

# Institute for Traffic Safety Management & Research

## KEY FINDINGS

### DRIVERS EVALUATED BY A DRE: 2021

- The number of DRE evaluations conducted decreased 7% from 2019 to 2020, followed by a 7% increase to 2,746 in 2021.
- 38% of the DRE evaluations were associated with an arrest from 6pm to midnight.
- 73% of the drivers evaluated were men, up from 70% in 2019.
- A third of the evaluated drivers were in the 30-39 age group.
- 81% of the drivers evaluated were White, followed by African American (12%), and Hispanic (5%).
- 28% of the drivers evaluated were unlicensed or had a suspended/revoked license, up from 24% in 2019.
- Cannabis and narcotic analgesics were both the most common drug category identified by the DREs (41%).

### TOXICOLOGY TESTING AND RESULTS: 2021

- 20% of the drivers evaluated refused to take a chemical test, up from 13% in 2019.
- Of the drivers with chemical tests conducted, 23% had a urine test only, 74% had a blood test only.
- Of drivers with available toxicology results for the blood test, 92% had at least one active form of drug detected in their blood.
- 58% of the drivers with active drugs in blood tested positive for multiple drug categories, up from 49% in 2019.
- Of drivers with active drugs in the blood, cannabis and narcotic analgesics were the most common drug category found (50%).
- Narcotic analgesics and CNS stimulants had notable increases in prevalence from 2019.

### CONCLUSIONS

- Strategies that reduce the refusal rate of chemical testing and increase the collection of blood specimen should be considered.
- NY's traffic safety community should be aware of the increased prevalence of narcotic analgesics and CNS stimulants in drug-impaired driving.
- Motorist education regarding the combined effects of drugs from multiple drug categories on driver behavior is needed.

## DRUGGED DRIVING IN NEW YORK STATE: A VIEW FROM THE DRUG RECOGNITION EXPERT PROGRAM 2019-2021

### INTRODUCTION

According to the most recent National Roadside Survey of Alcohol and Drug Use by Drivers, the prevalence of drug use among drivers increased from 16% in 2007 to 20% in 2013-2014; the drug with the largest increase was cannabis (THC).<sup>1</sup> Based on the National Highway Traffic Safety Administration (NHTSA)'s 2020 study of selected trauma centers, the prevalence of drug use, particularly cannabinoids and opioids, among seriously or fatally injured drivers seemed to increase further during the COVID-19 public health emergency.<sup>2</sup> The increased use of both prescription drugs and illegal drugs in recent years combined with the legalization of recreational marijuana use in several states has heightened the need for strong efforts to address the serious problem of drugs and driving.

Recent analyses conducted by the Institute for Traffic Safety Management and Research (ITSMR) showed that the number of fatalities in drug-related motor vehicle crashes in New York State rose from 258 (28% of all fatalities) in 2019 to 409 (40% of all fatalities) in 2020, a great cause for concern. To provide more information on the issue of drugs and driving to New York's traffic safety community and the state's Advisory Council on Impaired Driving, the NYS Governor's Traffic Safety Committee (GTSC) recently provided funding for ITSMR to conduct a study on drivers who were evaluated by a Drug Recognition Expert (DRE) on New York's roadways during the three-year period 2019-2021. Summarizing the results of that study, this *Research Note* presents the following information:

- **Drivers Evaluated by a DRE**
  - Overview
  - Characteristics of the Evaluation Event
  - Characteristics of Drivers Evaluated
  - DRE Opinions on Drug Categories Involved
- **Toxicology Testing and Results**
  - Drivers Evaluated and Tested
  - Drugs Found – All Laboratories
  - Drugs Found - New York State Police Forensic Investigation Center

The primary data sources for the study are the NYS DRE database maintained by ITSMR and the NYS Department of Motor Vehicles' Traffic Safety Law Enforcement and Disposition (TSLED) system. TSLED captures tickets issued for operating a motor vehicle while under the influence of alcohol or drugs (VTL Section 1192) in all areas of the state, with the exception of New York City. The tickets issued in New York City are captured by a system maintained by the NYPD. Since the NYPD system does not have the same detailed data available as TSLED, the ticket analyses for this study were restricted to the data available from TSLED. As such, it is important to note that TSLED captures data on over 80% of the drivers charged with VTL 1192 violations annually across the state.

