Driving Under the Influence of Drugs and Alcohol

A Report Pursuant to House Bill 17-1315

June 2019

COLORADO
Division of Criminal Justice
Department of Public Safety

Colorado Department of Public Safety
Division of Criminal Justice
Office of Research and Statistics

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EXECUTIVE SUMMARY

Little is known about drug-involved driving when alcohol is not involved. In part, this is because alcohol is the most common cause of impaired driving. Consequently, much research exists regarding alcohol use and driving, but there is a paucity of information about marijuana-involved driving. Since commercialized recreational marijuana became available in Colorado in 2014, concerns have increased about the impact of driving while high. The Colorado Task Force on Drunk and Impaired Driving identified the lack of data as a serious priority that required the attention of policy makers. The Colorado General Assembly enacted House Bill 17-1315 which mandated that the Division of Criminal Justice (DCJ) in the Colorado Department of Public Safety collect and analyze specific data regarding driving under the influence of drugs and alcohol. Specifically, the bill requires DCJ to report annually to the General Assembly specific information relating to substance-affected driving citations that occurred in the previous year, including the following:

- The number of citations for impaired driving
- The number of cases with indication of impairment by alcohol, marijuana, other drugs, or any combination of the these
- The number of convictions for impaired driving
- The sentences imposed for impaired driving
- The number of convictions with evidentiary test results indicating impairment by alcohol, marijuana, Schedule I drugs (C.R.S., 18-18-203), other drugs, or any combination of these
- The elapsed time from law enforcement stop to biological sample

This document reports findings from the analysis of 2017 data, providing insight into the prevalence of drug-involved driving by examining toxicology information associated with individual DUI court cases. This document represents the second annual report in response to House Bill 17-1315. Prior to the publication of the first report analyzing 2016 data,[1] information regarding impaired driving in Colorado was available for only the aggregate number of case filings, the presence of Delta-9 THC in some toxicology samples, and impaired driving fatalities. While data on impaired driving fatalities are important, not all drivers involved in a fatal accident are tested and thus this captures only a small subset of impaired driving incidents*. The current study provides a comprehensive overview of the scope of DUI cases, the drugs involved, and the court outcome of those cases.*

In 2017, there were 26,454 case filings with at least one DUI charge, and 93,508 charges associated with these cases. Compared to 2016 (n=27,244), there were 2.9% fewer case filings overall. However, 2017 showed a 2.8% increase in the number of felony DUI charges, from 987 to 1,015, compared to 2016.

The 18th Judicial District had the largest number of case filings (n=3,461) while the 9th Judicial District had the highest rate of case filings with 1,394 DUI case filings per 100,00 residents age 16 and older. With respect to counties, El Paso had the largest number of case filings (n=3,074), while the Gilpin had the highest rate of case filings with 3,260 DUI case filings per 100,000 residents age 16 and older. When analyzing DUIs by age, the highest rate occurred at age 24 with 1,459 DUI case filings per 100,000 and

[1] See http://cdpsdocs.state.co.us/ors/docs/reports/2018-DUI_HB17-1315.pdf.

declined steadily as age increased. The highest rate of felony DUI charges was observed for those in the 50-54 age group with a rate of 52 per 100,000.

The majority of 2017 DUI court cases reached disposition by the date of data extraction[2] (92.5%, n=24,468), Overall, 88.1% of cases received dispositions of guilty[3] and 9.7% were dismissed (Table 12). Percentages of guilty dispositions varied with charge type and ranged between 72.0% for DUIs to 98.7% for DWAIs with 1 or 2 prior incidents.

Approximately two-thirds (66.3%) of 2017 DUI case filings were linked to toxicology results (n= 17,527). The median time from offense to blood draw was 64 minutes.

Most of the case filings that had an alcohol toxicology test had a Blood Alcohol Concentration (BAC) that was at or above the legal 0.08 *per se* limit (83.7%, n=13,277). Fewer cases (4,792) were screened for the presence of cannabinoids, and 66.2% of these (n=3,170) were confirmed for cannabis metabolites, including the psychoactive component of cannabis, Delta-9 THC. Of the 3,170 THC confirmation screens, approximately half (50.7%, n=1,607) were at or above the legal 5 ng/mL *permissible inference of impairment* level. This was a 17.4% increase, or a difference of 238 cases, from the number of defendants at or above the *permissible inference of impairment* level observed in the 2016 (n=1,369) study.

Toxicology results for both alcohol and THC confirmations were available for 1,937 case filings. Of these, 62.4% (n=1,209) were found to have traces of both alcohol and Delta-9 THC. One-fifth (20.8%, n=251) of the 1,209 results with both alcohol and Delta-9 THC detected had an additional drug detected. These findings confirm that cases with higher BACs have a lower incidence of drug testing. Specifically, 14.7% (n=1,955) of cases with a BAC at 0.08+ were further screened for cannabinoids while 50.8% (n=266) of cases with a BAC < 0.05 were screened for cannabinoids.

Information on both case disposition and toxicology was available for 16,349 case filings. There was a slightly lower conviction rate[3] for cases with no toxicology test (85.2%, n=6,921) when compared to those with a toxicology test (89.7%, n=14,658). Generally, conviction rates were the highest for BAC values of 0.08+ (95.3%). This was followed by conviction rates for Delta-9 THC values of 5.0+ ng/mL, at 91.6%. These findings suggest that convictions were more common at the per se level for alcohol and at the permissible inference level for Delta-9 THC.

It is important to remember that the presence of a drug or drugs does not perfectly correlate with impairment. Impairment is based on the sum of the behavioral testing by law enforcement and toxicological findings.

Additional findings include the following:

- In 2017, males made up 74.4% (n=19,687) of defendants of all impaired driving case filings, while comprising 88.3% of defendants charged with a felony DUI.
- Males age 18 to 20 had the highest rate of DUIs at 1,135 case filings per 100,000 residents age 18 to 20; this was followed by males 21 years or older at 885 per 100,000 residents over the age of 21.

[2] Court data extraction occurred on December 4, 2018.
[3] This includes guilty, deferred judgment, and deferred dismissed outcomes.

