

# ITSMR Research Note

## KEY FINDINGS



### Impaired Fatal & Personal Injury Crashes (F&PI): 2015-2019

- 4% of all F&PI crashes each year involve alcohol and/or drugs.
- 409 persons died in impaired crashes in 2019, representing 44% of the state's traffic fatalities.
- 42% of the impaired F&PI crashes in 2019 occurred on weekends; 58% occurred between 6pm and 3am.

### Impaired Drivers in F&PI Crashes\*

- 75% of the impaired drivers in F&PI crashes in 2019 were men.
- 30% of the impaired drivers in 2019 were in the 21-29 year age group; 27% were ages 30-39.
- 21% of the impaired drivers in 2019 had "unsafe speed" reported as a contributing factor.
- 82% of the surviving impaired drivers in 2019 were ticketed for alcohol-impaired driving (VTL 1192.1-3); 10% were ticketed for drug-impaired driving (VTL 1192.4 & 4a); and 31% were ticketed for improper passing or lane use violations.

## CONCLUSIONS

- The involvement of alcohol and/or drugs continues to be a serious issue in fatal crashes, with more than two out of five fatalities (44%) being alcohol or drug-related.
- Continuing efforts are needed to improve the effectiveness of public awareness initiatives that are designed to educate the motoring public on the dangers of driving under the influence of alcohol and drugs.

*\*NOTE: For this study, an "impaired driver" is a driver who had some level of alcohol and/or drugs in his/her system at the time of the crash. It does not imply that the driver had a level of alcohol and/or drugs sufficient to be the cause of the crash.*

## Impaired Crashes on New York Roadways: 2015-2019

### INTRODUCTION

In June 2020, the National Highway Traffic Safety Administration (NHTSA) reported that of the 36,560 traffic fatalities in 2018, an estimated 10,511 people (29%) were killed in alcohol-impaired-driving crashes.<sup>1</sup> The most recent study available regarding drug use and driving, NHTSA's *2013-2014 National Roadside Study of Alcohol and Drug Use by Drivers: Drug Results*, found that of the drivers tested, approximately 22% of both weekday/daytime and weekend/nighttime drivers tested positive for drugs. Delta-9-tetrahydrocannabinol (THC), the active component of marijuana, was the most frequent drug, with 9% of daytime drivers and 13% of nighttime drivers testing positive. An increase in nighttime drug prevalence from 16% to 20% was found between the 2007 and 2013-2014 National Roadside Study, when comparing the same drugs tested for in 2007.<sup>2</sup> A positive result for any drug does not necessarily mean the driver was impaired at the time of testing, only that the drug was present in the body.

Because of concerns these findings have raised, the NYS Governor's Traffic Safety Committee (GTSC) provided funding for the Institute for Traffic Safety Management and Research (ITSMR) to update its earlier study on the involvement of alcohol and/or drugs in fatal and personal injury (F&PI) crashes on New York roadways. Focusing on the five-year period 2015-2019, this research note presents the following information on impaired F&PI crashes:

- Overview
- Fatalities
- Day of Week and Time of Day
- Single Versus Multiple Vehicle Involvement
- Region of the State
- Characteristics of Impaired Drivers in F&PI Crashes
- Tickets Issued to Surviving Impaired Drivers

The data for the study were obtained from the DMV's Accident Information System (AIS) and Driver License File. Most of the data are available in ITSMR's Traffic Safety

Statistical Repository (TSSR). In this study a crash is defined as an impaired crash if at least one of the following criteria is met:

- 1) Contributing factor of “alcohol involvement”, “drugs (illegal)” or “prescription medication” was reported on the police crash report form.
- 2) Ticket was issued for one or more violations of 1192.1 (DWAI), 1192.2 (Per Se), 1192.3 (DWI), 1192.4 (DWAI Drugs) or 1192.4A (DWAI Drugs & Alcohol) as a result of the crash.

- 3) Positive BAC was reported for a driver, pedestrian or bicyclist involved in the crash.
- 4) Positive drug result is shown in the AIS drug table for a driver, pedestrian or bicyclist killed in the crash. Drug involvement as reported by the coroner or medical examiner means only that drugs were found in the person’s system and does not imply impairment or indicate that drug use was the cause of the crash.