## DRIVERS EVALUATED BY A DRUG RECOGNITION EXPERT (DRE): 2019-2021

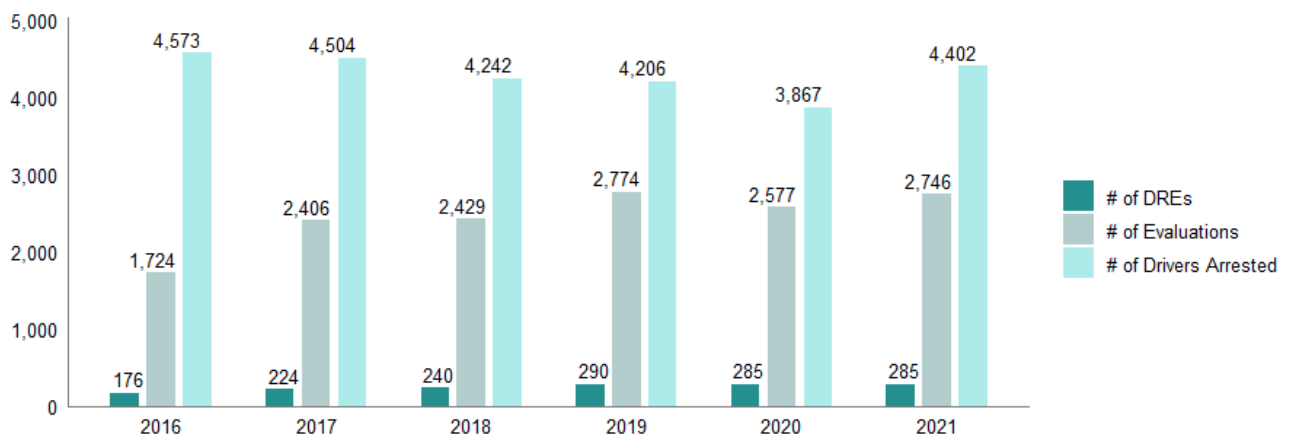
### Overview

Since 1987, New York has participated in the International Drug Evaluation & Classification (DEC) Program, now recognized by all fifty states in the US, the District of Columbia, Canada, Hong Kong, and the United Kingdom. The DEC program operates under the guidance and direction of the International Association of Chiefs of Police (IACP) and is supported by the National Highway Traffic Safety Administration (NHTSA). Under the program, DRE police officers undergo training approved by NHTSA and the IACP so that they can identify drug impairment and accurately determine the category of drugs causing such impairment. After successfully completing the training, DRE officers are certified for two years and must meet certain requirements for re-certification.

As they evaluate suspected drug-impaired drivers, the DREs follow a multi-step, standardized protocol and capture a large variety of data on a standard data collection form developed by the IACP. Because of the intense nature of the evaluation protocol, the GTSC contracted with ITSMR in 2013 to develop an application that would allow the state's DRE officers to capture the data on a mobile device for transmission directly into a database maintained by ITSMR. This change has enabled New York to develop a database containing a wealth of information pertaining to the drivers evaluated for suspected drug-impaired driving.

As shown in Figure 1, the DRE program expanded rapidly in New York State between 2016 and 2019. There was a 65% increase in the number of DRE evaluators from 176 in 2016 to 290 in 2019. During the same period, the number of DRE evaluations grew 61% from 1,724 to 2,774, considerably narrowing the gap between the number of drivers arrested for drug impaired driving and the number of drivers evaluated by a DRE. The changes from 2019 to 2020 most likely reflect the influence of the COVID-19 pandemic. The number of DRE evaluations dropped 7% from 2,774 in 2019 to 2,577 in 2020, followed by a 7% increase to 2,746 in 2021. Similarly, the number of drivers arrested for drug-impaired driving dropped 8% from 4,206 in 2019 to 3,867 in 2020, followed by a 14% increase in 2021.

**FIGURE 1.** Number of DREs, DRE Evaluations Conducted & Drivers Arrested for Drug-Impaired Driving\*



\*TSLED data only; data were not available from the NYPD; a drug-impaired driving arrest is defined as one in which the driver is charged with a violation of VTL Section 1192.4 (DWAI Drugs) or 1192.4a (DWAI Drugs & Alcohol).

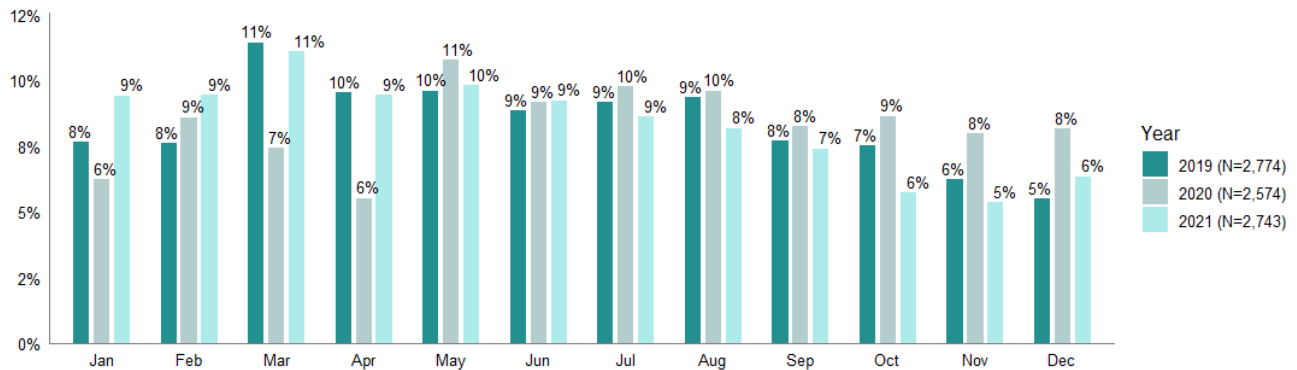
## Characteristics of the Evaluation Event

When characteristics of the evaluation show only small annual variations, only the data for 2021 are presented.

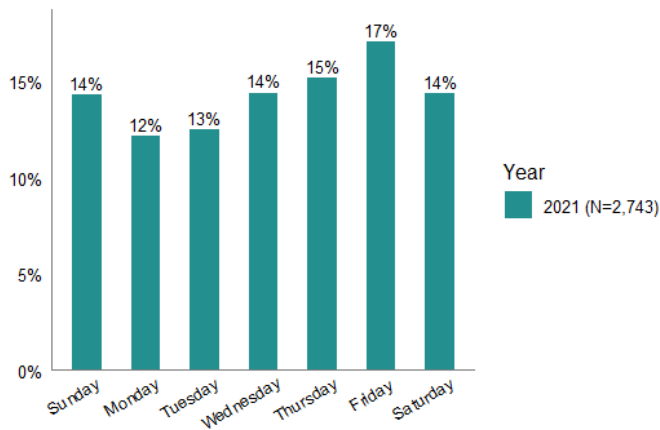
### Month of Year

The monthly distribution of DRE evaluations showed large variations between 2019 and 2021. In 2019, the number of monthly DRE evaluations was highest in March (11%) and lowest in December (5%). Compared to 2019, the proportion of DRE evaluations in March and April dropped substantially in 2020, corresponding to the full COVID lockdown, while the proportion of DRE evaluations rose in the winter months. The monthly evaluations in 2021 reverted back to the pattern in 2019, with more monthly evaluations in the spring and summer and fewer monthly evaluations towards the end of the year.