- According to probation assessment data, in 2017, over one-third of cases (37.7%) had one or two prior DUIs; 6.6% had three or more priors.
- According to probation assessment and toxicology data, those with no priors had an average BAC of 0.157 and those with three or more priors had an average BAC of 0.191.
- The more severe the DUI charge, the less likely it was to be amended. For example, 83.7% of DUI charges with 1-2 prior were not amended. In DUI cases with 3 or more priors, 91.5% of charges were not amended.
- The most common additional charge associated with DUI was careless driving.
- Alcohol was present alone or in combination with another drug in 86.3% of toxicology results in 2017.
- Delta-9 THC was present alone or in combination with another drug in 15.7% of toxicology results in 2017.
- The mean BAC was 0.160 (p. 42) and the mean Delta-9 THC was 8.2 ng/mL.
- Central Nervous System (CNS) stimulants and CNS depressants were the most common DRE (Drug Recognition Expert) drug categories that appeared after alcohol and marijuana.
- Following the detection of alcohol and cannabis in the toxicology results, the most common drugs detected for 2017 case filings were methamphetamine (n=632), alprazolam (n=367), and cocaine (n=354).
- Generally, conviction rates were the highest for BAC values of 0.08+ (88.2% to 95.7%). This was followed by conviction rates for Delta-9 THC values of 5.0+ ng/mL with rates ranging from 87.6% to 95.7%. These findings suggest that convictions are more common at the *per se* level for alcohol and at the *permissible inference* level for Delta-9 THC.
- DUI cases with prescription drugs had a lower proportion of guilty dispositions at 61.3% (n=57).
- Almost three-quarters (74.2%) of those that received probation assessments in 2017 had no crash reported with the DUI incident. Those that had three or more priors had the highest percentage (26.6%, n=323) of crash involvement.

Among the most important points to remember, however, pertains to the detection of drugs other than alcohol. Testing for drugs is difficult and time consuming for law enforcement officers. Alcohol is faster, easier and cheaper to screen for compared to other drugs, thanks to preliminary roadside breath screenings. Once alcohol with a BAC level of .08 or higher is detected, law enforcement officers generally have enough evidence to reliably achieve a conviction. Therefore, officers do not consistently spend the additional money and time requesting toxicology blood testing for substances beyond alcohol. In fact, in 2017, 14.7% (n=1,955) of cases with a BAC of 0.08 and above were further screened for cannabinoids while 50.8% (n=266) of cases with a BAC of less than 0.05 were screened for cannabinoids.

SECTION ONE
BACKGROUND AND OVERVIEW

This section reviews the statutory purpose of this annual report, summarizes state DUI laws, and discusses issues related to the detection of impaired driving. The inaugural report was published in July 2018 and focused on impaired driving cases filed in court during the 2016 calendar year. The current report focuses on case filings during the 2017 calendar year.

Purpose of this Report

House Bill 17-1315

In 2017, the Colorado General Assembly passed House Bill 17-1315[4] which directs the Colorado Department of Safety, Division of Criminal Justice, to "analyze the types of DUI offenses being committed by offenders" and issue an annual report. The bill calls for the report to include, among other things, the following:

- The number of citations for impaired driving
- The number of cases with indication of impairment by alcohol, marijuana, other drugs, or any combination of the these
- The number of convictions for impaired driving
- The number of convictions with evidentiary test results indicating impairment by alcohol, marijuana, Schedule I drugs (C.R.S. 18-18-203), other drugs, or any combination of these
- The elapsed time from law enforcement stop to biological sample

Data analyzed for this study include court filings from the Colorado Judicial Branch and Denver County Court; forensic toxicology laboratory results from the Colorado Bureau of Investigation, ChemaTox Laboratories, Inc., and the Denver Crime Lab in the Denver Police Department; evidentiary breath-alcohol testing from the Colorado Department of Public Health and Environment (CDPHE); and individual alcohol/drug assessment information about convicted impaired drivers from the Division of Probation Services via the Office of Behavioral Health.

Overview: Driving Under the Influence

Statutes

The statute that governs Driving Under the Influence (DUI) and Driving While Ability Impaired (DWAI) is located in C.R.S. 42-4-1301, and the two definitions are provided below. Note that the statute sets a *per se* limit for DUI at 0.08 and for DWAI at 0.05.

> *(f)* ***"Driving under the influence"*** *means driving a motor vehicle or vehicle when a person has consumed alcohol or one or more drugs, or a combination of alcohol and one or more drugs, that affects the person to a degree that the person is substantially incapable, either mentally or*

[4] Colorado Revised Statutes, 24-33.5-520.

physically, or both mentally and physically, to exercise clear judgment, sufficient physical control, or due care in the safe operation of a vehicle.

*(g) **"Driving while ability impaired**" means driving a motor vehicle or vehicle when a person has consumed alcohol or one or more drugs, or a combination of both alcohol and one or more drugs, that affects the person to the slightest degree so that the person is less able than the person ordinarily would have been, either mentally or physically, or both mentally and physically, to exercise clear judgment, sufficient physical control, or due care in the safe operation of a vehicle.*

Colorado's *expressed consent* statute[5] states that if an individual is lawfully arrested by an officer who has probable cause to believe that the person has been driving under the influence, then the individual must consent to taking a chemical test of his/her blood or breath for the purpose of determining the blood alcohol content (BAC). Refusal to comply will result in administrative revocation of the driver's license by the Colorado Division of Motor Vehicles and may have other consequences.

Table 1. DUI Law in Colorado, *per se* and presumption of impairment limits

Time Frame	DUI Statute	Illegal *per se* BAC limit	Illegal presumption limit - DUI	Illegal presumption limit - DWAI
Prior to 1955	13-4-30	None	None	None
1955-1972	13-4-30 (2)(b)	None	.15	.05
1973-1982	42-4-1202(2)(c)	None	.10	.05
1983-1988	42-4-1202(1.5)(a)	.15	.10	.05
1989-2003	42-4-1202(1.5)(a)	.10	.10	.05
2004-Present	42-4-1301(2)(a)	.08	.08	.05

Source: *Session Laws of Colorado, 1953; 1955; 1983; 1989; Colorado Revised Statutes, 1973; 2004*.
Note: Colorado first established an expressed consent to test statute in 1983.

In 2013, the legislature amended the impaired driving statute (C.R.S. 42-4-1301 (6)(a)(IV)) to create a section addressing driving under the influence of marijuana. The law established the following:

"If at such time the driver's blood contained five nanograms or more of Delta 9-tetrahydrocannabinol per milliliter in whole blood, as shown by analysis of the defendant's blood, such fact gives rise to a permissible inference that the defendant was under the influence of one or more drugs."

