER DRIVER DISTRACTIONS

In June 2012, an observational survey of cell phone use and other distracted driving behaviors on New York’s roadways was conducted in conjunction with ITSMR’s annual statewide observational survey of seat belt use. The survey replicated distracted driving observational surveys conducted annually from 2002 to 2007. Observations were conducted at 200 sites on both major and local roads in 20 of the state’s 62 counties. The population observed in the survey included drivers in passenger cars, minivans, vans, sport utility vehicles, and pick-up trucks.

In addition to observing cell phone use, the 2012 survey replicated the earlier distracted driving surveys by capturing data on other behaviors that take a driver’s attention away from the driving task. Specifically, the following distracted driving behaviors were observed and recorded: talking to a passenger, attending to a child, adjusting vehicle controls, reading/writing, smoking, eating/drinking and self-grooming. Table 1 presents information on the number of drivers observed using cell phones and the number observed engaged in another distracted driving behavior in the 2012 survey; data from the most recent previous survey conducted in 2007 are provided for comparison.

The driving behavior of 19,496 and 21,257 drivers was observed and recorded in the 2007 and 2012 surveys, respectively. Table 1 shows that the proportion of drivers who were observed using a cell phone while driving decreased from 4.5% in 2007 to 4.0% in 2012, a statistically significant decrease ($p < .014$).

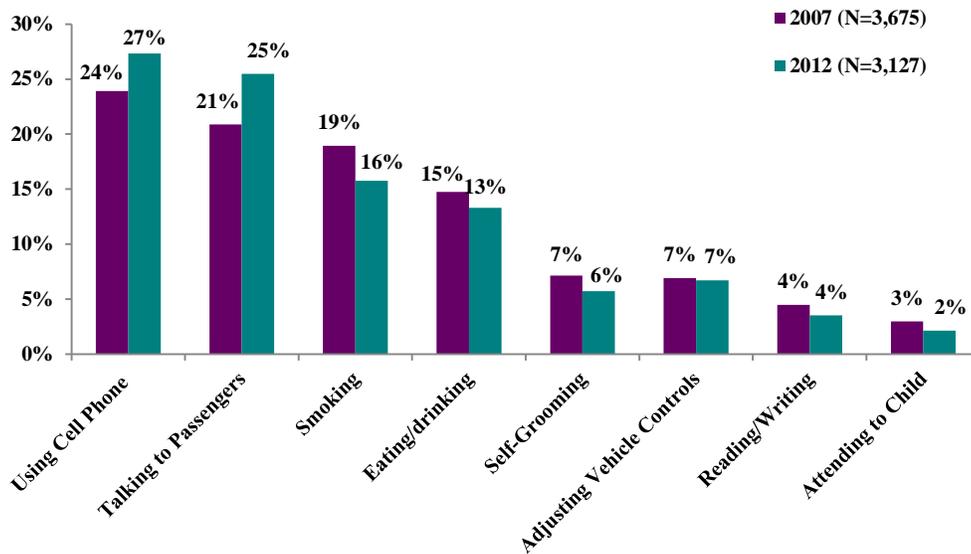
Other types of distracted driving behavior were observed for 15% of the drivers in the 2007 survey and 11% in the 2012 survey. In total, approximately 20% of the drivers in 2007 and 15% in 2012 were engaged in a distracting behavior.

Table 1 Driver Distraction Observational Survey		
	2007	2012
Total Drivers Observed	19,496	21,257
Drivers Using Cell Phones		
Number	879	855
<i>Percent of Total</i>	4.5%	4.0%*
Drivers Engaged in Other Distracted Driving Behaviors		
Number	2,912	2,276
<i>Percent of Total</i>	14.9%	10.7%
Total Distracted Drivers	3,791	3,131
<i>Percent of Total Drivers</i>	19.5%	14.7%

* Statistically significant decrease from 2007 ($p < .014$)

Figure 1 shows the extent to which specific types of behaviors, including cell phone use, were observed in the 2007 and 2012 surveys. The behaviors most frequently observed were using a cell phone and talking to a passenger, with the proportion of drivers engaged in these behaviors increasing between 2007 and 2012. Using a cell phone increased from 24% to 27%, representing a statistically significant change ($p=.0012$); talking to a passenger increased from 21% to 24%, also a statistically significant change ($p<.0001$). The proportions of drivers engaged in each of the other distracted driving behaviors declined between 2007 and 2012.

Figure 1
Driver Distraction Observational Surveys
Specific Distracted Driving Behaviors (Including Cell Phone)

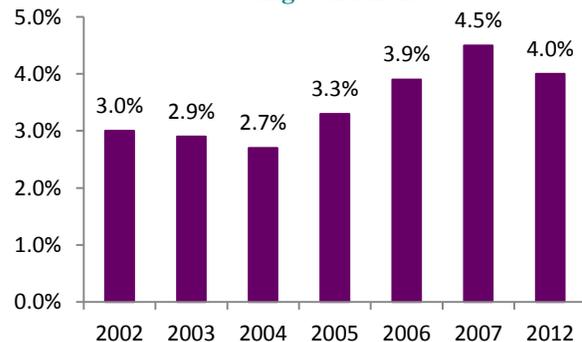


OBSERVATIONS OF CELL PHONE USE

Because New York’s cell phone law has been in effect since 2001, more extensive analyses were conducted on the observations of cell phone use. The observers conducting the 2012 survey captured data on three key aspects of cell phone use while driving: 1) use of a hand-held cell phone, as evidenced by a cell phone held to the ear, 2) use of a hands-free phone, as evidenced by a visible headset, and 3) manipulation of a hand-held cell phone or other electronic device to dial, text, email, etc. In previous surveys, this third category was used to collect information on drivers who were dialing their phone; because of the increasing use of hand-held electronic devices for texting, checking email, etc. this category was expanded in the 2012 survey to include these other activities.