**FIGURE 2.** Evaluations Conducted - Month of Year



**FIGURE 3.** Evaluations Conducted - Day of Week



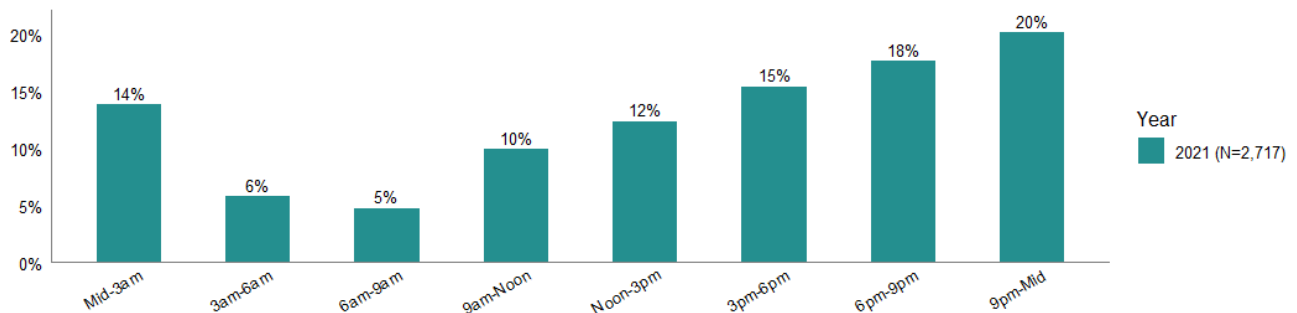
### Day of Week

As shown in Figure 3, the largest proportion of DRE evaluations in 2021 were conducted on Friday (17%). The smallest proportion were conducted on Monday (12%).

### Time of Arrest

Figure 4 shows that 38% of the drivers evaluated in 2021 were arrested from 6pm to midnight. Drivers evaluated were least likely to be arrested from 3am to 9am.

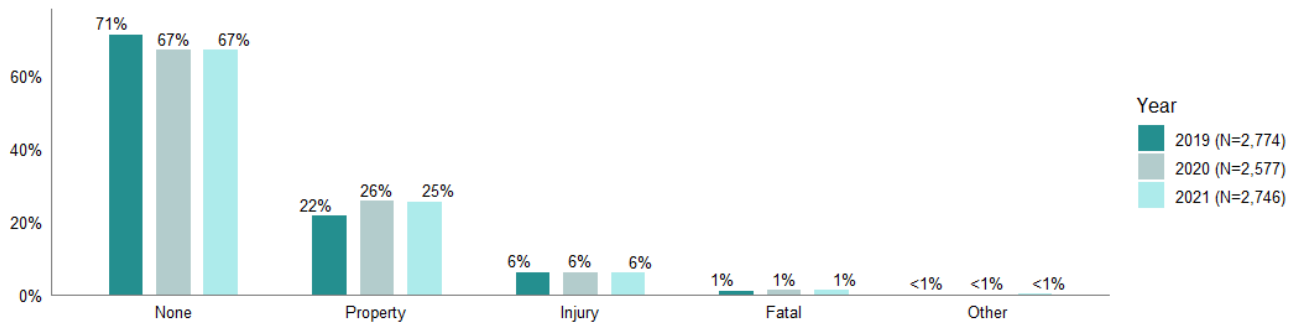
**FIGURE 4.** Evaluations Conducted - Time of Arrest



## Type of Crash

Figure 5 shows that the vast majority of DRE evaluations from 2019 to 2021 did not involve a crash. However, the proportion of evaluations involving a property damage crash increased from 22% in 2019 to 25%-26% in 2020 and 2021. In each year, 6% of the DRE evaluations involved a personal injury crash, and 1% involved a fatal crash.

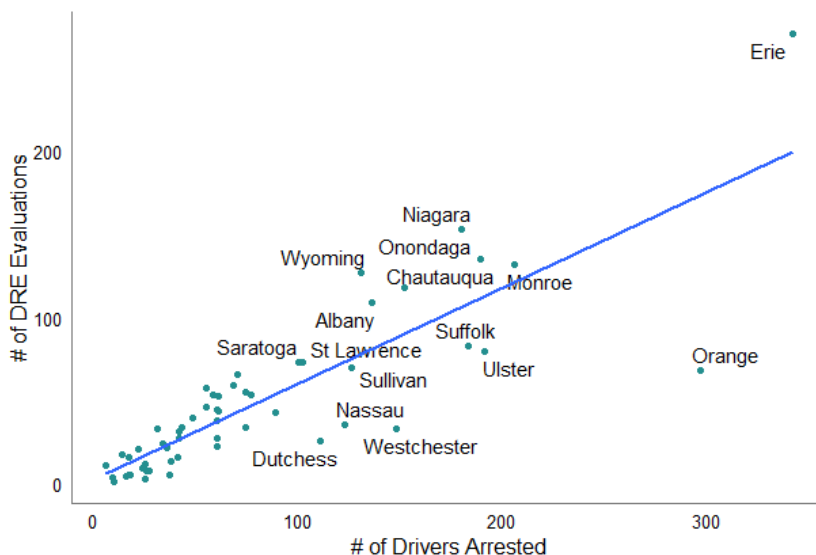
**FIGURE 5.** Evaluations Conducted – Type of Crash



## County of Arrest

The number of DRE evaluations conducted varied greatly by county of arrest. Of the DRE evaluations conducted in 2021, the top 5 counties of arrest were Erie, Niagara, Onondaga, Monroe, and Wyoming. Figure 6 shows the relationship between the number of DRE evaluations conducted and the number of drivers arrested for drug-impaired driving at the county level in 2021. In general, counties with a higher number of drivers arrested for drug-impaired driving had a higher number of DRE evaluations conducted. The blue line represents the expected number of DRE evaluations given the number of drivers arrested for drug-impaired driving. Counties deviated from the blue line had a higher or lower than expected number of DRE evaluations. For example, Orange County had a lower-than-expected number of DRE evaluations, whereas Erie County had a higher-than-expected number of DRE evaluations given the number of drivers arrested for drug-impaired driving.