## OVERVIEW

Despite year-to-year fluctuations, the number of impaired fatal crashes dropped 12% between 2015 and 2019 (431 vs. 378) (Table 1). Impaired fatal crashes represented 38%-51% of all fatal crashes during the years 2015 to 2019. Although the number of personal injury impaired crashes also fluctuated from year to year, the number did drop

from 4,137 in 2015 to 4,086 in 2019, a decrease of 1%. Impaired personal injury crashes represented 4% of all personal injury crashes in each year from 2015 to 2019. When fatal and personal injury (F&PI) crashes are combined, 4% of the total F&PI crashes are classified as impaired crashes.

	2015	2016	2017	2018	2019	Change 2015-19
<b>Fatal Crashes</b>	<b>1,045</b>	<b>969</b>	<b>933</b>	<b>882</b>	<b>881</b>	<b>-15.7%</b>
<b>Impaired Fatal Crashes</b>	431	380	351	449	378	-12.3%
<i>% of all fatal crashes</i>	41.2%	39.2%	37.6%	50.9%	42.9%	
<b>Personal Injury Crashes</b>	<b>102,986</b>	<b>112,852</b>	<b>113,551</b>	<b>115,236</b>	<b>114,643</b>	<b>11.3%</b>
<b>Impaired PI Crashes</b>	4,137	4,657	4,510	4,198	4,086	-1.2%
<i>% of all PI crashes</i>	4.0%	4.1%	4.0%	3.6%	3.6%	
<b>Fatal and Personal Injury Crashes</b>	<b>104,031</b>	<b>113,821</b>	<b>114,484</b>	<b>116,118</b>	<b>115,524</b>	<b>11.1%</b>
<b>Impaired F&amp;PI Crashes</b>	4,568	5,037	4,861	4,647	4,464	-2.3%
<i>% of all F&amp;PI crashes</i>	4.4%	4.4%	4.2%	4.0%	3.9%	

## FATALITIES

The number of fatalities in impaired crashes declined from 468 in 2015 to 409 in 2019, representing a drop of 13% (Table 2). The proportion of total fatalities that occurred in impaired crashes fluctuated over the years, ranging from a high of 51% in 2018 to a low of 39% in 2017 (Figure 1).