Detection Issues

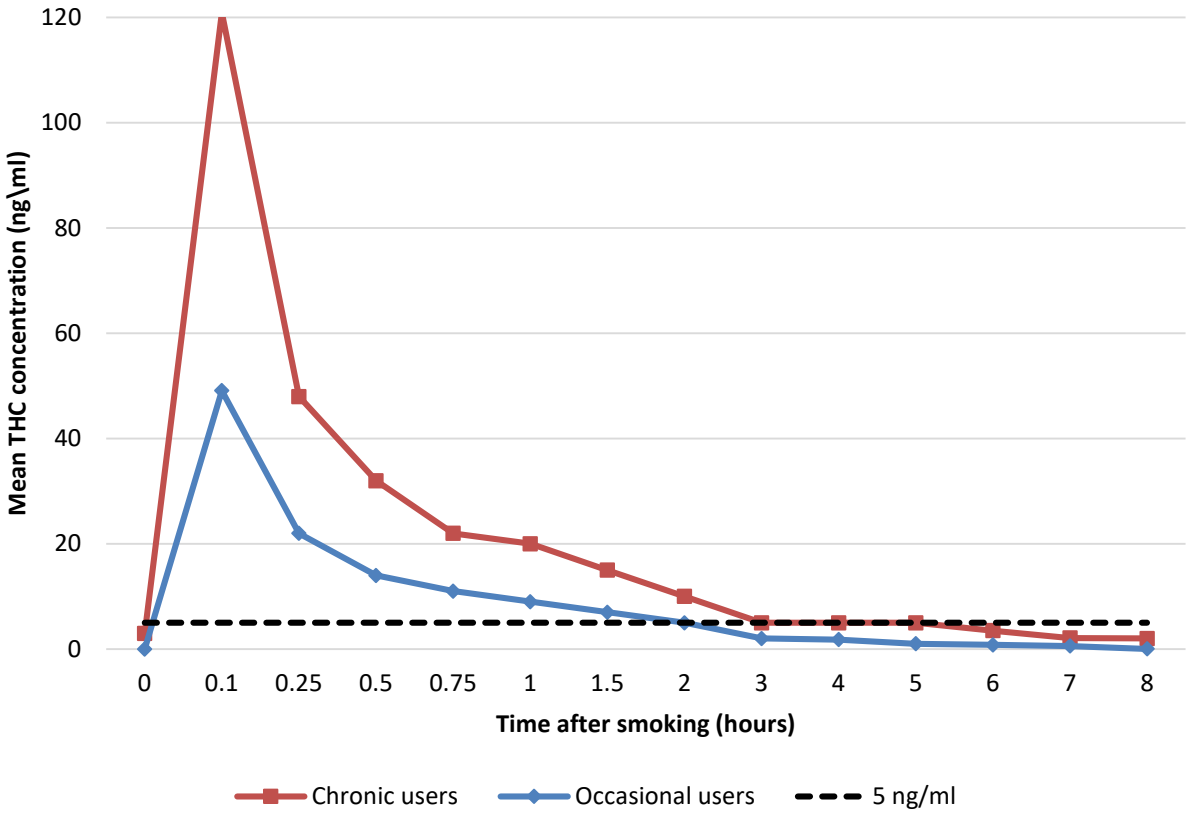
It is difficult to measure the scope of driving under the influence of drugs (DUID) for a number of reasons. First, there is no criminal charge that specifies the driver is impaired by drugs instead of, or in combination with, alcohol. The current statute applies to driving under the influence of alcohol, drugs, or a combination of the two.[6] Second, there is no central repository for toxicology test results that would allow for an analysis of trends. Information is available from some laboratories but those results cannot be easily linked with court cases. Third, law enforcement may choose not to pursue additional toxicology testing if the driver's blood alcohol content (BAC) is at or above 0.08, which is the *per se* limit above which a driver is considered to be under the influence in Colorado. The additional time and cost

[5] Colorado Revised Statutes, 42-4-1301.1
[6] Colorado Revised Statutes, 42-4-1301.

required for further toxicology testing may not be considered worthwhile if the burden of proof for impairment is already met by a BAC level.

Following an arrest for DUI or DWAI, if the officer has probable cause to believe the suspect is impaired by drugs and/or alcohol,[7] the officer may transfer the suspect to a location where breath can be tested or blood can be drawn for further toxicology screening. The Delta-9 THC level in blood decreases rapidly in the first hour after use, then gradually thereafter, making prompt testing critical (Figure 1).[8]

Figure 1. Dissipation of Delta-9 THC over time, adapted from Toennes et al.[9]



Source: *Toennes, et al. (2008).*[9]

In terms of detection, the number of peace officers in Colorado who have been trained to identify driving impairment from drugs other than alcohol has increased substantially in recent years. In 2012 there were 129 peace officers statewide trained as Drug Recognition Experts (DREs), and as of May 2018

[7] An officer may also transport a suspect for blood screening in cases where alcohol is the only substance suspected. There are evidentiary breath alcohol testers available to law enforcement that are easy to administer and available in jails and some police stations.

[8] Atha, M. (2000). *Blood and urine drug testing for cannabinoids*, available at: http://www.idmu.co.uk/pdfs/drugtest.pdf.

[9] Blood samples for the study were serum blood samples and not whole blood samples. Serum will show higher levels than whole blood. For more information, see Toennes, S., Ramaekers, J., Theunissen, E., Moeller, M., & Kauert, G. (2008). Comparison of cannabinoid pharmacokinetic properties in occasional and heavy users smoking a marijuana or placebo joint. *Journal of Analytical Toxicology*, *32*, 470-477.

there were 228. Thousands of additional peace officers have also received training in Advanced Roadside Impaired Driving Enforcement (ARIDE).[10]

Previously Available Data and Limitations

Very little data exist that examine the toxicological profiles of those involved in impaired driving cases. Colorado uses the National Incident-Based Reporting System to collect crime and arrest information, for which DUI and DUID are possible codes. However, there is no data field to capture information on BAC or other toxicological testing. There have been efforts by individual law enforcement agencies to collect information on impairment by both alcohol and drugs, but there is no statewide data system. The court system's data are structured to capture BAC level but has no consistent way to capture such information on other impairing drugs. The only known analysis that links toxicology results and court cases is the inaugural report of 2016 data published by the authors in July 2018.[11, 12]

Traffic fatality data is commonly used to examine the prevalence of drug-impaired driving in addition to alcohol-impaired driving. The Fatality Analysis Reporting System (FARS) is a program administered by the National Highway Traffic Safety Administration (NHTSA) that collects information on many aspects of fatal crashes, including the toxicology results of drivers. The Colorado Department of Transportation (CDOT) and Colorado Department of Public Safety (CDPS) have published data examining the toxicology results of drivers using the FARS data.[13] However, FARS data have important limitations. First, FARS data focus on the subgroup of cases with a fatality. In 2017, for example, Colorado recorded 648 fatalities on roadways[14] compared to 21,699 DUI arrests.[15] The second limiting factor is that only about 45% of drivers involved in fatal crashes are tested in any given year; the reasons for this are unclear and vary by state. Finally, while CDOT has improved data collection over the last several years, limitations remain. For example, prior to 2016, the reporting of specific metabolites of THC was sporadic and the Delta 9-THC level—the primary psychoactive metabolite of cannabis—was not consistently captured.