**FIGURE 6.** DRE Evaluations Conducted & Drivers Arrested for Drug-Impaired Driving\* by County



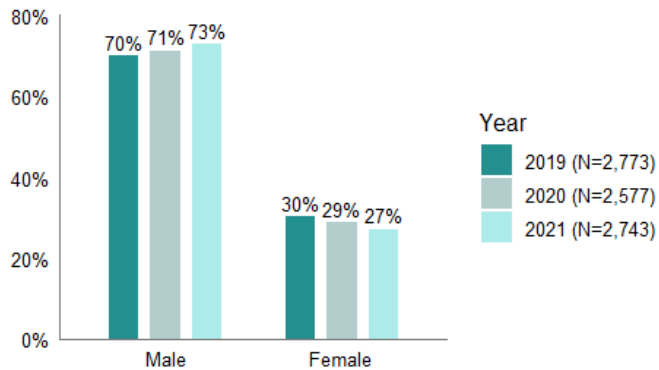
\*TSLED data only; data were not available from the NYPD; a drug-impaired driving arrest is defined as one in which the driver is charged with a violation of VTL Section 1192.4 (DWAI Drugs) or 1192.4a (DWAI Drugs & Alcohol).

## Characteristics of Drivers Evaluated

### Driver Gender

Men constituted the vast majority of drivers evaluated. Their proportion increased each year between 2019 and 2021. As seen in Figure 7, 73% of drivers evaluated in 2021 were men, up from 70% in 2019.

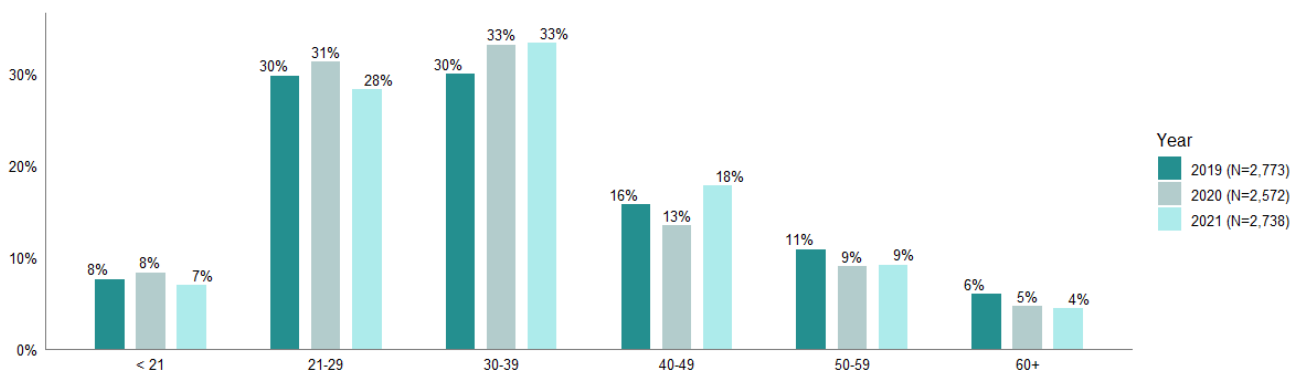
**FIGURE 7.** Drivers Evaluated by Gender



### Driver Age

The age distribution of drivers evaluated had notable changes over the past few years. From 2019 to 2020, the proportion of drivers in the age groups 40 and above declined from 33% to 27%. These changes are consistent with increased social isolation among the older population during the COVID-19 pandemic. From 2020 to 2021, the proportion of drivers in the age group 40-49 increased from 13% to 18%, whereas the proportion in the age groups 50 and above remained low. In 2021, the largest proportion of drivers evaluated were in the 30-39 age group, followed by the 21-29 age group.

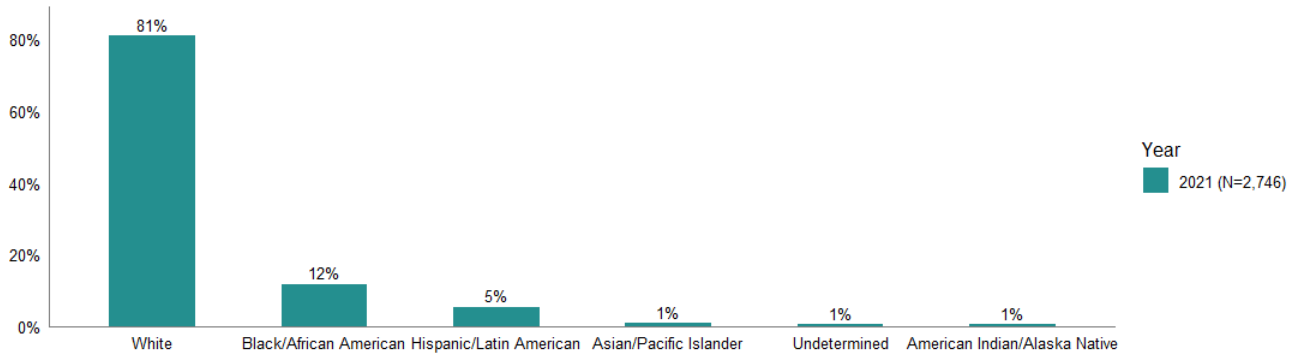
**FIGURE 8.** Drivers Evaluated by Age



## Driver Race

Figure 9 shows that the largest proportion of drivers evaluated in 2021 were White (81%), followed by African American (12%), Hispanic (5%), Asian or Pacific Islander (1%), and American Indian or Alaska Native (1%).