Figure 2 shows the proportion of drivers observed using a cell phone in the surveys conducted between 2002 and 2007 and in 2012. Beginning in 2004, observed use increased steadily from 2.7% to 4.5% in 2007. In the survey conducted five years later in 2012, 4.0% of the drivers were observed using a cell phone. The decrease in cell phone use between 2007 and 2012 was statistically significant ($p<.014$).

Figure 2
Proportion of Drivers Observed Using Cell Phones



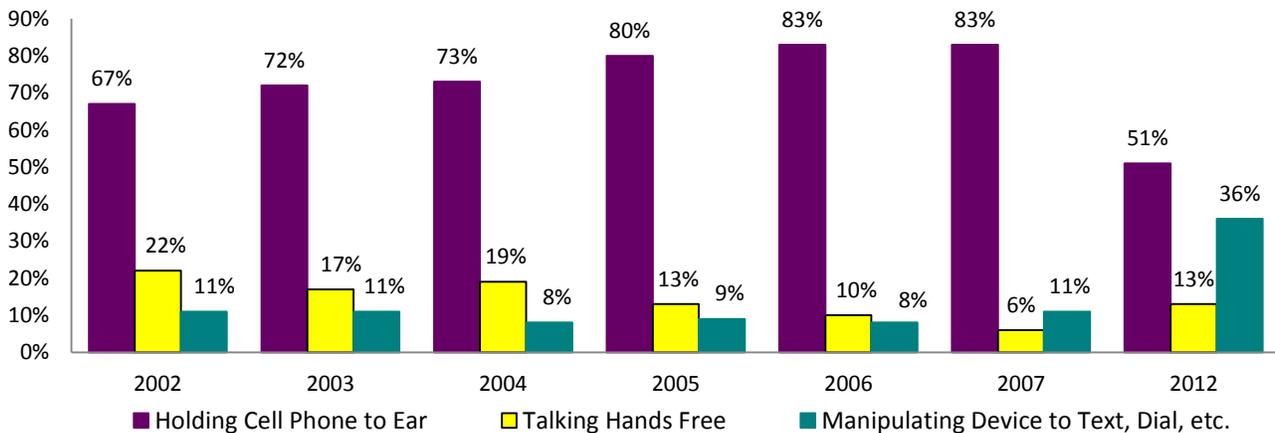
Since the New York State cell phone law prohibits the use of hand-held cell phones while driving, one of the primary objectives of the observational surveys was to determine the extent to which drivers are using cell phones in compliance with the law and whether there have been changes over time.

Figure 3 below indicates changes in the type of cell phone use observed for drivers in 2012 and in the previous surveys conducted 2002-2007. Among the drivers observed using a cell phone between 2002 and 2007 there was an upward trend in the proportion of drivers observed talking on a hand-held cell phone in violation of the law (from 67% to 83%). Over the same six-year period, there was a general decline in hands-free cell phone use among drivers (from 22% to 6%).

The most striking changes occurred between 2007 and 2012. The proportion of drivers observed talking on a hand-held phone in violation of the law dropped from 83% in 2007 to 51% in 2012, a statistically significant decrease ($p < .0001$). The proportion of drivers observed using a hands-free device doubled, rising from 6% in 2007 to 13% in 2012, also a statistically significant change ($p < .0001$).

As mentioned previously, in response to increased awareness of the prevalence of texting while driving and the danger this behavior poses to highway safety, New York banned texting while driving in 2009. Another objective of the 2012 survey was to determine the extent to which drivers use hand-held cell phones and other electronic devices to text while driving. As Figure 3 shows, 36% of the drivers in 2012 were observed manipulating their cell phone to text, check email, dial or some other activity. In comparison, 8%-11% of the drivers in the surveys conducted 2002-2007 were observed dialing their phones.

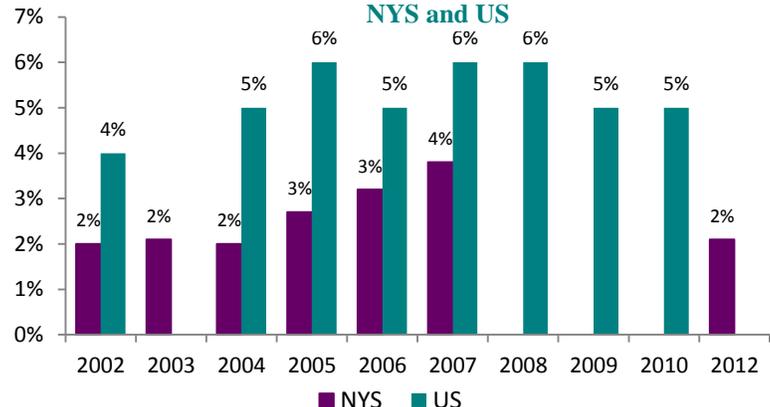
Figure 3
Types of Cell Phone Use Observed for Drivers



National statistics on hand-held cell phone use are available from the National Occupant Protection Use (NOPUS) surveys conducted by NHTSA in 2002, 2004-2010.⁶ The proportion of drivers observed in these surveys who were talking on hand-held cell phones are included in Figure 4.