Issues Regarding Toxicology and Law Enforcement Testing

In Colorado, a suspect can choose to be tested for impairing substances by either breath or blood methods. If a law enforcement officer determines through preliminary breath testing that the suspect's BAC will likely be above the *per se* level of 0.08, the- officer may forego additional chemical testing for anything other than alcohol. It costs $100-500 to have drug testing completed, depending on the lab and how many drugs require confirmation testing. It can also make the traffic stop take much longer, because the officer has to transport the suspect to a location where blood can be drawn, usually a hospital or emergency room. Given the prevalence of polydrug use in fatalities (see Grondel, Hoff and

[10] DRE training requires 72 hours of course instruction plus field certification; ARIDE is a 16-hour training course.
[11] See Footnote 1.
[12] A 2014 publication by Urfer, et al., examined blood samples tested at a large private lab in Colorado, but focused primarily on THC outcomes in potential drug-impaired driving cases.[12] The Colorado Bureau of Investigation is conducting research examining blood samples in DUI cases that were previously only tested for alcohol to determine the prevalence of other drugs but the results are not yet available.
[13] See http://cdpsdocs.state.co.us/ors/docs/reports/2018-SB13-283_Rpt.pdf. Reed, J. (2018). *Impacts of Marijuana legalization in Colorado.* Report Pursuant to Senate Bill 13-283. Office of Research and Statistics, Division of Criminal Justice, Colorado Department of Public Safety.
[14] Colorado Department of Transportation (2018), Colorado Fatalities since 2002. Available at https://www.codot.gov/library/traffic/safety-crash-data/fatal-crash-data-city-county/Colorado_Historical_Fatalities_Graphs.pdf/view.
[15] Colorado Bureau of Investigation (2018), *Colorado Crime Statistics.* Available at https://coloradocrimestats.state.co.us/tops/.

Doane, 2018),[16] it is likely that the prevalence of drivers impaired by alcohol in combination with other drugs is higher than the estimates provided here.

There is also no standard "panel" of drugs that must be tested by a lab. If law enforcement only requests a test for alcohol, marijuana, or some other individual drug, the lab may only test for what is requested. The Colorado Bureau of Investigation has a standard drug panel applied to all tests, but ChemaTox Laboratory's testing protocol varies depending on the requests from law enforcement or the prosecutor's office.

Detection of Impairment

To assist in the detection of alcohol impairment, the Breathalyzer was invented in 1954 and Colorado adopted a presumption of impairment based on the results of the test in 1955. The techniques and technology of detecting alcohol-impaired driving have continued to improve over the last 60 years. Law enforcement training to detect alcohol impairment is standardized, but the technology for detecting *drug* impairment by the roadside still largely depends on an officer's ability to observe and provide testimony regarding specific indicators of impairment. The technology for detecting the presence of drugs in a driver's system at the roadside does exist but has not yet been accepted in the courts as evidence of impairment.[17]

Summary

This section provided an overview of the laws prohibiting alcohol and drug impaired driving as well as issues surrounding the detection of alcohol and cannabis.

Among the most important points to remember pertains to the detection of drugs other than alcohol. Testing for drugs is difficult and time consuming for law enforcement officers. Alcohol is faster, easier and cheaper to screen for compared to other drugs, thanks to preliminary roadside breath screenings. Once alcohol is detected, law enforcement generally has enough evidence to reliably achieve a conviction. Therefore, agencies do not consistently spend the additional money and time requesting toxicology blood testing for substances beyond alcohol.

[16] Grondel, D., Hoff, S. & Doane, D. (2018). *Marijuana use, alcohol use, and driving in Washington state: Emerging issues with poly-drug use on Washington roadways.* Olympia, WA: Washington Traffic Safety Commission.

[17] The Colorado State Patrol conducted a pilot test of five oral fluid testing devices, which can detect drugs of abuse such as such as amphetamines, designer amphetamines, opiates, cocaine and metabolites, benzodiazepines, cannabinoids, and methadone. These devices are used in other countries but have not been widely adopted in the United States.

SECTION TWO
IMPAIRED DRIVING

In 2016, 3.1% of Colorado adults reported driving after having too much to drink and in 2017, 3.0% reported driving within 2-3 hours of using marijuana.[18] This demonstrates a need to better understand substance-affected driving. Alcohol has historically been the focus of impaired driving policy and research. In fact, there is a wealth of information available on alcohol impaired driving while there is a dearth of research on the problem of drug impaired driving. As the national landscape of marijuana legalization continues to expand, it is critical to gain a better understanding of driving impairment associated with drugs, especially cannabis.

Section Two provides an overview of the myriad of issues associated with the detection of impaired driving. It describes law enforcement training, and reviews the research on impaired driving. The section concludes with a description of the traffic stop and the multiple phases of the court process that result from a DUI offense.

Detection and Law Enforcement Training

Two primary methods are used to detect and infer driving impairment, and these are behavioral and chemical. The former comes in the form of observations by law enforcement officers during psychophysical roadside tests, and the latter comes in the form of chemical tests of breath and bodily fluids. An important item to note here is that individuals typically are not stopped for being impaired. Rather, drivers are most commonly stopped for a traffic infraction and the officer then observes apparent driver impairment. Using information gained in standardized training, the officer investigates specific qualitative indicators of driver impairment.

Law enforcement officers are trained by several methods, including the Standardized Field Sobriety Testing (SFST), Advanced Roadside Impaired Driving Enforcement (ARIDE), and Drug Recognition Expert Training (DRE). The SFST and ARIDE trainings are coordinated by Colorado Peace Officer Standards and Training (POST) and the DRE program is coordinated by CDOT's Highway Safety Office. In addition to these approaches, there is a preliminary breath alcohol test (PBAT) that can be administered as an alcohol screen during a roadside stop. Note that this is only a screen and therefore it is not considered evidentiary and is not admissible in court; officers must follow up with additional testing. However, there is no equivalent and reliable instantaneous screen for impairment associated with other drugs, including cannabis.

As of March 2019 there were 5,592 active SFST operators, 1,460 active ARIDE certificate holders, and 198 active DREs in Colorado.