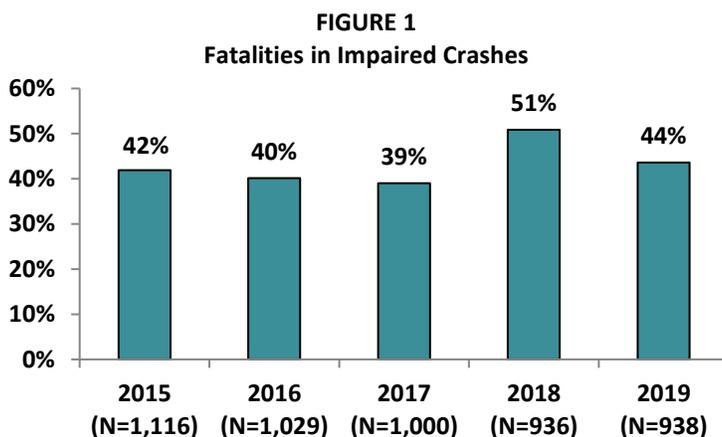


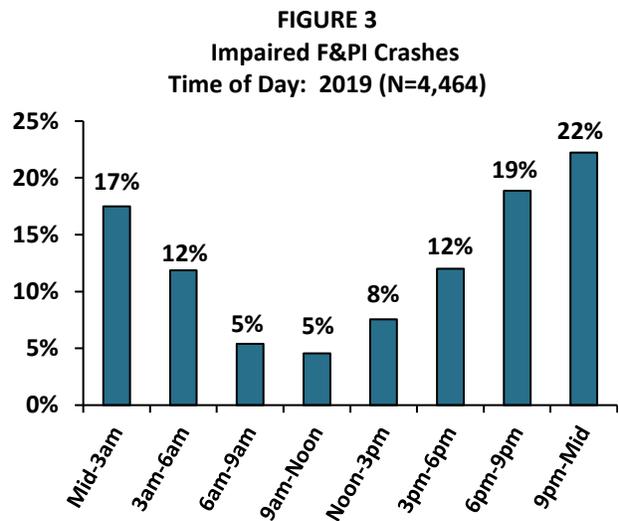
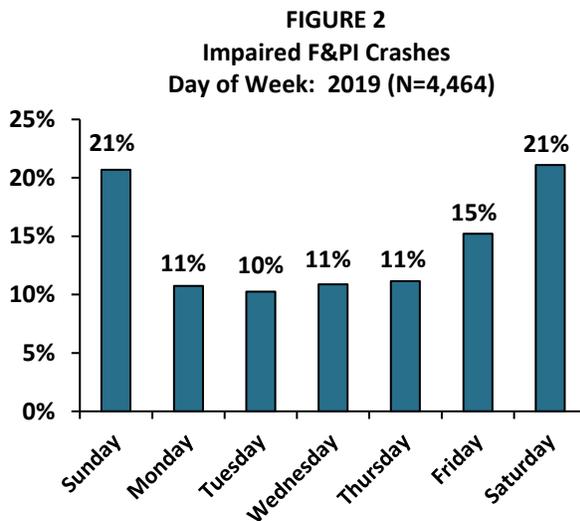
Table 2 also shows that, not surprisingly, the majority of fatalities in impaired crashes were the drivers involved. As Table 2 further indicates, the vast majority of drivers killed were the impaired

drivers. Approximately 25%-28% of the fatalities were pedestrians; 12%-20% each year were passengers and 2%-5% were bicyclists.

TABLE 2 Fatalities in Impaired Crashes					
	2015	2016	2017	2018	2019
<b>Fatalities in Impaired Crashes</b>	<b>N=468</b>	<b>N=413</b>	<b>N=390</b>	<b>N=476</b>	<b>N=409</b>
<b>Drivers</b>	54.1%	54.2%	50.5%	60.3%	51.8%
<i>Impaired Drivers</i>	48.1%	50.4%	48.2%	57.1%	47.9%
<i>Non-Impaired Drivers</i>	6.0%	3.9%	2.3%	3.2%	3.9%
<b>Passengers</b>	17.1%	14.5%	19.5%	11.8%	16.1%
<b>Pedestrians</b>	25.6%	28.1%	24.6%	26.1%	27.6%
<b>Bicyclists</b>	3.2%	3.2%	5.1%	1.9%	4.2%
<b>Other</b>	0.0%	0.0%	0.3%	0.0%	0.2%

## DAY OF WEEK AND TIME OF DAY

- 42% of the police-reported impaired F&PI crashes in 2019 occurred on weekends (21% on both Saturday and Sunday) (Figure 2).
- 58% of the police-reported impaired F&PI crashes occurred between 6pm and 3am (Figure 3).



## SINGLE VERSUS MULTIPLE VEHICLE INVOLVEMENT

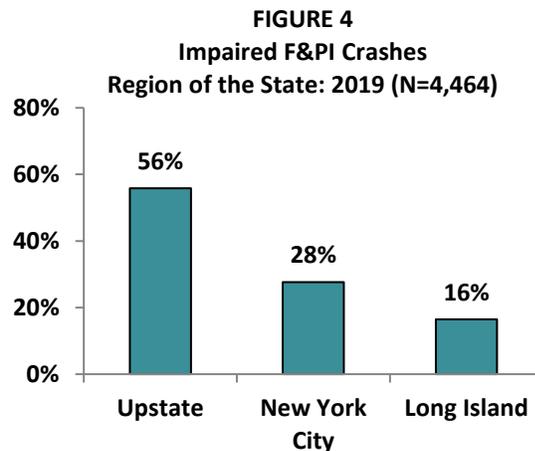
- More than half (51%) of the impaired F&PI crashes in 2019 involved multiple vehicles and 35% involved a single vehicle (Table 3).
- A pedestrian or bicyclist was involved in 14% of the impaired F&PI crashes.

TABLE 3 Impaired F&PI Crashes Single Vs. Multiple Vehicle Involvement: 2019 (N=4,464)	
Single Vehicle Involved	35.4%
Multiple Vehicles Involved	50.5%
Single/Multiple Vehicle w/Pedestrian or Bicyclist	14.1%

## REGION OF THE STATE

The state is typically divided into three regions for purposes of analysis: Upstate, Long Island and New York City. The Upstate region consists of the 55 counties north of New York City, the Long Island region includes the two counties of Nassau and Suffolk and the New York City region is comprised of five counties (Bronx, Kings, New York, Queens and Richmond).