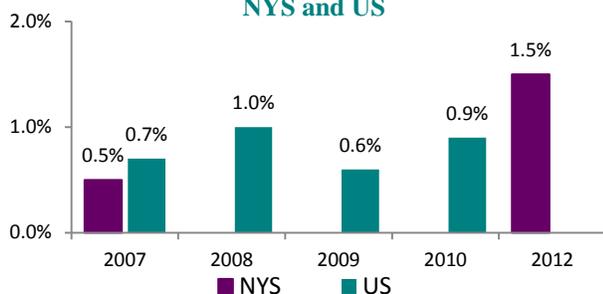
In each of the years when both statewide and national surveys were conducted, the proportion of drivers observed holding phones to their ears while driving was two to three percentage points higher in the national surveys. This would be expected since only nine other states, the District of Columbia, Guam and the Virgin Islands have joined New York in banning hand-held cell phone use while driving.

Figure 4
Proportion of Drivers Observed Holding Cell Phones to Their Ear While Driving: NYS and US



Sources: NYS Observational Surveys 2002-2007, 2012 and National Occupant Protection Use Surveys (NOPUS) 2002, 2004-2010

Figure 5
Proportion of Drivers Observed
Manipulating Hand-Held Cell Phones:
NYS and US



Sources: NYS Observational Surveys 2007, 2012 and National Occupant Protection Use Surveys (NOPUS) 2007-2010

As shown in Figure 5, comparisons between national and New York State statistics on the proportions of drivers observed texting or manipulating hand-held devices while driving also show interesting differences.

Between the two surveys conducted in New York, the proportion of drivers visibly manipulating hand-held devices tripled from 0.5% in 2007 to 1.5% in 2012. This increase occurred even though texting while driving was banned in New York in 2009. Since results from more recent NOPUS surveys are not yet available, it remains to be seen whether the national rate of texting while driving has increased as dramatically as it has in New York.

DRIVER CHARACTERISTICS

Additional analyses of the results of ITSMR’s 2012 observational survey were conducted to determine the gender and age of the drivers observed using cell phones. These results were compared to the 2007 survey results to determine whether differences in these driver characteristics may have occurred during the intervening five-year period.

As indicated in Table 2, very similar numbers of men and women were observed using cell phones in each of the surveys (444 women vs. 433 men in 2007 and 429 women vs. 426 men in 2012). Of those observed using a cell phone while driving in the 2007 survey, similar proportions of men and women were observed holding a phone to their ear in violation of the law (82% and 85%, respectively); men and women were equally likely to be observed using a hands-free device (6%). The pattern changed in 2012, with women being less likely than men to be observed using a hand-held cell phone (46% vs. 55%) and more likely than men to be observed using a hands-free phone (15% vs. 11%). In 2012, women were also more likely than men to be observed texting while driving or otherwise manipulating a hand-held electronic device (39% vs. 33%).

Table 2
Driver Distraction Observational Surveys
Cell Phone Use by Driver Gender: 2007 & 2012

	2007		2012	
	Women (N=444)	Men (N=433)	Women (N=429)	Men (N=426)
Hand-Held	84.5%	82.2%	46.4%	55.4%
Hands-Free	5.9%	6.2%	14.7%	11.3%
Dialing	9.7%	11.6%	na	na
Manipulating Electronic Device (dialing/texting/e-mail)	na	na	38.9%	33.3%

na = not applicable

As shown in Table 3, of those observed using a cell phone while driving in 2007, drivers age 60 and older and drivers ages 16-24 were most likely to be using a hand-held cell phone (88% and 87%, respectively). Drivers ages 40-59 were most likely to be observed using a hands-free phone (8%).

A different pattern of cell phone use was observed in 2012, with the proportion of drivers in each age group observed using a hands-free cell phone decreasing substantially from 2007 (Table 3). The proportions of drivers ages 40-59 and drivers age 60 and over observed using a hands-free cell phone doubled (8% vs. 15% and 7% vs. 14%, respectively), while the proportion of drivers ages 16-24 using a hands-free phone quadrupled (3% vs. 14%).

Table 3
Driver Distraction Observational Surveys
Cell Phone Use by Driver Age: 2007 & 2012

	2007			
	16-24 Years (N=209)	25-39 Years (N=393)	40-59 Years (N=220)	60+ Years (N=56)
Hand-Held	86.6%	83.7%	78.2%	87.5%
Hands-Free	3.4%	6.1%	8.2%	7.1%
Dialing	10.0%	10.2%	13.6%	5.4%
	2012			
	16-24 Years (N=174)	25-39 Years (N=286)	40-59 Years (N=281)	60+ Years (N=106)
Hand-Held	44.2%	48.3%	53.7%	61.3%
Hands-Free	14.4%	9.4%	15.3%	14.2%
Manipulating Electronic Device (dialing/texting/e-mail)	41.4%	42.3%	31.0%	24.5%

Although the data for 2007 and 2012 are not strictly comparable due to the implementation of the law prohibiting text messaging in November 2009, sizeable differences also occurred in the proportion of drivers observed manipulating their cell phones (Table 3). In 2007, 10% of the drivers in the 16-24 and 25-39 age groups were observed dialing a cell phone, while in 2012 approximately 42% of the drivers in these same age groups were observed manipulating their phones (texting, dialing, etc.). Similarly, the proportion of drivers age 60 and over who were observed manipulating their cell phone increased almost five-fold from 5% in 2007 to 25% in 2012. In 2012, 31% of the drivers ages 40-59 were observed manipulating their cell phones, more than double the drivers in this age group observed in 2007 (14%).