Beyond these standardized classroom trainings there are additional hands-on, practical labs in which law enforcement can participate, hosted by POST and various law enforcement agencies. Live alcohol workshops, also known as "wet labs," are an optional component of the SFST. These wet labs are set up so law enforcement can participate in mock contact with a volunteer who may or may not have

[18] For more information on self-reported alcohol and marijuana use and driving see Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, Prevalence and Trends Data at https://www.cdc.gov/brfss/brfssprevalence/ and Marijuana Health Monitoring and Research Program, Colorado Department of Public Health and Environment, Behavioral Risk Factor Surveillance System at https://www.colorado.gov/pacific/cdphe/adult-marijuana-use-trends, respectively.

consumed alcohol. The consumption is concealed and occurs in a separate setting from officers. Law enforcement officers interact with these volunteers as though the volunteers are suspected of impaired driving and the officers implement the battery of tests to detect and assess impairment.

The only *marijuana-focused* practical training lab in Colorado, "The Green Lab," commenced in September 2015. Chris Halsor of Understanding Legal Marijuana, LLC, developed The Green Lab to provide law enforcement with training to better detect and understand cannabis and cannabis impairment. Similar to wet labs, some of the volunteers consume cannabis in a separate setting from law enforcement. Law enforcement officers then engage with these volunteers to detect and assess impairment. Additionally, these courses are designed to provide officers with training on report writing, understanding toxicology testing, and testimony preparation, among other topics.[19] As of July 2018, 410 Colorado law enforcement officers had participated in The Green Lab.

Additional training for law enforcement and prosecutors is available through the Traffic Safety Resource Prosecutor (TSRP) Program. According to the TSRP manual:[20]

> Traffic safety resource prosecutors (TSRPs) facilitate a coordinated, multidisciplinary approach to the prosecution of impaired driving and other traffic crimes. TSRPs are prosecutors who provide training, education, and technical support to traffic crimes prosecutors, law enforcement personnel, and other traffic safety professionals throughout their States and across the country. Traffic crimes and safety issues include alcohol and/or drug impaired driving distracted driving, vehicular homicide, occupant restraint, and other highway safety issues. Each TSRP must assess the needs and demands unique to his or her own State and work in conjunction with many agencies to meet these needs. The National Highway Traffic Safety Administration, law enforcement agencies, judicial organizations, crime laboratories (including forensic toxicologists), medical examiners, local media, Governor's Highway Safety Offices' victim advocate groups, and resources available from the National District Attorneys Association's National Traffic Law Center are used to facilitate services to all prosecutors and law enforcement.

Training to detect drugged driving impairment is critical for peace officers because there is no equivalent to the preliminary breath alcohol test (PBAT) for other drug testing. While not admissible in court, the PBAT allows an officer to quickly and easily assess a person's BAC. The arresting officer will provide the person with a choice between a subsequent breath or blood test if alcohol is the suspected impairing substance.

Research on Detection

Field Sobriety Efficacy and Delta-THC Levels

The efficacy of field sobriety tests (FSTs) in determining alcohol impairment has been supported by research and these studies are taught in the drug recognition curricula. However, recently Declues et. al

[19] Chris Halsor is a former Traffic Safety Resource Prosecutor for Colorado. For more information on The Green Lab visit https://www.understanding420.com.

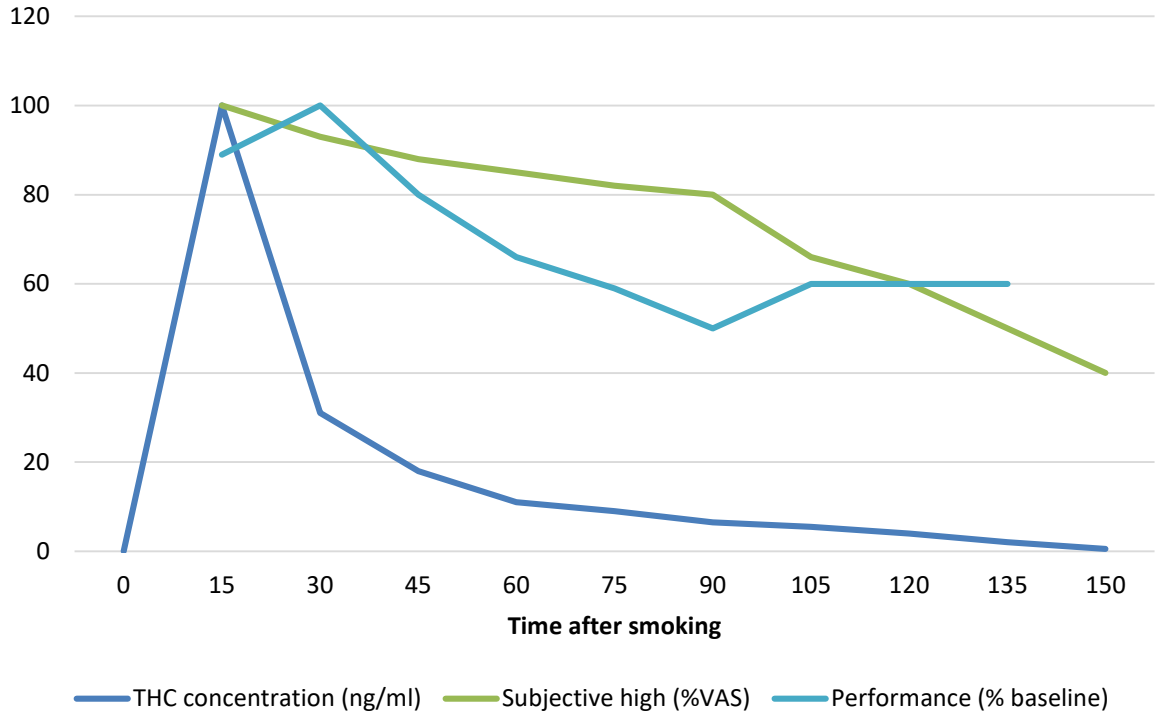
[20] The Traffic Safety Resource Prosecutor Manual which can be accessed at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/12323_tsrpmanual_092216_v3-tag.pdf. For more information on the Colorado TSRP Program visit http://www.cdacweb.com/TSRP/AboutTSRP.aspx.

(2016) examined the validity of field sobriety tests on the presence of Delta-9 THC.[21] Delta-9 THC is the primary psychoactive metabolite in marijuana. Researchers found that Horizontal Gaze Nystagmus (HGN) is not exhibited or expected in cannabis consumers while Lack of Convergence (LOC) was a strong indicator of cannabis presence. Additionally, both the One Leg Stand (OLS) and Walk and Turn (WAT) were sensitive in the assessment of impairment, with the WAT being the most sensitive of all. Despite individuals exhibiting clues of impairment during these standardized roadside tests, no correlation was found between the tests and Delta-9 THC concentration in whole-blood samples. Another study by Hartman et. al (2016) found that pupil dilation, elevated pulse, LOC and the exhibition of impairment clues in two other psychophysical tasks, were best at indicating impairment.[22] However, the latter results were only for exams administered by DREs. Again, there was no correlation in this study between test performance and THC concentration in whole-blood.

