ITSMR Research Note

KEY FINDINGS

Crash Analyses: 2015-2019

- Fewer than 1% of police-reported fatal and personal injury (F&PI) crashes involved the use of a cell phone over the five years 2015-2019.
- ➤ 15 persons were killed and 3,272 persons were injured in cell phone crashes from 2015 to 2019.
- 26% of police-reported F&PI crashes had "driver inattention/distraction" reported as a contributing factor in 2019, up from 22% in 2015.
- > 109 persons were killed and more than 41,000 persons were injured in crashes in 2019 that had "driver inattention/distraction" reported as a contributing factor.

Ticket Analyses: 2015-2019

- More than 1 million tickets were issued for cell phone violations in the five years 2015-2019.
- 71,059 tickets were issued for cell phone violations in 2019, down 46% from 2015; 61% of the tickets in 2019 were for texting, up from 39% in 2015.
- ➤ 61% of the cell phone tickets were issued in NYC in 2019, up from 59% in 2015; 30% were issued Upstate in 2019, down from 33% in 2015.
- 68% of the drivers ticketed in 2019 were men; 52% of the drivers ticketed were ages 21-39.

Driver Behavior Survey: 2020

- 62% of the drivers surveyed said they talk on a cell phone while driving.
- > 37% of the drivers surveyed reported that they send or receive text messages on a hand-held cell phone while driving, including 5% who reported that they "always" or "usually" do so.
- > 93% thought that hand-held texting while driving affects a driver's ability to drive safely "a great deal" (80%) or "a moderate amount" (13%).

Conclusions

- Cell phone use continues to be a relatively minor factor reported in crashes.
- Distracted driving as a factor in F&PI crashes is on a slow upward trend, increasing from 21% in 2010 to 26% in 2019.
- Based on self-reported driving behavior in 2020, more than three fifths of drivers talk on a cell phone, and more than one third of drivers send or receive texts on a hand-held cell phone.

Cell Phone Use and Distracted Driving on New York Roadways: 2015-2019

INTRODUCTION

In August 2020, the CTIA, a representative of America's wireless industry, reported that there were 442.5 million U.S. wireless subscriptions, up 20+ million year-over-year. Americans have an average of 1.3 wireless devices per person.¹ The CTIA further reported that in 2019 consumers exchanged 2.1 trillion text messages, up 52 billion from the prior year, and spent 3.1 trillion minutes talking on their cell phone, up nearly 30% from 2018. The implications of the increasing use of cell phones and messaging continues to be of serious concern to New York's traffic safety community.

To help address these concerns, the state's Governor's Traffic Safety Committee (GTSC) provided funding for the Institute for Traffic Safety Management and Research (ITSMR) to update its earlier study on cell phones and distracted driving. Focusing on the five-year period 2015-2019, this research note presents a variety of information on cell phone use, texting and distracted driving related to fatal and personal injury (F&PI) crashes, tickets issued for violations of the cell phone law, and a 2020 survey on driver behaviors and perceptions:

- Overview of F&PI Crashes
 - Fatalities and Persons Injured
 - Single Vehicle Involvement
 - Region of the State
 - Day of Week and Time of Day
 - Driver Gender and Age
- Tickets Issued for Violating the Cell Phone Law
 - Region of the State
 - Driver Gender and Age
- 2020 Driver Behavior Survey

The crash and ticket data for the study were obtained from the DMV's Accident Information System (AIS) and Traffic Safety Law Enforcement & Disposition (TSLED) and Administrative Adjudication (AA) ticket systems, via ITSMR's Traffic Safety Statistical Repository (TSSR). This study defines a crash as a distracted driving crash if the contributing factor of "Driver Inattention/Distraction" is noted on the police crash report form. It defines a cell phone crash as a crash that meets at least one of the following criteria:

1) Contributing factor of "Cell Phone (hand held)", "Cell Phone (hands-free)" and/or

- "Texting" was reported on the police crash report form.
- Ticket was issued for a violation of VTL 1225c (talking on a hand-held cell phone while driving) and/or VTL 1225-d (texting using a cell phone while driving).