As shown in Figure 4, the largest proportion of impaired F&PI crashes in 2019 occurred in the Upstate region (56%), followed by New York City (28%) and Long Island (16%).



## CHARACTERISTICS OF IMPAIRED DRIVERS IN F&PI CRASHES

For these analyses on drivers, an “impaired driver” is defined as a driver who had some level of alcohol and/or drugs in his/her system at the time of the crash. It does not imply that all of these drivers had a level of alcohol and/or drugs sufficient to be the cause of the crash.

Table 4 shows that in each of the five years 2015-2019, more than six out of ten drivers involved in impaired crashes had alcohol and/or drugs in their system.

TABLE 4 Drivers in Police-Reported Impaired F&PI Crashes					
	2015	2016	2017	2018	2019
<b>Total Drivers</b>	<b>N=6,648</b>	<b>N=7,336</b>	<b>N=7,064</b>	<b>N=6,783</b>	<b>N=6,574</b>
<b>Impaired Drivers</b>	62.9%	61.9%	60.9%	60.5%	60.3%
<b>Non-Impaired Drivers</b>	37.1%	38.1%	39.1%	39.5%	39.7%

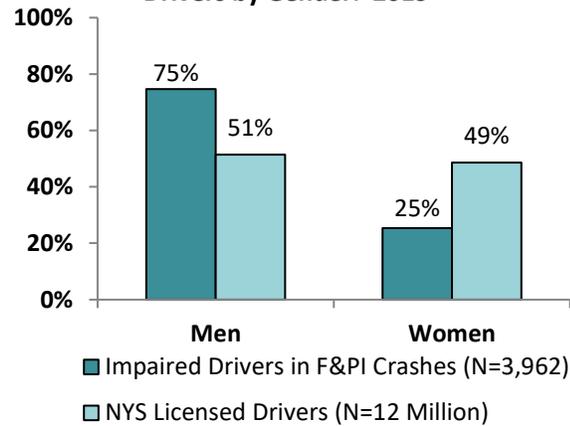
Analyses were also conducted by the gender and age of the impaired drivers to obtain a profile of the drivers who drove with alcohol and/or drugs in their system at the time of the crash. Because the analyses of the annual data for these variables showed little variation from year to year, only the

2019 data are presented. In addition, the data are compared to the number of NYS licensed drivers to examine whether certain groups of drivers are overrepresented or underrepresented in their involvement in impaired crashes.

## Driver Gender

In 2019, as shown in Figure 5, men were overrepresented in impaired F&PI crashes, with 75% of the impaired drivers being men, compared to 51% of NYS licensed drivers. In contrast, women are underrepresented in impaired F&PI crashes, with 25% of the impaired drivers being women, compared to 49% of the state's licensed drivers.

**FIGURE 5**  
Impaired Drivers in F&PI Crashes & NYS Licensed Drivers by Gender: 2019

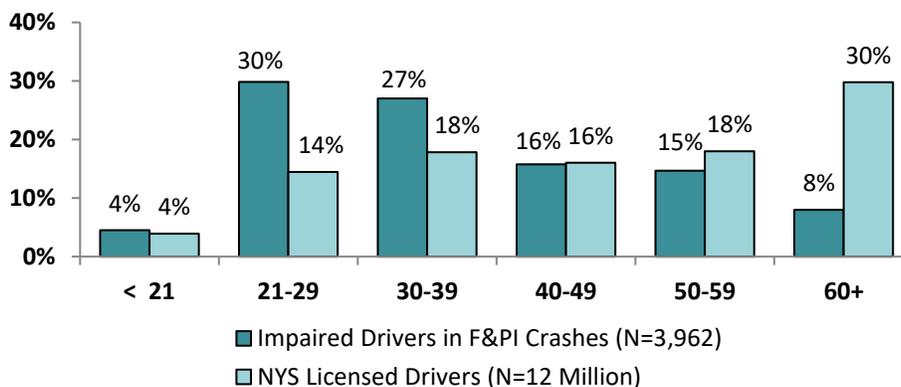


## Driver Age

- Young drivers ages 21-29 were overrepresented in impaired F&PI crashes in 2019, compared to licensed drivers (30% vs. 14%, respectively); drivers ages 30-39 were also overrepresented (27% vs. 18%, respectively) (Figure 6).
- Drivers ages 60 and over were underrepresented in impaired F&PI