VEHICLE TYPE

Analyses were also conducted to determine whether the use of cell phones while driving varied by the type of vehicle driven and whether changes occurred between the 2007 and 2012 surveys. As shown in Table 4, substantial differences were observed by vehicle type within each of the surveys and between the surveys conducted in 2007 and 2012.

In 2007, van drivers observed using a cell phone were the most likely to be using a hand-held phone (91%), while car drivers were most likely to be using a hands-free phone (8%) (Table 4). Drivers of pick-up trucks observed using a cell phone were most likely to be seen dialing the phone (14%), followed by equal proportions of SUV and car drivers (11%). In comparison, in the 2012 survey, drivers of pick-up trucks observed using a cell phone were the most likely to be using a hand-held phone (60%). Similar proportions of car, SUV and van drivers were observed using a hands-free phone (13%-15%), while only 5% of pick-up drivers were observed using a hands-free adaptor.

A comparison of the 2007 and 2012 surveys shows substantial changes in the types of cell phone use observed by drivers of different types of vehicles. In 2012, drivers of all four vehicle types were much less likely than in 2007 to be observed using a hand-held phone and much more likely to be observed manipulating their cell phones (texting, e-mail, dialing). Except for drivers of pick-up trucks, drivers were also far more likely to be observed using a hands-free phone in 2012 than in 2007.

Table 4
Driver Distraction Observational Surveys
Cell Phone Use by Vehicle Type: 2007 & 2012

	2007			
	Car (N=431)	SUV (N=249)	Van (N=117)	Pick-Up (N=79)
Hand-Held	80.7%	85.1%	90.6%	79.8%
Hands-Free	8.1%	3.6%	3.4%	6.3%
Dialing	11.1%	11.2%	6.0%	13.9%
	2012			
	Car (N=458)	SUV (N=200)	Van (N=101)	Pick-Up (N=96)
Hand-Held	49.1%	47.0%	57.4%	60.4%
Hands-Free	13.3%	15.0%	14.9%	5.2%
Manipulating Electronic Device (dialing/texting/e-mail)	37.6%	38.0%	27.7%	34.4%

ANALYSES OF POLICE-REPORTED CRASEHES INVOLVING DISTRACTED DRIVING

The crash analyses focused on fatal and personal injury crashes that occurred over the five-year period, 2007-2011. The objectives of the analysis were to determine the extent to which driver distractions, including the use of a cell phone while driving, were reported to be contributory factors in fatal and personal injury crashes and examine changes over time in such crashes. In the absence of complete data on cell phone use at the time of a crash, the best information is available from the police officers who investigate and report on traffic crashes and their judgment as to whether cell phone use or another type of driver distraction was a factor in a crash. Hence, the crash data used in the analysis were obtained from the NYS Department of Motor Vehicles’ Accident Information System (AIS). Key findings from these analyses are summarized below.

RESULTS OF CRASH ANALYSES

The results of the crash analyses indicated that cell phone use continues to be reported as a contributing factor in only a small number of crashes. As shown in Table 5, over the five-year period, 2007-2011, cell phone use was reported as a contributing factor in 22 fatal crashes and 1,413 personal injury crashes (0.2% of the total fatal and personal injury crashes). In similar analyses of the fatal and personal injury crashes that occurred over the five-year period, 2002-2006, cell phone use was reported as a contributing factor in nine fatal crashes and 1,109 personal injury crashes (0.2% of the total fatal and personal injury crashes). The largest number of fatal crashes with cell phone use reported as a contributing factor since the implementation of New York’s cell phone law occurred in 2010; eight fatal crashes were reported, with one of the eight crashes involving texting.

Distracted driving was much more likely than cell phone use to be reported as a contributing factor in fatal and personal injury crashes in each of the years, 2007-2011 (Table 5). While driver distraction/inattention was reported as a factor in 10%-13% of the fatal crashes each year, the number of personal injury crashes that identified driver distraction/inattention as a contributing factor increased slightly each year, rising from 19% in 2007 to 22% in 2011. These results match those in ITSMR’s earlier studies confirming that distracted driving continues to be consistently reported as a contributing factor in one out of five crashes.

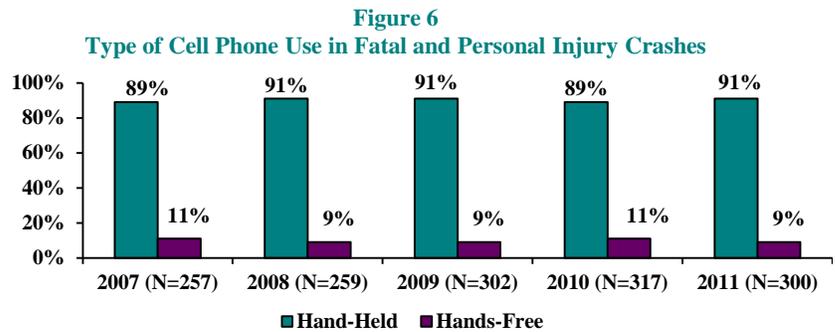
Table 5
NYS Police-Reported Fatal and Personal Injury Crashes