OVERVIEW OF FATAL AND PERSONAL INJURY (F&PI) CRASHES

Cell phone use continues to be reported in only a small number of crashes. Table 1 shows that 15 fatal and 2,445 personal injury cell phone crashes

occurred during the five-year period 2015-2019, representing 0.4% of the total number of police-reported fatal and personal injury crashes.

| Table 1 NYS Police-Reported Fatal and Personal Injury Crashes | | | | | | | | | | | | |
|--|------------|------|---------|------|---------|------|---------|-----------|---------|------|---------|------|
| | ortea 6 | 2017 | | 2018 | | 2019 | | 2015-2019 | | | | |
| _ | # | % | # | % | # | % | # | % | # | % | # | % |
| Fatal Crashes | 1,045 | | 969 | | 933 | | 882 | | 881 | | 4,710 | |
| Cell Phone Use | 1 | 0.1 | 3 | 0.3 | 3 | 0.3 | 6 | 0.7 | 2 | 0.2 | 15 | 0.3 |
| Distracted Driving | 150 | 14.4 | 127 | 13.1 | 144 | 15.4 | 110 | 12.5 | 106 | 12.0 | 637 | 13.5 |
| PI Crashes | 102,986 | | 112,852 | | 113,551 | | 115,236 | | 114,643 | | 559,268 | |
| Cell Phone Use | 435 | 0.4 | 494 | 0.4 | 523 | 0.5 | 495 | 0.4 | 498 | 0.4 | 2,445 | 0.4 |
| Distracted Driving | 23,060 | 22.4 | 26,155 | 23.2 | 28,642 | 25.2 | 29,498 | 25.6 | 29,999 | 26.2 | 137,354 | 24.6 |
| Total F&PI Crashes | 104,031 | | 113,821 | | 114,484 | | 116,118 | | 115,524 | | 563,978 | |
| Cell Phone Use | 436 | 0.4 | 497 | 0.4 | 526 | 0.5 | 501 | 0.4 | 500 | 0.4 | 2,460 | 0.4 |
| Distracted Driving | 23,210 | 22.3 | 26,282 | 23.1 | 28,786 | 25.1 | 29,608 | 25.5 | 30,105 | 26.1 | 137,991 | 24.5 |

Additional analyses were conducted to examine the number of cell phone crashes that involved talking on a cell phone and the number that involved texting. It is important to note that a single crash can involve both talking on a cell phone and texting; as a result, the annual percentages seen in Figure 1 total

more than 100%. As shown, the proportion of F&PI cell phone crashes that involved talking on a cell phone fluctuated during the 5-year period, rising from 84% in 2015 to 88% in 2019. In contrast, texting crashes dropped from 29% in 2015 to 26% in 2019.

Figure 1

Type of Cell Phone Use in Fatal and Personal Injury Crashes

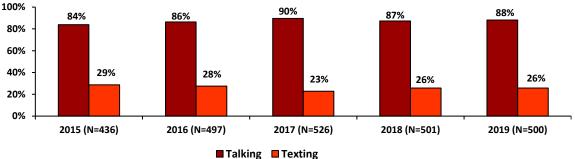


Table 1 also shows the extent to which driver inattention/distraction was reported as a contributing factor in F&PI crashes over the five years 2015-2019. Driver inattention/distraction was reported as a factor in 12%-15% of the fatal crashes

each year, while the proportion of personal injury crashes that identified driver inattention/ distraction as a contributing factor rose from 22% in 2015 to 26% in 2019.

Fatalities and Persons Injured

During the five years 2015-2019, 15 persons were killed and 3,272 persons were injured in cell phone crashes (Table 2). The number of persons killed in distracted driving crashes fluctuated from year to

year, with 109 fatalities occurring in 2019, down from 160 in 2015. In 2019, more than 41,600 persons were injured in distracted driving crashes, up from about 33,100 in 2015.