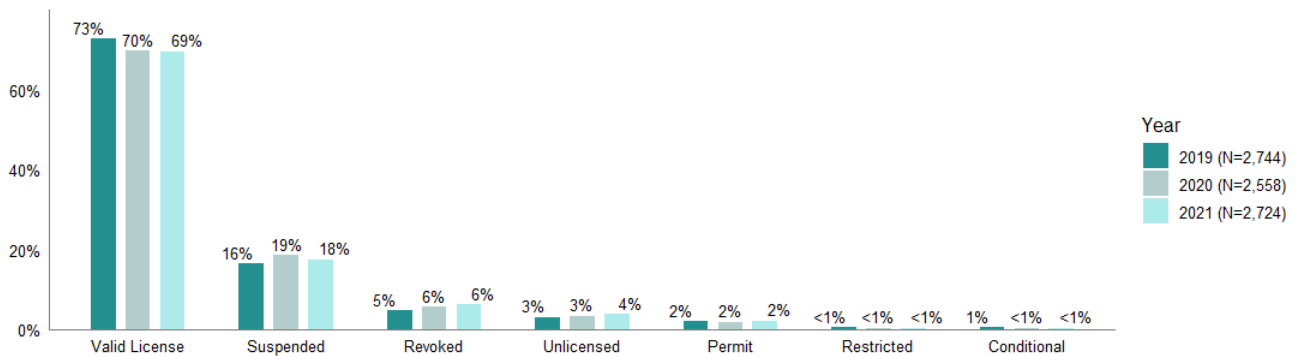
**FIGURE 9.** Drivers Evaluated by Race



## Driver License Status

Figure 10 shows that the vast majority of drivers evaluated had a valid license; however, the proportion dropped slightly from 73% in 2019 to 69% in 2021. 28% of drivers evaluated in 2021 were unlicensed or had a suspended/revoked license, up from 24% in 2019.

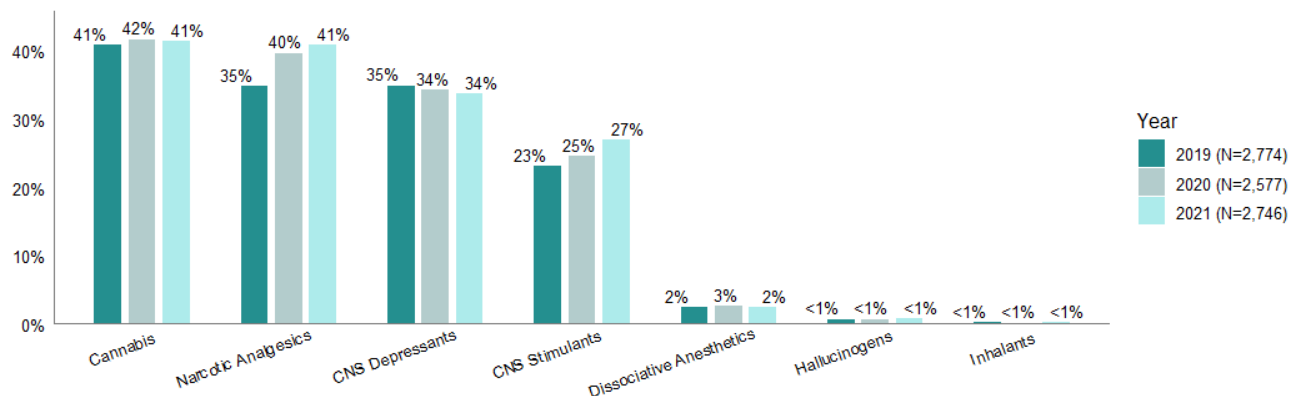
**FIGURE 10.** Drivers Evaluated by License Status



## DRE Opinions on Drug Categories Involved

Following the IACP guidelines, DREs use the information they collect during the evaluation process to identify the category or categories of drugs they think the driver is under the influence of. There are seven categories of drugs: cannabis, central nervous system (CNS) depressants, CNS stimulants, dissociative anesthetics, hallucinogens, inhalants, and narcotic analgesics. As indicated in Figure 11, cannabis and narcotic analgesics were both the most commonly identified drug category by the DREs in 2021, followed by CNS depressants. The prevalence of narcotic analgesics and CNS stimulants had notable increases over time. Between 2019 and 2021, the proportion of evaluated drivers who the DREs thought were under the influence of narcotic analgesics rose from 35% to 41%. The proportion thought to be under the influence of CNS stimulants increased from 23% to 27%.

**FIGURE 11. DRE Opinions on Drug Categories**



## Results of Toxicology Testing

### Drivers Evaluated and Tested

Each driver evaluated is asked to submit a biological specimen for chemical testing by one of the state’s eleven forensic laboratories. The DREs are responsible for entering the test results into the DRE database. For the drivers evaluated each year, 2019-2021, Table 1 shows the number and proportion of drivers who submitted to a chemical test, and the type of chemical test conducted. From 2019 to 2021, the proportion of drivers evaluated who submitted to a chemical test dropped from 80% to 75%. Meanwhile, drivers’ refusal rate showed a concerning upward trend. In 2021, 20% of the drivers evaluated refused to take a chemical test, up from 13% in 2019.