- crashes, compared to licensed drivers (8% vs. 30%, respectively).
- 4% of the impaired drivers in F&PI crashes in 2019 were under age 21. Although some of these drivers may have had only drugs in their system, the majority had alcohol, despite the fact that drivers this age are prohibited from drinking alcoholic beverages.

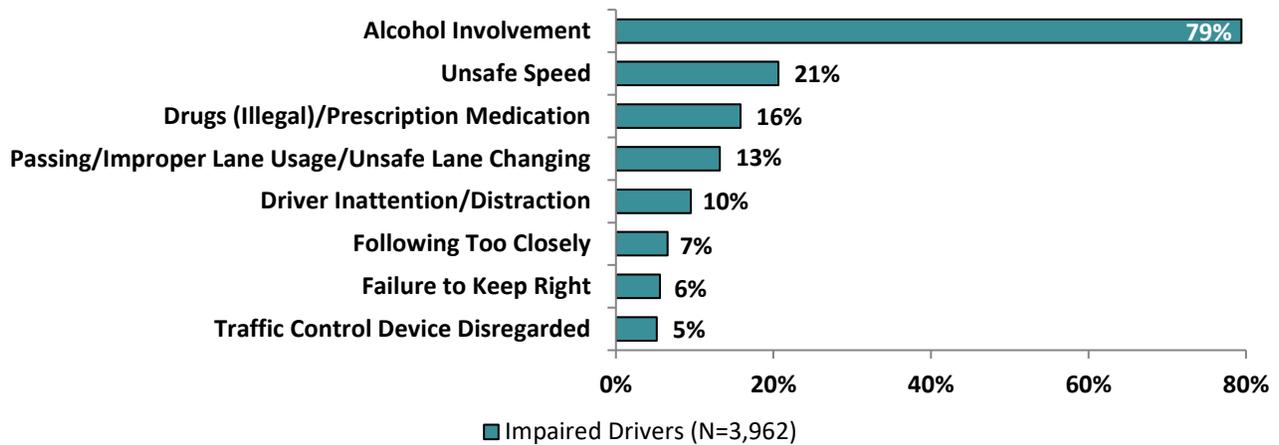
**FIGURE 6**  
Impaired Drivers in F&PI Crashes & NYS Licensed Drivers by Age: 2019



## Select Contributing Factors

- 79% of the impaired drivers had “Alcohol Involvement” and 16% had “Drugs (Illegal)” or “Prescription Medication” reported as a contributing factor in 2019 (Figure 7).
- 21% of the impaired drivers also had “Unsafe Speed” reported as a contributing factor.
- 13% of the impaired drivers also had improper or unsafe lane usage and 10% had “Driver Inattention/Distraction” reported as a contributing factor.