| Table 2 | | | | | | | | | | | | |
|---|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|
| Fatalities and Persons Injured in Police-Reported Crashes | | | | | | | | | | | | |
| | 2015 | | 2010 | 5 | 201 | 7 | 201 | 8 | 2019 | 9 | 2015-2 | 2019 |
| | # | % | # | % | # | % | # | % | # | % | # | % |
| Fatalities | 1,116 | | 1,029 | | 1,000 | | 936 | | 938 | | 5,019 | |
| In Cell Phone Crashes | 1 | 0.1 | 3 | 0.3 | 3 | 0.3 | 6 | 0.6 | 2 | 0.2 | 15 | 0.3 |
| In Distracted Driving | 160 | 14.3 | 135 | 13.1 | 150 | 15.0 | 113 | 12.1 | 109 | 11.6 | 667 | 13.3 |
| Crashes | | | | | | | | | | | | |
| Persons Injured | 145,991 | | 157,452 | | 158,603 | | 160,066 | | 159,097 | | 781,209 | |
| In Cell Phone Crashes | 570 | 0.4 | 637 | 0.4 | 710 | 0.5 | 685 | 0.4 | 670 | 0.4 | 3,272 | 0.4 |
| In Distracted Driving | 33,121 | 22.7 | 36,614 | 23.3 | 40,184 | 25.3 | 41,014 | 25.6 | 41,648 | 26.2 | 192,581 | 24.7 |
| Crashes | | | | | | | | | | | | |

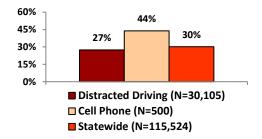
Single Vehicle Involvement

Cell phone F&PI crashes were much more likely than either distracted driving F&PI crashes or all F&PI crashes to involve a single vehicle. As indicated in Figure 2, in 2019, 44% of the cell phone F&PI crashes involved a single vehicle, compared to 27% of the distracted driving F&PI crashes and 30% of all policereported F&PI crashes.

Figure 2

NYS Police-Reported Fatal and Personal
Injury Crashes

Single Vehicle Involvement: 2019



Region of the State

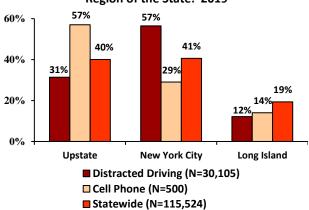
For analysis purposes, the state is typically divided into three regions: Upstate, New York City and Long Island. The Upstate region consists of the 55 counties north of New York City; the New York City region is comprised of five counties (Bronx, Kings, New York, Queens and Richmond); and the Long Island region includes the two counties of Nassau and Suffolk. As indicated in Figure 3, the largest proportion of distracted driving crashes in 2019 occurred in New York City (57%), and the largest proportion of cell phone crashes occurred Upstate (57%). In comparison, the proportion of all police-reported F&PI crashes that occurred in the Upstate and New York City regions were similar (40% and 41%, respectively).

Figure 3

NYS Police-Reported Fatal and Personal
Injury Crashes
Region of the State: 2019

57%

57%



Day of Week and Time of Day

The distribution of both cell phone and distracted driving F&PI crashes by day of week was very similar to the distribution of all F&PI crashes in 2019 (Figure 4). As shown, cell phone and distracted driving crashes are fairly evenly distributed over the weekdays (13%-17%).

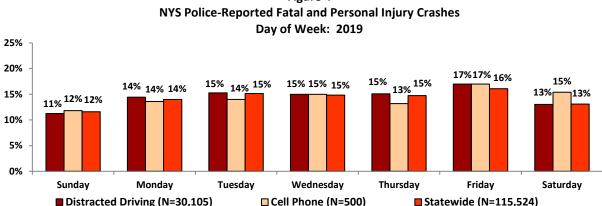


Figure 4

As indicated in Figure 5, only small differences are seen in the distribution of cell phone, distracted driving and all F&PI crashes by time of day in 2019. The largest proportions of such crashes occurred between 3 and 6pm, followed by crashes between noon and 3pm.

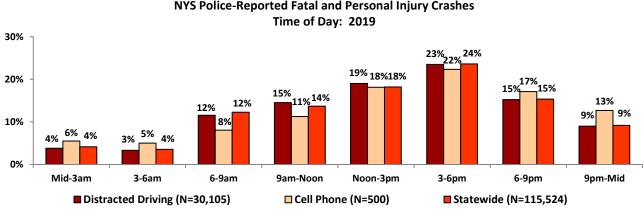


Figure 5 **NYS Police-Reported Fatal and Personal Injury Crashes**

Driver Gender and Age

Analyses were also conducted comparing the gender and age of cell phone drivers and distracted drivers in crashes with the gender and age of all New York State licensed drivers for the five years 2015-2019. It is important to note that these analyses did not include all drivers, but rather focused on those drivers for whom contributing factors of "Cell Phone (hand held)", "Cell Phone (hands-free)", "Texting"

and "Driver Inattention/Distraction" were reported on the police crash report forms. The analyses also included those drivers who received a ticket for a cell phone and/or a texting violation. 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 2019 are presented.