| <b>Drivers Evaluated</b>       | <b>2019 (N=2,774)</b> |            | <b>2020 (N=2,577)</b> |            | <b>2021 (N=2,746)</b> |            |
|--------------------------------|-----------------------|------------|-----------------------|------------|-----------------------|------------|
| Chem Tests - Conducted         | 2,227                 | 80%        | 1,992                 | 77%        | 2,056                 | 75%        |
| Chem Tests - Refused           | 359                   | 13%        | 431                   | 17%        | 539                   | 20%        |
| Chem Tests – Not taken         | 188                   | 7%         | 154                   | 6%         | 151                   | 5%         |
| <b>Chem Tests Conducted</b>    | <b>2,227</b>          |            | <b>1,992</b>          |            | <b>2,056</b>          |            |
| Urine Test Only                | 553                   | 25%        | 475                   | 24%        | 482                   | 23%        |
| Blood Test Only                | 1,571                 | 71%        | 1,444                 | 72%        | 1,523                 | 74%        |
| <i>Blood Results Available</i> | <i>1,253</i>          | <i>80%</i> | <i>1,166</i>          | <i>81%</i> | <i>1,039</i>          | <i>68%</i> |

Among drivers who submitted to a chemical test, the type of biological specimen collected has important implications on drugs found. Blood is considered the “gold standard” for testing for the presence of drugs in impaired driving cases and is most useful for detecting substance use that occurred within 2 to 12 hours of the test.<sup>3,4</sup> In comparison, drugs and their metabolites can remain present in urine for days and even weeks after last use; therefore, drug presence in urine may represent historical use or exposure unrelated to observed impairment.<sup>4,5</sup> To capture recent, relevant drug use, the toxicology results reported in the remaining sections are based on blood tests only. Of the drivers with chemical tests conducted, 74% had a blood test only in 2021, up from 71% in 2019; 23% had a urine test only in 2021, down from 25% in 2019. Among drivers evaluated in 2021, with blood tests only, the toxicology results for seven out of ten drivers are available for inclusion in this study, down from eight out of ten drivers in 2019 and 2020.

## Drugs Found – All Laboratories

Table 2 shows the toxicology results, based on blood tests only, from all laboratories in the state. In 2021, the toxicology results are available for 1,039 drivers. 95% of those drivers had at least one drug compound found in the blood, up from 91% in 2019. It is important to note that toxicology results can include non-impairing substances such as caffeine, non-impairing medications, drugs administered as part of treatment following a crash, and metabolites of the parent drug that was ingested, insufflated, or injected. Some metabolites remain active and can potentially affect cognitive or motor functions until further metabolism is complete; other metabolites are inactive (i.e., do not impact cognitive or motor functions).<sup>2</sup> The time it takes for a drug compound to be eliminated from the blood varies by the compound and by the condition of the individual.<sup>6</sup>

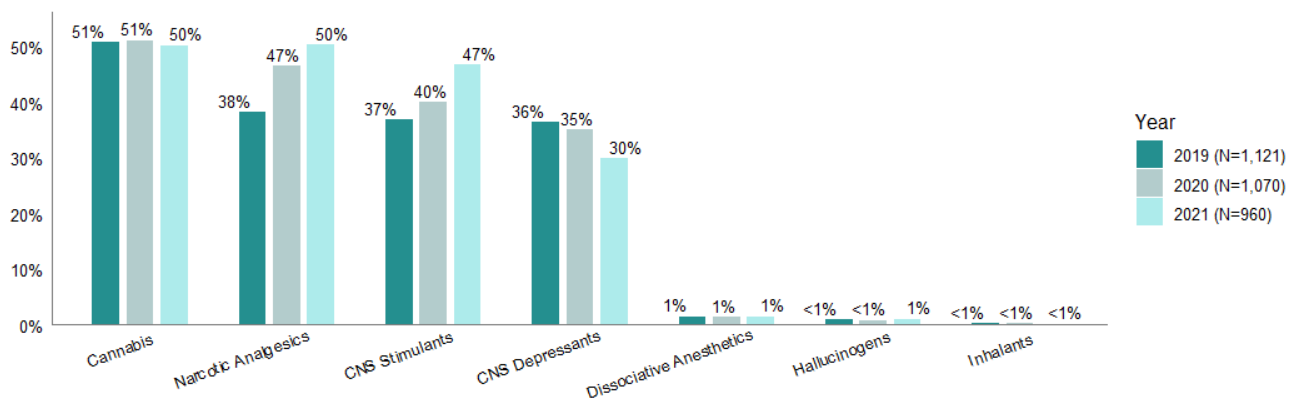
The remaining analyses are based on parent drugs and active metabolites, excluding inactive metabolites, non-impairing drugs and drugs likely administered in post-crash settings. The presence of any parent drug or active metabolite indicates that an active form of a drug was in the blood of the driver at the time of arrest.<sup>2</sup> Of drivers with available toxicology results for the blood test, 89%-92% tested positive for any parent drug or active metabolite between 2019 and 2021. In 2021, 58% of the drivers with active drugs in their blood tested positive for multiple drug categories, up from 49% in 2019.

| TABLE 2<br>Drugs Found in Blood – All Labs  |                |     |                |     |                |     |
|---|----------------|-----|----------------|-----|----------------|-----|
| Drivers with a Blood Test Only              | 2019 (N=1,253) |     | 2020 (N=1,166) |     | 2021 (N=1,039) |     |
| Any drug compound found                     | 1,140          | 91% | 1,084          | 93% | 984            | 95% |
| Any parent drug or active metabolite found* | 1,121          | 89% | 1,073          | 92% | 961            | 92% |
| Multiple drug categories                    | 548            | 49% | 578            | 54% | 562            | 58% |

\*Non-impairing drugs and drug compounds likely administered post-crash were excluded from this analysis; one inactive metabolite, BENZOYLECGONINE, was included in the analysis because the parent drug cocaine remains for a very short time in blood and is rarely observed.