Figure 2 shows results from studies that examined Delta-9 THC concentration, subjective high, and performance of subjects.[23] Figure 2 depicts how THC concentration peaks early, but the impairing effects on driving-related performance tasks and subjective high appear long after the peak concentration. This suggests that at there are performance deficits that follow the peak of THC concentration. Furthermore, high THC concentration in blood does not perfectly correspond to impairment.

[21] FSTs are sensitive to cannabis induced impairment, but there is no correlation to whole-blood levels of Delta-9 THC. See Declues, K., Perez, S., & Figueroa, A. (2016). A 2-year study of delta 9-tetrahydrocannabinol concentrations in drivers: Examining driving and field sobriety test performance. *Journal of Forensic Science, 61*(6), 1664-1670. doi: 10.1111/1556-4029.13168.
[22] FSTs are sensitive to cannabis induced impairment, but no significant difference was found in test results between Delta-9 THC < 5.0 ng/mL and ≥ 5.0 ng/mL groups. See Hartman, R. L.., Richman, J. E., Hayes, C. E., & Huestis, M. A. (2016). Drug Recognition Expert (DRE) examination characteristics of cannabis impairment. *Accident Analysis and Prevention, 92*, 219-229.
[23] Blood samples for the study were plasma samples and not whole blood samples. For more information, see Berghaus et al., 1998; Sticht and Käferstein, 1998; and Robbe, 1994, as cited in Compton, R. (2017, July). *Marijuana-Impaired Driving - A Report to Congress.* (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration.

Figure 2. Time course of Delta-9 THC concentration, subjective high, and performance



Source: *Berghaus et al. (1998); Sticht and Käferstein (1998); and Robbe (1994) as cited in Compton (2017).*

Further compounding the problem of linking blood concentrations of THC with impairment is the context of individual consumption. Karschner et al. (2009) found that chronic cannabis users had measurable concentrations of Delta-9 THC during a seven-day abstinence period. The highest level observed at the conclusion of the seven days was 3.0 ng/mL, as a result of THC being stored in fat and its ability to slowly release from the tissue.[24] This becomes a problem for frequent and medicinal users who may continuously have detectable levels of THC in their blood stream without any obvious impairing effects.

Due to the uncertainty concerning specific THC levels and impairment, in 2018 the International Association of Chiefs of Police adopted a resolution that: 1) "there is no minimum blood THC concentration below which a driver can be considered unaffected after recent consumption of cannabis products;" 2) "there is no scientific basis for the adoption of THC *per se* legislation;" and 3) "legislative and governing bodies should prohibit operating a vehicle under the influence of cannabis and public safety efforts should prioritize the expansion of law enforcement training in recognizing and articulating drug impairment in drivers."[25]

[24] Experimental protocol with abstinence monitored, not self-reported, on 25 subjects. See Karschner, E. L., Schwilke, E. W., Lowe, R. H., Darxin, D., Pope, H. G., Herning, R., Lud Cadet, J., & Huestis, M. A. (2009). Do Δ^9-tetrahydrocannabinol concentrations indicate recent use in chronic cannabis users? *Addiction, 104*(12), 2041-2048. doi: 10.1111/j.1360-0443.2009.02705.x.

[25] International Association of Chiefs of Police (2018). *2018 Resolutions* at https://www.theiacp.org/sites/default/files/View%20the%20recently%20adopted%202018%20Resolutions.pdf.

Despite the complicated relationship between the pharmacokinetics of cannabis and impairment, there have been developments in oral fluid (OF) roadside tests to detect cannabis. The benefits to this exam are many, but there are also many caveats. The Society of Forensic Toxicologists indicated that OF concentrations of THC are correlated with blood levels after three hours, and one study found that passive exposure to cannabis may result in a positive OF screen.[26, 27] In a review of the literature, NHTSA (2017) indicated that these screening devices "have not been shown to be completely reliable and accurate" in its *Marijuana-Impaired Driving* report.[28] THC concentrations in OF are known to have large variability among occasional and heavy users. Furthermore, the peak of THC concentration varies depending on the method of consumption, with higher concentrations and an initial spike in concentration when smoked as opposed to when ingested.

Alcohol impairment

Research has found that alcohol consumption impacts a number of skills that are critical for driving.[29] Performance on driving simulators and divided attention tasks can be negatively impacted by BAC levels as low as 0.001. Perception and visual functions are consistently impaired at levels as low as 0.04. At higher BAC levels, around 0.06, cognitive tasks, psychomotor skills, and choice reaction time are consistently impacted. These skills are critical for the driver to appropriately respond to stimuli on the road including other drivers, pedestrians, traffic signals, and so on. Generally, according to NTSHA's (2017) review of alcohol impaired driving research, "all drivers can be expected to experience impairment in some driving-related skills by 0.08 g/dl or less."

Additionally, much of the epidemiological literature has found that driving under the influence of alcohol increases crash risk. A case-control study found that crash risk is elevated at alcohol concentration levels beginning at 0.05.[30] Drivers with BACs of 0.05 and 0.08 were 2 to 4 times as likely to crash when compared to drivers with no alcohol, respectively.[31] Furthermore, researchers have found that drivers who are under age 21 exhibit a more pronounced relationship between alcohol and crash risk when compared to those who are 21 and older. In particular, at blood alcohol concentrations of 0.08 or above, underage drivers were 27.4 times as likely to be involved in a crash than their underage