Driver Gender

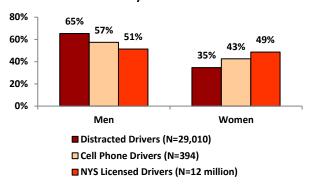
As Figure 6 shows, analyses of the data on distracted drivers showed that men were overrepresented; 51% of the licensed drivers were men, but men accounted for 65% of the distracted drivers in F&PI crashes in 2019.

The distribution of cell phone drivers by gender was also different than that of all licensed drivers. Figure 6 shows that 57% of the cell phone drivers in F&PI crashes were men and 43% were women, compared to 51% and 49% of the licensed drivers, respectively.

Driver Age

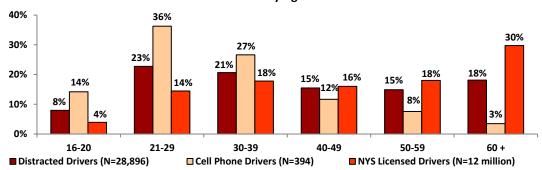
For the analyses by age, the population of drivers was divided into six categories: 16-20 years, 21-29 years, 30-39 years, 40-49 years, 50-59 years, and 60 years and over. Young drivers (ages 16-20) were overrepresented in both distracted driving and cell phone F&PI crashes (Figure 7). Four percent of New York State's licensed drivers were under age 21 in

Figure 6
Drivers in NYS Police-Reported Fatal and Personal Injury
Crashes by Gender: 2019



2019, compared to 8% of the distracted drivers and 14% of the cell phone drivers. In addition, while drivers ages 21-29 represented 14% of the state's licensed drivers, they accounted for 23% of the distracted drivers involved in F&PI crashes and 36% of the cell phone drivers in 2019.

Figure 7
Drivers in NYS Police-Reported Fatal and Personal Injury
Crashes by Age: 2019

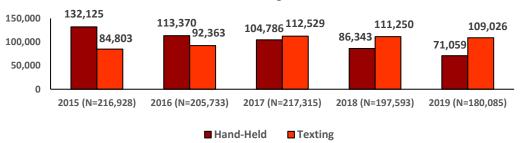


TICKETS ISSUED FOR VIOLATING THE CELL PHONE LAW

New York's cell phone law banning the use of handheld mobile telephones or portable electronic devices while driving carries a penalty of a fine of up to \$200 for a first-offense violation, a surcharge of up to \$93, and five driver violation points.² To determine the extent to which the hand-held cell phone and text messaging law is being enforced and provide information on drivers violating the law, data on tickets issued to drivers for violations of the handheld cell phone and texting law were examined for the five years 2015-2019. During that time period:

- More than 1 million tickets were issued for violating the hand-held cell phone and text messaging law.
- The number of tickets issued for using a hand-held cell phone while driving dropped 46% (132,125 versus 71,059), while the number of tickets issued for texting increased by 29% (84,803 versus 109,026) (Figure 8).
- Although the total number of tickets issued for all traffic violations decreased by less than 1% between 2015 and 2019, cell phone and texting tickets decreased 17%.

Figure 8
Tickets Issued for Violating the Cell Phone Law



Region of the State

The largest proportion of all tickets each year from 2015 to 2019 were issued Upstate, followed by New York City and Long Island. In contrast, the largest proportion of cell phone tickets were issued in New York City, followed by Upstate and Long Island.

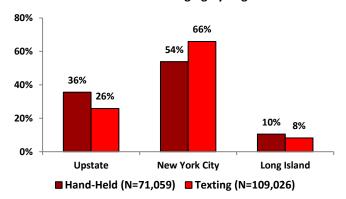
Table 3 shows that the proportion of cell phone tickets issued in New York City increased from 59% in 2015 to 61% in 2019, while decreasing from 33% to 30% Upstate.

| Table 3 | | | | | | | |
|---|-----------------------|-----------------------|---------------------|---------------------|--|--|--|
| Tickets Issued for Violating the Cell Phone Law by Region | | | | | | | |
| Total Tickets Cell Phone Tickets | | | | | | | |
| | 2015 (N=3,505,545) | 2019 (N=3,502,973) | 2015 (N=216,928) | 2019 (N=180,085) | | | |
| Upstate | 54.7% | 51.2% | 33.2% | 29.7% | | | |
| New York City | 30.1% | 30.6% | 58.6% | 61.2% | | | |
| Long Island | 15.2% | 18.1% | 8.2% | 9.1% | | | |

In 2019, approximately 39% of the cell phone tickets issued were for using a hand-held cell phone and 61% were issued for texting while driving. When the text messaging violations are analyzed separately from the hand-held cell phone tickets issued, a different regional pattern emerges.