**FIGURE 7**  
**Top 8 Contributing Factors Reported for Impaired Drivers in F&PI Crashes: 2019**

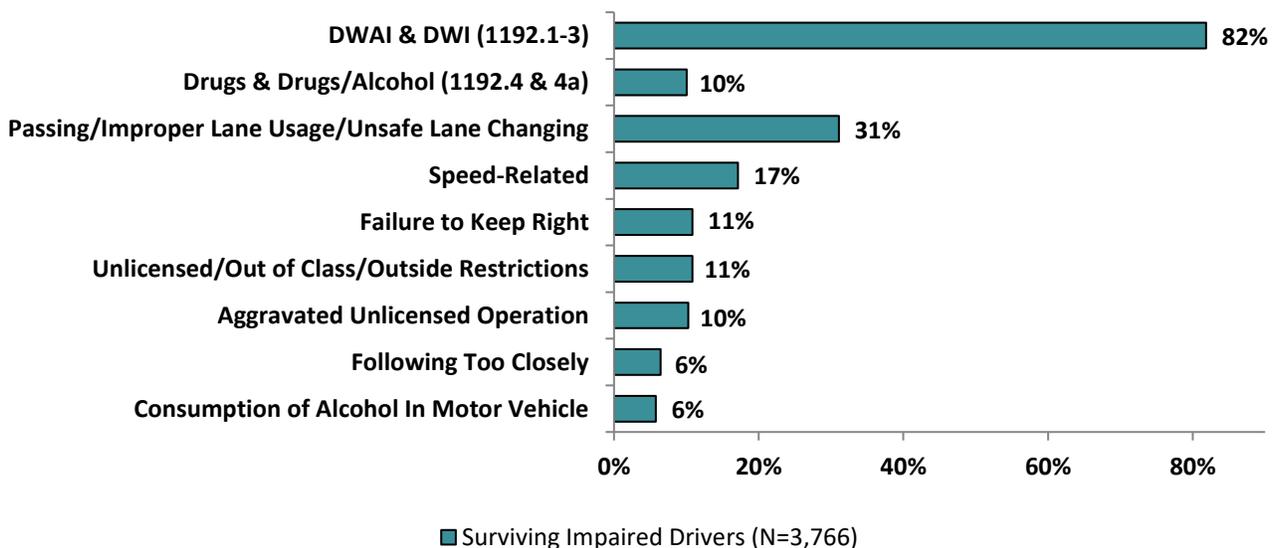


## TICKETS ISSUED TO SURVIVING IMPAIRED DRIVERS IN F&PI CRASHES

In addition to capturing extensive data on the circumstances of the crash and the drivers involved, the police crash report form also indicates whether any tickets were issued for violations of the New York State Vehicle and Traffic Law (VTL) as a result of the crash. Analyses were conducted to determine the extent to which surviving impaired drivers were issued tickets in connection with the crashes that occurred in 2019 and the violations charged (Figure 8).

- 82% of the surviving impaired drivers were ticketed for an alcohol offense (1192.1-3) and 10% were ticketed for drug/drug and alcohol-impaired driving (1192.4 & 4a).
- 31% of the surviving impaired drivers were ticketed for passing/lane use-related violations, followed by speed-related violations (17%).

**FIGURE 8**  
**Tickets Issued to Surviving Impaired Drivers in F&PI Crashes, Select Violations: 2019**



## SUMMARY

The overall findings from this study indicate that modest progress is being made with regard to combatting the problem of impaired driving on New York's roadways. The number of fatalities in impaired crashes dropped from 468 in 2015 to 409 in 2019. This decline represents a drop of 13% over the five-year period 2015-2019, compared to a greater drop of 16% in total motor vehicle fatalities over the same five years. Although a total of 4,464 fatal and personal injury (F&PI) impaired crashes occurred in 2019, down from 4,568 in 2015, these continue to represent 4% of all F&PI crashes in the state each year.

Young drivers ages 21-29 made up 30% of impaired drivers in F&PI crashes in 2019, the largest proportion, followed by drivers ages 30-39 at 27%. In examining other factors, the analyses showed that "Unsafe Speed" was a factor associated with

more than one fifth (21%) of these drivers, followed by "Passing/Improper Lane Usage/Unsafe Lane Changing" (13%). "Driver Inattention/Distracted" was a factor associated with one in ten of the impaired drivers.

These findings should provide useful information to the Governor's Traffic Safety Committee and the state's Advisory Council on Impaired Driving in their efforts to address the problem of impaired driving among motorists in New York State. As they try to improve the effectiveness of public awareness efforts to educate the motoring public on the dangers of driving under the influence of alcohol and drugs, it is important to gain a better understanding of the effect of drugs, both illegal and prescription, on driving behavior as well as the synergistic effect of combining alcohol and drugs.

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## REFERENCES

<sup>1</sup>National Center for Statistics and Analysis. (2020, June). State alcohol-impaired-driving estimates: 2018 data (Traffic Safety Facts. Report No. DOT HS 812 917). National Highway Traffic Safety Administration.

<sup>2</sup>Kelley-Baker, T., Berning, A., Ramirez, A., Lacey, J. H., Carr, K., Waehrer, G., Compton, R. (2017, May). *2013-2014 National Roadside Study of Alcohol and Drug Use by Drivers: Drug Results* (Report No. DOT HS 812 411). Washington, DC: National Highway Traffic Safety Administration.

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