[26] See Oral Fiud FAQs document from the Society of Forensic Toxicologists at http://www.soft-tox.org/files/2017_OF_FAQ.pdf.
[27] Passive, non-smoking, participants showed some presence of THC in OF, but at much lower levels than observed for actively smoking participants and under extreme secondhand exposure. See Cone, E. J., Bigelow, G. E., Hermann, E. S., Mitchell, J. M., LoDico, C., Flegel, R., & Vandrey, R. (2015). Nonsmoker exposure to secondhand cannabis smoke. III. Oral fluid and blood drug concentrations and corresponding subjective effects. *Journal of Analytical Toxicology, 39*, 497-509. doi:10.1093/jat/bkv070.
[28] Compton, R. (2017, July). Marijuana-Impaired Driving - A Report to Congress. (DOT HS 812 440). Washington, DC: National Highway Traffic Safety Administration. See https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf.
[29] For full literature review with experimental tasks and respective BAC level that demonstrates impairment, see Moskowitz, H. & Fiorentino, D. (2000). *A review of the literature on the effects of low doses of alcohol on driving-related skills*. Washington D.C.: National Highway Traffic Safety Administration.
[30] NHTSA and US DOT funded case-control study in Long Beach, CA and Fort Lauderdale, FL with 2,871 crashes with 4,919 crash drivers and 10,066 control drivers. See Blomberg, R. D., Peck, R. C., Moskowitz, H., Burns, M., & Fiorentino, D. (2005). Crash risk of alcohol involved driving: A case-control study. *Proceedings of the International Council on Alcohol, Drugs, and Traffic Safety Conf*erence 2002; 39-44.
[31] NHTSA-funded study with data collected in Virginia Beach, VA with approximately 3,000 crash drivers and 6,000 control drivers. Odds ratios were adjusted for age and gender. See Lacey, J. H., Kelley-Baker, T., Berning, A., Romano, E., Ramirez, A., Yao, J., Moore, C., Brainard, K., Carr, K., Pell, K., & Compton, R. (2016). *Drug and alcohol crash risk: A case-control study.* (Report No. DOT HS 812 355). Washington, DC: National Highway Traffic Safety Administration.

peers with no alcohol.[32] Finally, crash risk increases exponentially with increasing breath and blood alcohol concentrations.

Marijuana Impairment

The CDPHE's Retail Marijuana Public Health Advisory Committee biennially publishes a comprehensive review of relevant marijuana research.[33] The 2019 report found substantial evidence in the literature to support the following:

- Recent marijuana use increases a driver's risk of a motor vehicle crash.
- Less-than-weekly marijuana users exhibit meaningful driving impairment with THC levels of 2-5 ng/mL or ingestion of 10 mg or more of THC.
- Combining marijuana and alcohol increases impairment and motor vehicle crash risk more than each alone.
- Delaying driving for a minimum of six hours after smoking allows THC-induced impairment to resolve for less-than-weekly users at 18 mg of THC.

In addition to this overview, a number of studies, including a 2013 meta-analysis, found that cannabis consumption can be detrimental to divided attention, driving, and reaction time.[34] However, the meta-analysis found contradictory results on the impact of Delta-9 THC on cognitive tasks. Of two studies that examined the impact of THC on time and distance perception, one found that there was no impairment,[35] while the other found that there was significant impairment and an interaction between cannabis and alcohol was exhibited.[36] Additionally, two studies found that reaction time increased with THC impairment for both occasional and frequent users,[37] and another study found that THC did not impact measures of reaction time.[38]

The impairing effects of cannabis are more pronounced with more difficult tasks. Driving simulator and actual driving performance research has found that the standard deviation of lane position (SDLP), or weaving within a lane, is the most sensitive measure of cannabis impairment, and is commonly

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[32] Case control data from previous study (Blomberg, Peck, and Moskowitz et al., 2005) reanalyzed to determine age and crash risk interactions. See Peck, R. C., Gebers, M. A., Voas, R. B., & Romano, E., (2008). The relationship between blood alcohol concentration (BAC), age, and crash risk. *Journal of Safety Research, 39*, 311-319. doi:10.1016/j.jsr.2008.02.030.

[33] The full report on marijuana use trends and health effects is available at https://www.colorado.gov/marijuanahealthinfo.

[34] For a meta-analysis of marijuana and its impact on driving performance and skills associated with driving, see Hartman, R. L. & Huestis, M. A. (2013). Cannabis effects on driving skills. *Clinical Chemistry, 59*(3), 478-492. doi: 10.1373/clinchem.2012.194381.

[35] Weinstein A., Brickner O., Lerman H., Greemland M., Bloch M., Lester H., Chisin, R., Sarne, Y., Mechoulam, R., Bar-Hamburger, R., Freedman, N., & Even-Sapir, E. (2008). A study investigating the acute dose-response effects of 13 mg and 17 mg Δ^9-tetrahydrocannabinol on cognitive-motor skills, subjective and autonomic measures in regular users of marijuana. *Journal of Psychopharmacology, 22*(4), 441-451. doi: 10.1177/0269881108088194.

[36] Chait L. D. & Perry J. L. (1994). Acute and residual effects of alcohol and marijuana, alone and in combination, on mood and performance. *Psychopharmacology, 115*(3), 340-349.

[37] Ramaekers J. G., Kauert G., Theunissen E. L., Toennes S. W., Moeller M. R. (2009). Neurocognitive performance during acute THC intoxication in heavy and occasional cannabis users. *Journal of Psychopharmacology, 23*(3): 266 – 77. doi: 10.1177/0269881108092393; Ramaekers J. G., Moeller M. R., van Ruitenbeek P., Theunissen E. L., Schneider E., Kauert G. (2006) Cognition and motor control as a function of Δ9-THC concentration in serum and oral fluid: limits of impairment. *Drug and Alcohol Dependence, 85*(2), 114-122.

[38] Ramaekers J. G., Theunissen E. L., de Brouwer M., Toennes S. W., Moeller M. R., Kauert G. (2011). Tolerance and cross-tolerance to neurocognitive effects of THC and alcohol in heavy cannabis users. Psychopharmacology, *214*(2), 391 – 401. doi: 10.1007/s00213-010-2042-1.

exhibited with cannabis impaired driving. SDLP has been demonstrated to be dose-dependent, and performance on this measure results in an additive deficit when alcohol is also involved.[39] However, there are also studies that find the contrary, that is, there is no significant difference observed for SDLP with THC impairment.[40]

There is convergent evidence that alcohol induced impairment increases crash risk, but this is not the case for marijuana. Some studies find that, in comparison to drivers with no cannabis, there is no significant crash risk associated with cannabis impaired driving.[41] However, other studies find that there is a higher crash risk associated with cannabis consumption,[42, 43] with odds ratios ranging from 0.85 to 7.16, meaning that the increased crash risk was up to seven times greater for those who used cannabis compared to those who did not.[44]

Furthermore, there is some evidence that crash risk increases with dose and frequency of use. That is, occasional users are more sensitive to the impairing effects of cannabis.[45] The lack of consensus in the literature likely stems from a lack of standardization in how researchers define cannabis use—use of a psychoactive versus an inactive metabolite—or a lack of granularity in data collection/analysis. In addition to this, participants that generally choose to participate in experimental studies are likely to be occasional or frequent users. Nevertheless, despite the lack of consensus in the literature, it has been demonstrated that cannabis follows alcohol as the most common drug detected in fatal crashes.[46]

Other Drug Impairment

The impact of other drugs on driving and crash risk is even less understood than the impact of alcohol and marijuana. The NHTSA-sponsored Virginia Beach study[47] (Lacey, 2016) aggregated drugs into a

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[39] Simulator driving study with occasional smokers with only 18 participants. See Hartman, R. L., Brown, T. L., Milavetz, G., Spurgin, A., Pierce, R. S., Gorelick, D. A., Gaffney, G., & Huestis, M. A. (2015). Cannabis effects of driving lateral control with and without alcohol. *Drug Alcohol Dependence, 1*(154), 27-37. doi: 10.1016/j.drugalcdep.2015.06.015.