As Figure 9 shows, 66% of the text messaging tickets in 2019 were issued in New York City and 26% were issued Upstate, compared to 54% and 36%, respectively, of the hand-held cell phone tickets issued.

Figure 9 Tickets Issued for Violating the Cell Phone Law Hand-Held vs. Text Messaging by Region: 2019



Driver Gender and Age

The data by driver gender and age for each of the five years 2015–2019 were analyzed to determine whether the gender and age distribution of drivers ticketed for non-compliance of the cell phone law was similar to that of all New York State licensed drivers. 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 2019 are presented. It is important to note that a driver can be issued multiple tickets for cell phone violations in a single event (e.g., one for violating the hand-held section of the law and one for violating the texting section of the law).

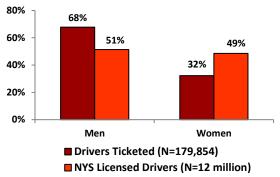
Driver Gender

While men and women make up similar proportions of New York's driver license population (51% and 49%, respectively), men were more than twice as likely to be ticketed for violating the cell phone law. In 2019, approximately two-thirds (68%) of the drivers ticketed were men and one-third (32%) were women (Figure 10).

Driver Age

Drivers ages 21-39 were the most overrepresented in tickets issued for violating the cell phone law (52% vs. 32%), while drivers 60 years of age and older were underrepresented (9% vs. 30%) (Figure 11). Differences are seen when the data are analyzed separately for drivers ticketed for using a hand held cell phone versus texting. Figure 12 shows that drivers ages 21-39 are much more likely to be

Figure 10
Drivers Ticketed for Violating the NYS Cell Phone Law vs. NYS Licensed Drivers by Gender: 2019



ticketed for a texting violation than for a hand held cell phone violation (57% vs. 45%).

Figure 11
Drivers Ticketed for Violating the NYS Cell Phone Law vs. NYS Licensed Drivers by Age: 2019

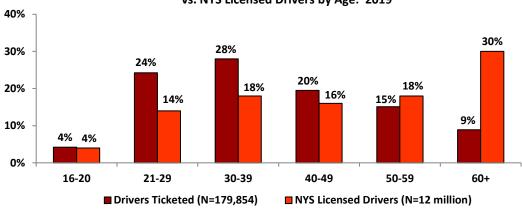
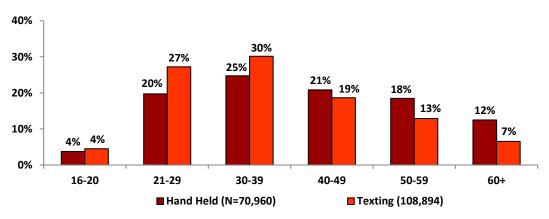


Figure 12
Drivers Ticketed for Hand Held Cell Phone Violations Vs. Texting by Age: 2019



2020 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 during the COVID-19 pandemic, New York conducted its first online driver survey in September-October 2020, incorporating minor

variations for the new electronic survey format. Survey respondents included more than 1,100 drivers from 61 of New York's 62 counties, all but the largely rural Wyoming County, east of Buffalo. Beginning with 2013, the survey has included six questions on cell phone use in addition to questions on seat belt use, speeding and impaired driving.