	2007		2008		2009		2010		2011	
	#	%	#	%	#	%	#	%	#	%
Fatal Crashes	1,220		1,160		1,060		1,119		1,077	
Cell Phone Use*	5	0.4	2	0.2	6	0.6	8	0.7	1	0.1
Distracted Driving**	132	10.8	118	10.2	119	11.2	141	12.6	125	11.6
Personal Injury Crashes	124,812		121,413		120,359		121,062		116,575	
Cell Phone Use	252	0.2	257	0.2	296	0.2	309	0.3	299	0.3
Distracted Driving	23,244	18.6	22,985	18.9	23,631	19.6	25,023	20.7	25,040	21.5
Total F&PI Crashes	126,032		122,573		121,419		122,181		117,652	
Cell Phone Use	257	0.2	259	0.2	302	0.2	317	0.3	300	0.3
Distracted Driving	23,376	18.5	23,103	18.8	23,750	19.6	25,164	20.6	25,165	21.4

* Represents the contributing factors of “Cell Phone (hand held)”, “Cell Phone (hands free)” and “Texting” included on the police accident report forms; texting did not become a contributory factor on the police crash report forms until October 2010.
 ** Represents the contributing factor of “Driver Inattention/Distracted” included on the police accident report forms.

Hand-held cell phones were much more likely to be reported as a contributing factor in crashes than hands-free phones.

Of the fatal and personal injury crashes involving the use of cell phones, the proportion that involved the use of a hand-held phone ranged from 89%-91% over the five years 2007-2011 (Figure 6).



DRIVER CHARACTERISTICS

Analyses were also conducted comparing the characteristics of drivers involved in cell phone and distracted driving crashes with the characteristics of all New York State licensed drivers for the five years, 2007-2011. Since only small variations or fluctuations occurred from year to year with regard to the age and gender of the driver, only the results for 2011 are presented.

As Figure 7 shows, male drivers were overrepresented in crashes involving distracted driving; 51% of the licensed drivers were men, but men accounted for 61% of the drivers in distracted driving crashes. The distribution of male and female drivers in crashes in which a cell phone was a factor was similar to that of all licensed drivers.

As indicated in Figure 8, young drivers were overrepresented in both distracted driving and cell phone crashes. Four percent of New York State’s licensed drivers were under age 21 in 2011, compared to 12% of the drivers in distracted driving crashes and 19% of the drivers in cell phone crashes. While drivers ages 21-29 represent 14% of the state’s licensed drivers, they accounted for 23% of the drivers in distracted driving crashes and 31% of the drivers in cell phone crashes in 2011.

Figure 7
NYS Police-Reported Fatal and Personal Injury Crashes
Driver Gender: 2011

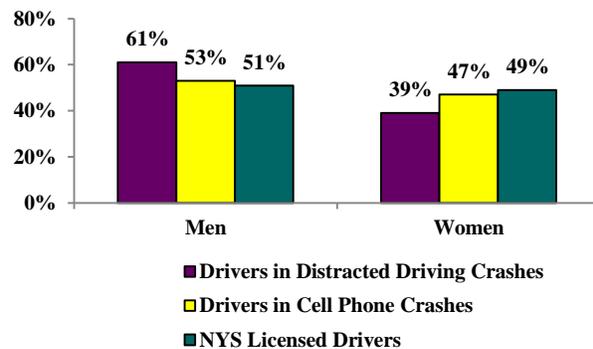
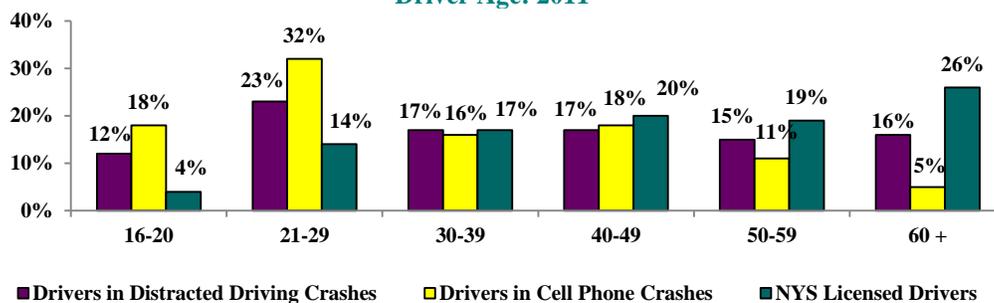


Figure 8
NYS Police-Reported Fatal and Personal Injury Crashes
Driver Age: 2011



OTHER DISTRACTED DRIVING BEHAVIORS

Analyses focusing exclusively on distracted driving crashes were conducted to identify the specific types of driver distractions involved and determine whether the type of distraction varied by the severity of the crash. Since the police accident report form requires police officers to note the specific type of distraction in the “Accident Description/ Officer’s Notes” section of the form, this set of analyses required an extensive review of the paper copies of the crash reports.

The paper copies for 592 “distracted driving” fatal crashes in 2007-2011 were reviewed. Because of the large number of “distracted driving” personal injury crashes each year, random samples of injury crashes were drawn for each year and reviewed. Of the 120,000 distracted driving personal injury crashes in years 2007-2011, 3,275 (3%) were randomly selected for inclusion in the analyses. Since only very small changes were noted year to year, the data were aggregated for the five years, 2007-2011. The results of the analyses are summarized in Table 6.