As shown in Figure 13, of the drivers who tested positive for any parent drug or active metabolite in the blood, half tested positive for cannabis between 2019 and 2021. Consistent with the DRE opinions on drug categories (Figure 11), the proportion of drivers found with narcotic analgesics and CNS stimulants had notable increases between 2019 and 2021. 50% of the drug-positive drivers tested positive for narcotic analgesics in 2021, up from 38% in 2019. 47% of the drug-positive drivers tested positive for CNS stimulants in 2021, up from 37% in 2019. CNS depressants is the only drug category with a notable drop in prevalence, from 36% in 2019 to 30% in 2021.

**FIGURE 13.** Drug Categories Found – All Laboratories





## Drugs Found – New York State Police Forensic Investigation Center

It is important to note that the scope of testing and detection thresholds used can vary across labs and within the same lab over time. Labs testing for more compounds and detecting compounds at lower thresholds of quantity will be able to detect more drugs.<sup>6</sup> Without a uniform testing method, changes in the prevalence of a drug over time could be driven by changes in forensic drug testing, not changes in the actual use of the drug in drug-impaired driving.

To minimize variation in toxicology testing over time, the following analyses are based on the toxicology results from a single lab, the New York State Police Forensic Investigation Center (NYSP lab). Between 2019 and 2021, the NYSP lab tested 77% of the blood specimens collected from suspected drug-impaired drivers. The NYSP lab routinely tested for Tier I drugs as defined by the National Safety Council’s Alcohol, Drugs and Impairment Division recommendations for toxicological investigation of drug-impaired driving.<sup>5</sup> Tier 1 drugs include the most frequently encountered drugs in drug-impaired driving and those detected and confirmed with commonly available toxicology laboratory equipment. All analyses in this section are based on selected drugs that were consistently included in the scope of testing over the three-year period (see Appendix Table A1). It should be noted that the screening thresholds were lowered for some drugs in the narcotic analgesics and CNS depressants categories effective June 2019. Therefore, changes in drugs found from 2019 to 2020/2021 could be partially driven by improvement in the lab’s ability to detect drugs in those two drug categories.

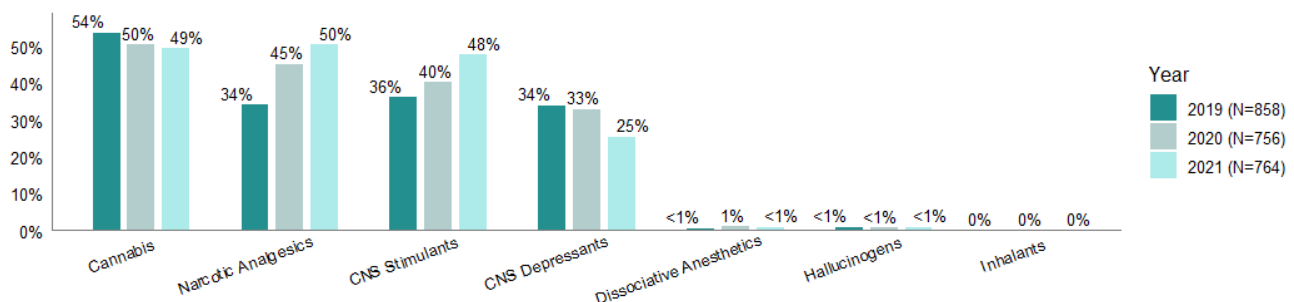
Table 3 shows that of drivers with available toxicology results for blood test only, 89%-94% tested positive for at least one drug compound, 88%-92% tested positive for any parent drug or active metabolite. Of the drivers with active drugs in the blood, 57% tested positive for multiple drug categories in 2021, up from 45% in 2019.

| TABLE 3<br>Drugs Found in Blood – NYSP Lab  |              |     |              |     |              |     |
|---|--------------|-----|--------------|-----|--------------|-----|
| Drivers with a Blood Test Only              | 2019 (N=977) |     | 2020 (N=840) |     | 2021 (N=833) |     |
| Any drug compound found                     | 872          | 89% | 763          | 91% | 783          | 94% |
| Any parent drug or active metabolite found* | 858          | 88% | 756          | 90% | 764          | 92% |
| Multiple drug categories                    | 388          | 45% | 392          | 52% | 434          | 57% |

\*Non-impairing drugs and drug compounds likely administered post-crash were not tested at NYSP lab; one inactive metabolite, BENZOYLECGONINE, was included in the analysis because the parent drug cocaine remains for a very short time in blood and is rarely observed.

Figure 14 presents the distribution of drug categories found among the drivers who tested positive for any parent drug or active metabolite. Around half of the drivers tested positive for cannabis in each year. Consistent with the analyses using all labs (Figure 13), the proportion of drug-positive drivers found with narcotic analgesics and CNS stimulants had notable increases between 2019 and 2021, while the proportion with CNS depressants dropped considerably in 2021.

**FIGURE 14.** Drug Categories Found - NYSP Lab



## SUMMARY AND CONCLUSIONS

Key findings from the analyses are summarized in Tables 4 below. In 2021, 2,746 drivers across the state were evaluated by DREs for possible drug-impaired driving, while 4,402 drivers were arrested for drug-impaired driving (NYC excluded). Although only a subset of drivers arrested for drug-impaired driving were evaluated by a DRE, the time and location of the DRE evaluations and the arrest events are very similar, as are the gender and age of the drivers involved (see Appendix Table A2).