Talking on a Cell Phone While Driving

- 38% of the drivers reported that they never talk on a cell phone while driving (Table 4).
- 9% of the drivers reported that they "always" (4%) or "usually" (5%) talk on a cell phone while driving.
- Of those who responded that they talk on a cell phone while driving, 14% reported that they "always" and 5% reported that they "usually" use a hand-held phone in violation of the law.
- With regard to enforcement of the handheld cell phone law, more than half (59%) of the drivers thought that it was "very likely" (40%) or "somewhat likely" (19%) that they would get a ticket for using a cell phone while driving; 22% thought that it was "unlikely" or "very unlikely" that they would get a ticket.

| Table 4 | | | | | |
|--|-----------|--|--|--|--|
| NYS Driver Behavior Survey: Cell Phone Use | | | | | |
| | 2020 | | | | |
| How often do you talk on a cell phone | | | | | |
| while driving, whether hand-held or | (N=1,105) | | | | |
| hands-free? | | | | | |
| Always | 4.2% | | | | |
| Usually | 5.2% | | | | |
| Sometimes | 24.9% | | | | |
| Rarely | 27.8% | | | | |
| Never | 38.0% | | | | |
| When you talk on a cell phone while | | | | | |
| driving, how often do you use a hand- | (N=685) | | | | |
| held phone? | | | | | |
| Always | 13.6% | | | | |
| Usually | 4.8% | | | | |
| Sometimes | 4.8% | | | | |
| Rarely | 22.5% | | | | |
| Never | 54.3% | | | | |
| What do you think the chances are of | | | | | |
| getting a ticket if you talk on a hand- | (N=1,105) | | | | |
| held cell phone while driving? | | | | | |
| Very likely | 39.7% | | | | |
| Somewhat likely | 19.2% | | | | |
| Likely | 18.7% | | | | |
| Unlikely | 15.0% | | | | |
| Very unlikely | 7.3% | | | | |

Texting While Driving

- 37% of the drivers reported that they send or receive text messages using a hand-held cell phone while driving (Table 5).
- 5% reported that they "always" (3%) or "usually" (2%) text using a hand-held cell phone while driving.
- With regard to enforcement of the texting while driving law, 38% of the drivers thought it was "very likely" that they would be ticketed and an additional 18% thought it was "somewhat likely"; 28% thought it was "unlikely" or "very unlikely" that they would get a ticket for texting with a handheld cell phone while driving.
- Almost all of the drivers (93%) thought that texting using a hand-held cell phone affects a driver's ability to drive safely "a great deal" (80%) or "somewhat" (13%). Only 7% of the drivers thought that texting using a hand-held cell phone would "not at all" affect a driver's ability to drive safely.

| Table 5 NYS Driver Behavior Survey: Texting | | | | |
|---|-------------------|--|--|--|
| | 2020 (N=1,105) | | | |
| How often do you send or receive text messages using a hand-held cell phone while driving? | | | | |
| Always | 2.7% | | | |
| Usually | 2.2% | | | |
| Sometimes | 10.7% | | | |
| Rarely | 21.3% | | | |
| Never | 63.2% | | | |
| What do you think the chances are of | | | | |
| getting a ticket if you text using a hand-held cell phone while driving? | | | | |
| Very likely | 37.8% | | | |
| Somewhat likely | 17.9% | | | |
| Likely | 15.9% | | | |
| Unlikely | 18.8% | | | |
| Very unlikely | 9.5% | | | |
| Do you think texting using a hand-held cell phone affects a driver's ability to drive safely? | | | | |
| A great deal | 80.1% | | | |
| A moderate amount | 13.2% | | | |
| Not at all | 6.7% | | | |

SUMMARY AND CONCLUSIONS

While the risks associated with the use of cell phones to talk or text while driving are widely recognized, 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 in 2001, cell phone use continues to be a relatively minor factor in crashes, with cell phone use reported as a contributing factor in less than one percent of the fatal and personal injury crashes. Although better reporting would likely result in more crashes being associated with cell phone use, the proportion of crashes in which cell phone use was involved 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 10 years, the proportion of fatal and personal injury crashes in which distracted driving was reported as a

contributing factor rose slowly from 21% in 2010 to 26% in 2019.

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 million tickets were issued for violating the hand-held cell phone and text messaging law between 2015 and 2019. While highvisibility enforcement appears to be effective in increasing compliance with the cell phone and texting law, most 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 detailed 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.

REFERENCES

- 1. CTIA The Wireless Association website, 2020 Annual Survey Highlights:
- https://www.ctia.org/news/report-2020-annualsurvey-highlights
- 2. NYS Department of Motor Vehicles website, Cell phone use & texting:

https://dmv.ny.gov/tickets/cell-phone-use-texting

For further information regarding this *Research Note*, please contact:

Institute for Traffic Safety Management and Research 80 Wolf Road, Suite 607 Albany, NY 12205-2604 Phone 518-453-0291 E-mail info@itsmr.org