As the table indicates, 12% of the fatal crashes and 14% of the personal injury crashes involving distracted driving in 2007-2011 had the specific type of distraction noted on the police crash report. The most common type of specific distraction reported for fatal crashes was “talking/dealing with a passenger or child” (21%), followed by “daydreaming/looking elsewhere/simply not paying attention” (18%). For personal injury crashes, “daydreaming/looking elsewhere/simply not paying attention” was cited most often (41%), followed by “reaching for object” (12%).

Table 6
NYS Police-Reported Distracted Driving Fatal and Personal Injury Crashes
Type of Driver Distraction as Percent of Crashes
with Specific Distraction Reported

	Fatal Crashes 2007-2011	Personal Injury Crashes 2007-2011
Number of Crashes	592	3,275
Specific Distraction Noted		
Number of Crashes	72	670
% of Total	12.2%	14.0%
Specific Distraction		
Talking/Dealing with Passenger or Child	20.8%	8.1%
Daydreaming/Looking Elsewhere/Simply Not Paying Attention	18.1%	40.9%
Reaching for Object	15.3%	12.2%
Adjusting Car Controls	13.9%	7.1%
Action Outside Vehicle	11.1%	9.8%
Cell Phone	4.2%	3.3%
Pet/Insect in Car	4.2%	2.6%
Eating/Drinking	4.2%	3.9%
Other	8.3%	12.2%

Note: More than one specific type of distraction was reported for some crashes.

ANALYSES OF TICKETS ISSUED FOR VIOLATIONS OF THE CELL PHONE LAWS

In banning the use of hand-held cellular phones while driving, New York’s cell phone law carries a penalty of a fine of up to \$100 for violation of the law. The law prohibiting text messaging provides for a fine of up to \$150. As a further penalty for texting, effective July 12, 2011, two driver penalty points are assigned for violation of the texting law. To determine the extent to which the hand-held cell phone and text messaging laws are being enforced and provide information on drivers violating the laws, data on tickets issued to drivers for violation of the hand-held cell phone law were examined for the five years 2007-2011. Since the text messaging law was implemented on November 1, 2009, data on tickets issued to drivers for violation of the texting law were examined for the two-year period 2010-2011.

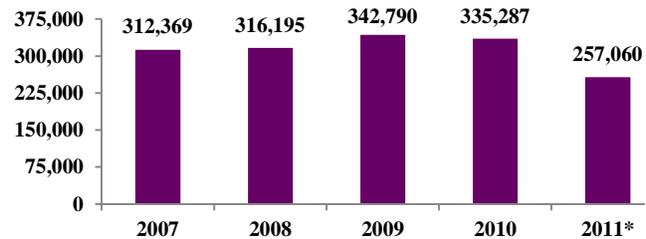
Ticket data for the analyses were obtained from the NYS Department of Motor Vehicles’ Traffic Safety Law Enforcement and Disposition (TSLED) and Administrative Adjudication (AA) systems. The TSLED system covers all areas of the state except for New York City, the five western towns of Suffolk County on Long Island, and the cities of Buffalo and Rochester. These areas not covered under TSLED are covered by the AA system. Key results from these analyses are presented below.

RESULTS OF TICKET ANALYSES

During the five years, 2007-2011, more than 1.5 million tickets were issued for violating the hand-held cell phone and text messaging laws. In 2010, the first full year of the text messaging law, 3,248 (1%) of the 335,287 tickets issued for cell phone violations were for texting. In 2011, the proportion of cell phone tickets issued for texting increased to 3% (8,984 of the 257,060 tickets issued). As shown in Figure 9, the number of tickets issued statewide for non-compliance with the hand-held cell phone and text messaging laws dropped to 257,060 in 2011, representing a decrease of 23% from 2010. While the total number of tickets issued for all traffic violations declined during this same time period, cell phone and texting tickets experienced a much greater decrease (23% compared to 9% for all tickets).

Cell phone tickets (including both hand-held and texting violations) as a proportion of the total traffic tickets remained constant at 8% in each of the four years, 2007-2010, then dropped to 7% in 2011.

Figure 9
Tickets Issued for Non-Compliance with the Cell Phone Laws



* As of May 2012

Since there was little variation in the distribution of cell phone tickets by region (Upstate, New York City and Long Island) over the five years, the analyses presented in Table 7 focus on the tickets issued in 2011. As indicated in the table, 63% of the 2011 cell phone tickets were issued in New York City compared to 30% of all the tickets issued.

Table 7
Tickets Issued for Non-Compliance with the Cell Phone Laws
Region: 2011

	Total Tickets		Cell Phone Tickets	
	#	%	#	%
Long Island	537,082	14.7	20,361	7.9
New York City	1,097,375	30.0	163,037	63.4
Upstate	2,023,512	55.3	73,662	28.7
Total	3,657,969	100.0	257,060	100.0

Approximately 97% of the cell phone tickets issued in 2011 were for using a hand-held cell phone and the remaining tickets were issued for texting while driving. When the 2011 tickets for text messaging violations are analyzed separately from the hand-held cell phone tickets issued, a different regional pattern emerges.

As shown in Figure 10, almost equal proportions of the text messaging tickets were issued in New York City (45%) and Upstate (46%).

DRIVER CHARACTERISTICS

Analyses were also conducted by driver gender and age for each of the five years, 2007–2011. Since only small variations or fluctuations occurred from year to year with regard to the age and gender of the driver, only the results for 2011 are presented.