With regard to the drug categories involved, the opinions of the DREs and the results of the toxicology reports should be interpreted with caution. A drug's effect on behavior may have dissipated by the time of evaluation, yet the drug may still show up in the blood specimen tested. The presence of an active drug in the blood does not necessarily mean it caused impairment. With delays in blood collection and drug stability issues, a parent drug or active metabolite may be present at the time of arrest but not detectable at the time of testing. That said, according to both the DRE opinions and the toxicology results, the most common drug categories in 2021 were cannabis and narcotic analgesics; and there were substantial increases in the prevalence of narcotic analgesics and CNS stimulants from 2019 to 2021. Although the lack of standardization in toxicology lab testing practices makes it difficult to interpret statewide toxicology results, the statewide toxicology findings are very similar to those based on the NYSP lab only.

| <b>Characteristics of Events: 2021</b>              |   |
|---|---|
| <b>Time of arrest: 6pm-Midnight</b>                 | 38%                                       |
| <b>Top day of week</b>                              | Friday (17%)                              |
| <b>Top county of arrest</b>                         | Erie                                      |
| <b>Characteristics of Drivers: 2021</b>             |   |
| <b>Men</b>  | 73%                                       |
| <b>Top age group</b>                                | 30-39 (33%)                               |
| <b>Top racial group</b>                             | White (81%)                               |
| <b>License: suspended, revoked &amp; unlicensed</b> | 28%                                       |
| <b>DRE Opinion on Drug Categories: 2021</b>         |   |
| <b>Top drug category</b>                            | Cannabis (41%), Narcotic analgesics (41%) |
| <b>Increased prevalence from 2019</b>               | Narcotic analgesics, CNS stimulants       |
| <b>Toxicology Results on Drug Categories: 2021</b>  |   |
| <b>Top drug category</b>                            | Cannabis (50%), Narcotic analgesics (50%) |
| <b>Increased prevalence from 2019</b>               | Narcotic analgesics, CNS stimulants       |

The findings related to the drivers evaluated by a DRE for possible drug-impaired driving, together with the results of toxicology testing, should provide useful information to New York's traffic safety community, especially the state's Advisory Council on Impaired Driving and the GTSC, for developing effective enforcement and public awareness strategies to address the problem of drug-impaired driving among motorists in New York State.

<sup>1</sup> Berning, A., Compton, R., & Wochinger, K. (2015, February). Results of the 2013–2014 National Roadside Survey of alcohol and drug use by drivers. (Traffic Safety Facts Research Note. Report No. DOT HS 812 118). Washington, DC: National Highway Traffic Safety Administration.

<sup>2</sup> Thomas, F. D., Berning, A., Darrah, J., Graham, L., Blomberg, R., Griggs, C., Crandall, M., Schulman, C., Kozar, R., Neavyn, M., Cunningham, K., Ehsani, J., Fell, J., Whitehill, J., Babu, K., Lai, J., and Rayner, M. (2020, October). Drug and alcohol prevalence in seriously and fatally injured road users before and during the COVID-19 public health emergency (Report No. DOT HS 813 018). National Highway Traffic Safety Administration.

<sup>3</sup> Compton, R. (2017, July). Marijuana-Impaired Driving - A Report to Congress. (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

<sup>4</sup> Hadland, S. E., & Levy, S. (2016). Objective testing: urine and other drug tests. *Child and Adolescent Psychiatric Clinics*, 25(3), 549-565.

<sup>5</sup> D’Orazio, A. L., Mohr, A. L., Chan-Hosokawa, A., Harper, C., Huestis, M. A., Limoges, J. F., ... & Logan, B. K. (2021). Recommendations for toxicological investigation of drug-impaired driving and motor vehicle fatalities—2021 update. *Journal of analytical toxicology*, 45(6), 529-536.

<sup>6</sup> Berning, A., Smith, R. C., Drexler, M., & Wochinger, K. (2022, March). Drug testing and traffic safety: What you need to know (Report No. DOT HS 813 264). National Highway Traffic Safety Administration.

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## Appendix

| <b>TABLE A1<br/>Selected Drugs and Metabolites</b> |  |
|--|--|
| <b>DRE Drug Category</b>                           | <b>Parent Drug or Metabolite</b>   |
| Cannabis   | THC, carboxy-THC*  |
| CNS Depressants                                    | carisoprodol, meprobamate, zolpidem, alprazolam, alpha-OH-alprazolam, clonazepam, 7-aminoclonazepam, lorazepam, diazepam, nordiazepam, oxazepam, temazepam           |
| CNS Stimulants                                     | methamphetamine, amphetamine, cocaine, benzoylecgonine*, cocaethylene  |
| Dissociative Anesthetics                           | phencyclidine  |
| Hallucinogens                                      | MDMA, MDA  |
| Narcotic Analgesics                                | codeine, 6-acetylmorphine, morphine, hydrocodone, hydromorphone, oxycodone, oxymorphone, methadone, fentanyl, acetyl fentanyl, norbuprenorphine, o-desmethyltramadol |

\* Inactive metabolite

| <b>TABLE A2<br/>Drug-Impaired Drivers</b> |  |                                       |
|---|--|---------------------------------------|
|   | <b>DRE Evaluations of Possible Drug-Impaired Drivers</b> | <b>Drug-Impaired Driving Arrests*</b> |
| <b>Characteristics of Events: 2021</b>    |  |                                       |
| <b>Time of arrest: 6pm-Midnight</b>       | 38%  | 38%                                   |
| <b>Top day of week</b>                    | Friday (17%)   | Friday (17%)                          |
| <b>Top county of arrest</b>               | Erie   | Erie                                  |
| <b>Characteristics of Drivers: 2021</b>   |  |                                       |
| <b>Men</b>                                | 73%  | 73%                                   |
| <b>Top age group</b>                      | 30-39 (33%)  | 30-39 (34%)                           |

\*TSLED data only; data were not available from the NYPD; a drug-impaired driving arrest is defined as one in which the driver is charged with a violation of VTL Section 1192.4 (DWAI Drugs) or 1192.4a (DWAI Drugs & Alcohol).