While men and women make up similar proportions of New York’s driver license population (51% and 49%, respectively), men are much more likely to be ticketed for non-compliance with the cell phone laws. As Figure 11 shows, two-thirds (67%) of the drivers ticketed were men and one-third (33%) were women.

Figure 10
Tickets Issued for Non-Compliance with the Cell Phone Laws
Hand-Held vs. Text Messaging Violations
Region: 2011

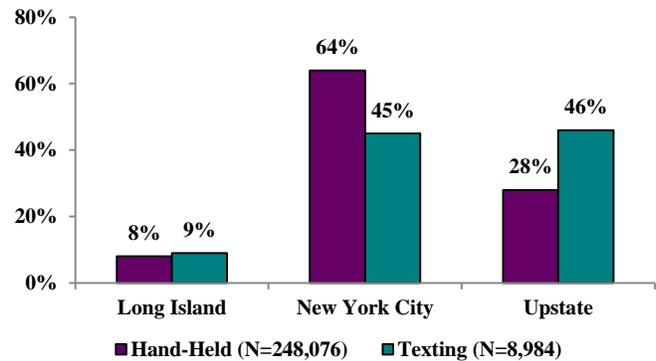
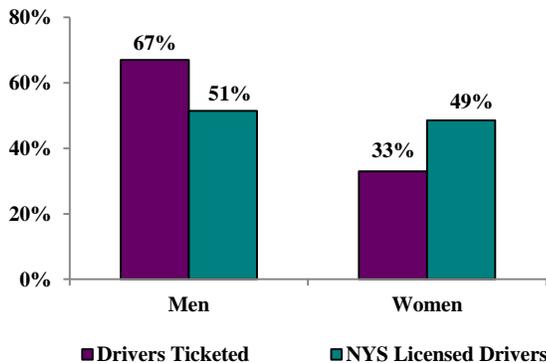


Figure 11

Non-Compliance with the NYS Cell Phone Laws
Drivers Ticketed vs. NY Licensed Drivers
Driver Gender: 2011

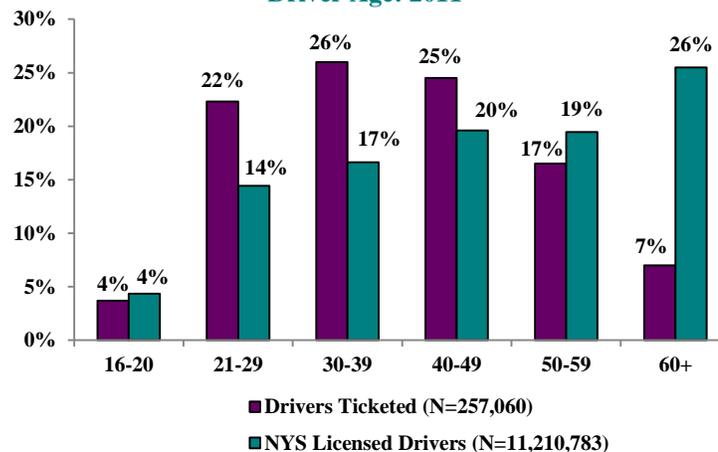


For the analyses by age, the population was divided into six categories: 16-20 years; 21-29 years; 30-39 years; 40-49 years; 50-59 years; and 60 years and over. Since some variation occurred over the five years with regard to driver age, the analyses by age focused on comparing the two years 2007 and 2011.

Figure 11 shows a shift in the proportion of drivers ticketed from those under age 30 to drivers age 50 and over. The proportion of the drivers age 50 and over ticketed for non-compliance increased from 19% in 2007 to 24% in 2011, while the proportion of drivers under age 30 dropped from 30% to 26% between the two years.

Figure 12

Non-Compliance with the NYS Cell Phone Laws
Drivers Ticketed vs. NY Licensed Drivers
Driver Age: 2011



Additional analyses were conducted to examine whether the age distribution of drivers ticketed for non-compliance in 2011 was similar to that of all New York State licensed drivers in 2011.

As Figure 12 shows, drivers ages 30-39 were the most overrepresented in tickets issued for non-compliance with the cell phone laws; 26% of the drivers ticketed were in this age group, but only 17% of the licensed drivers were 30-39 years of age. Drivers 60 years of age and older were underrepresented in the tickets issued for cell phone violations (7% vs. 26%).

2012 DRIVER BEHAVIOR SURVEY

Since 2010, the National Highway Traffic Safety Administration (NHTSA) has required all states to conduct an annual survey of drivers to collect information on self-reported driving behaviors and perceptions of enforcement. To meet this requirement, New York conducted its third annual driver survey at five NYS Department of Motor Vehicles (DMV) offices in June 2012. Three of the DMV offices selected for the survey are in New York's upstate region: Albany (Albany County), Syracuse (Onondaga County) and Yonkers (Westchester County); one office is in New York City (Brooklyn) and one is on Long Island (Medford, Suffolk County). For the first time, the survey included four questions on cell phone use in addition to questions on seat belt use, speeding and impaired driving. Information was also collected on the age, gender and county of residence of the participants. More than 300 drivers participated in the survey at each of the five offices, resulting in 1,545 completed surveys. The results from the survey questions on cell phone use are summarized in Table 8.

As indicated in Table 8, approximately half of the drivers (49%) reported that they send or receive text messages while driving; nine percent said they text while driving "most of the time" or "always". Six out of ten drivers (65%) said they talk on a cell phone while driving; as was the case with texting, nine percent said they talk on a cell phone while driving "most of the time" or "always".

With regard to enforcement of the cell phone laws, 38% of the drivers thought that they would be ticketed "always" (16%) or "most of the time" (22%) for using a cell phone while driving; 39% thought that they would "sometimes" get a ticket, and 23% thought that they would "rarely" (17%) or "never" (6%) get a ticket. Almost all of the drivers (94%) thought that using a cell phone impairs a driver's ability to drive safely "a great deal" (68%) or "somewhat" (26%). Only 6% of the drivers thought that using a cell phone while driving would "not at all" affect a driver's ability to drive safely.

Table 8
2012 Driver Behavior Survey
Cell Phone Use

<i>How often do you send or receive text messages while driving?</i>	(N=1,539)
Always	3.6%
Most of the time	5.7%
Sometimes	18.8%
Rarely	21.2%
Never	50.6%
<i>How often do you talk on a cell phone while driving?</i>	(N=1,537)
Always	3.0%
Most of the time	6.2%
Sometimes	27.3%
Rarely	28.0%
Never	35.5%
<i>What do you think the chances are of getting a ticket if you text or talk on a cell phone while driving?</i>	(N=1,526)
Always	16.1%
Most of the time	22.1%
Sometimes	38.9%
Rarely	16.6%
Never	6.2%
<i>Do you think using a cell phone to talk or text affects a driver's ability to drive safely...</i>	(N=1,509)
A great deal	67.9%
Somewhat	25.6%
Not at all	6.4%

SUMMARY AND CONCLUSIONS

In 2012, the Institute for Traffic Safety Management and Research conducted a multi-method study of cell phone use and other distracted driving behaviors and their effect on highway safety. This research updated an earlier evaluation of distracted driving called for in New York's 2001 cell phone legislation. Observational surveys of cell phone use were key components of both studies; surveys conducted annually from 2002 to 2007 showed that the rate of cell phone use among drivers increased from 3% to 4.5%. When the survey was repeated in 2012, 4% of the drivers were observed using a cell phone in some manner, a slight decrease from the rate five years earlier. Because New York's law bans hand-held cell phone use, it was important to determine the extent to which drivers are using cell phones in compliance with the law. Among those using cell phones in each survey, the majority of drivers were observed holding a cell phone to their ear in violation of the law, with the rate steadily increasing from 67% in 2002 to 83% in 2006 and 2007.

While there was only a slight change in overall cell phone use in the 2012 observational survey, other changes in the type of cell phone use by drivers were observed. Between 2007 and 2012, the proportion of cell phone users observed holding a cell phone to their ear in violation of the law dropped from 83% to 51%; however, the results suggest that one form of illegal cell phone use has been replaced by another potentially more dangerous behavior. The proliferation of texting-while-driving in recent years was reflected in a three-fold increase in the proportion of drivers observed manipulating a hand-held electronic device in 2012 (36% compared to 11% in 2007). These results are supported by the 2010 NOPUS results which showed that in just one year texting while driving increased on the national level from 0.6% to 0.9% of all drivers observed.

The results from the driver behavior survey conducted by ITSMR at five DMV offices in 2012 reinforce the concerns regarding texting while driving. Nearly half (49%) of the drivers said that they send or receive text messages while driving and nine percent text "all" or "most of the time" while behind the wheel. Talking on a cell phone while driving also remains a serious problem; 65% of the drivers reported that they talk on their cell phone while driving and nine percent talk on the phone "all" or "most of the time" when they are driving. These behaviors persist despite 94% of the drivers believing that using a cell phone to talk or text impairs a driver's ability to drive safely "a great deal" (68%) or "somewhat" (26%).

Despite the widely recognized risks associated with the use of cell phones to talk or text while driving, it is difficult to quantify that risk with a high degree of accuracy based on available crash data. Since the passage of New York's cell phone law more than a decade ago, cell phone use continues to be a relatively minor factor in crashes, with cell phone use reported as a contributory factor in less than one percent of the fatal and personal injury crashes. Even if better reporting resulted in more crashes being associated with cell phone use, the proportion of crashes in which cell phone use was a factor would continue to remain well below the levels of other dangerous driving behaviors such as speeding and impaired driving.

In contrast to the reported involvement of cell phone use in crashes, distracted driving in all its various forms has been a consistent and substantial threat to highway safety for many years. Over the past decade, distracted driving has been a reported factor in one out of five (19%-21%) fatal and personal injury crashes. This finding is reinforced by the results of the observational surveys where 20% of the drivers in 2007 and 15% in 2012 were engaged in some type of distracted driving behavior (including cell phone use).

New York State continues to be a national leader in addressing distracted driving through legislation and through the Governor's Traffic Safety Committee's support for public awareness and enforcement initiatives. More than 1.5 million tickets were issued for violating the hand-held cell phone and text messaging laws between 2007 and 2011. New York was also one of two states selected by NHTSA as a demonstration site to test the effectiveness of the high visibility enforcement model in reducing cell phone use while driving. While high visibility enforcement appears to be effective in increasing compliance with the cell phone and texting laws, the majority of distracted driving behaviors are not illegal. Reducing these types of distracted driving behaviors requires more efforts to raise awareness of the dangers associated with engaging in any behaviors or actions that take attention away from the driving task. More complete reporting by police officers on the specific types of distraction that contributed to a crash would provide valuable information to increase the effectiveness of future public awareness efforts and other initiatives.

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