[40] Ronen et al., (2010). The effect of alcohol, THC and their combination on perceived effects, willingness to drive and performance of driving and non-driving tasks. *Accident Analysis and Prevention*, *42*(6), 1855-1865; Anderson, B., Rizzo, M., Block, R., Pearlson, G., & O'Leary, D. (2010). Sex differences in the effects of marijuana on simulated driving performance. *Journal of Psychoactive Drugs*, *42*(1), 19-30.

[41] Based on a subset of 2006 - 2008 FARS data and 2007 National Roadside Survey responses; see Romano, E., Torres-Saavedra, P., Voas, R. B., & Lacey, J. H. (2014). Drugs and alcohol: Their relative crash risk. *Journal of Studies on Alcohol and Drugs, 75*(1), 56-64.

[42] Odds ratio of crash risk associated with marijuana use reported in one study is 1.83. See Li, G., Brady, J. E., & Chen, Q. (2013). Drug use and fatal motor vehicle crashes: A case-control study. *Accident Analysis & Prevention, 60*, 205-210. doi: 10.1016/j.aap.2013.09.001.

[43] Odds ratio of crash risk associated with marijuana use in meta-analysis of observational studies was found to be 1.92. This varied according to the type of study with higher odds ratios for case-control (2.79) and fatal collision studies (2.10) when compared to culpability (1.65) and non-fatal collision studies (1.74). The latter two were not significant at the 0.05 alpha-level. See Asbridge, M., Jayden, J. A., & Cartwright, J. L. (2012). Acute cannabis consumption and motor vehicle collision risk: Systematic review of observational studies and meta-analysis. *The BMJ*, *344.* doi: 10.1136/bmj.e536.

[44] This meta-analysis included nine observational studies. The small number of studies is due to criteria set forth by the authors. Since 1990 there were only 831 studies that were potentially relevant and very few of those contained data to assess crash risk. See Li., M., Brady, J. E., DiMaggio, C. J., Lusardi, A. R., Tzong, K.Y., & Li, G. (2012). Marijuana use and motor vehicle crashes. *Epidemiologic Reviews, 34*(1), 65 -72.

[45] Khiabani, H., Bramness, J., Bjorneboe, A., & Morland, J. (2006). Relationship between THC concentration in blood and impairment in apprehended drivers. *Traffic Injury Prevention*, *7*(2), 111-116.

[46] Governors Highway Safety Association (2018). *Drug-impaired driving: Marijuana and opioids raise critical issues for states*. Washington, DC: Governors Highway Safety Association.

[47] See Footnote 31 for full citation of Lacey et al., 2016.

number of categories including antidepressants, narcotic analgesics, and prescription and over-the-counter medicine. The authors found no significant contribution from any of these drugs to increased crash risk when adjusting for gender, age, race/ethnicity, and presence of alcohol.

One study found non-significant weak relationships between crash culpability and opiates and benzodiazepines, but a significant relationship between crash culpability and psychoactive drugs.[48] Another study found a significant association between opioid dose and odds ratio of road trauma with an increased risk 1.42 times higher for high doses, but a smaller increased risk 1.23 higher for very high doses.[49] Another study of fatally-injured drivers indicated that prescription drugs alone were not associated with a significant crash risk.[50] Researchers who explored the relationship between drug type and DUID arrests found that THC was the most common illicit drug found, and methamphetamines and amphetamines were the most common drug found for crash-involved DUID drivers.[51] Additionally, these researchers found that polydrug use was associated with higher risks of being arrested when compared to single drug use.

There is a need for more research on the topic of drug impaired driving. However, there are barriers to this kind of research, as discussed below.

Challenges in Marijuana Research

Researchers who study Schedule I drugs in the United States must register with the Drug Enforcement Administration by submitting protocols detailing the substances involved, including the amount of each substance, and providing detailed security arrangements intended to prevent diversion of the drug to outside parties. In addition, researchers must obtain authorization from the National Institute on Drug Abuse (NIDA). Since 1968, NIDA has contracted with the University of Mississippi as the single grower for all U.S. marijuana research. Generally, this Mississippi marijuana is of lower Delta-9 THC potency than what is being sold in the retail market with 'High THC' defined as 5 – 10% and 'Very High THC' as above 10% THC.[52] In comparison, the products available in the retail market have THC potencies that generally hover around 20% or more. This discrepancy makes it difficult to generalize the study findings from impaired driving experimental protocols to real-world situations.

Researchers likely face other barriers when seeking local approval to conduct research. As an example, the registration process described for the University of Colorado Denver, Anschutz Medical Campus, is

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[48] Case-control study completed in Australia with 3,398 driver fatalities. See Drummer, O. H., Gerostamoulos, J., Batziris, H., Chu, M., Caplehorn, J., Robertson, M. D., & Swann, P. (2004). The involvement of drugs in drivers of motor vehicles killed in Australian road traffic crashes. *Accident Analysis & Prevention, 36*(2), 239-248. doi: 10.1016/S0001-4575(02)00153-7.

[49] Here a high dose is 100 – 199 Morphine Equivalents (MEQ) and very high ≥ 200 MEQ; 10 mg of hydrocodone is 10 MEQ. There was no significant relationship between opioid prescription and trauma when dose level was removed. Population-based study conducted in Canada based on number of patients that had a publicly funded opioid prescription. 5,300 were involved in road trauma and a control group with the same N was used. See Gomes, T., Redelmeier, D. A., & Juurlink, D. N. (2013). Opioid dose and risk of road trauma in Canada. *JAMA Internal Medicine, 172*(3), 196-201.

[50] Culpability of crash study based in Australia. See Drummer, O. H. & Yap, S. (2016). The involvement of prescribed drugs in road trauma. *Forensic Science International, 265*, 17-21. doi: 10.1016/j.forsciint.2015.12.050.

[51] Case-control study done in Norway with 2,738 drug suspected drivers and 9,375 control drivers with BACs below legal limit (0.2 g/L). See Bogstrand, S. T. and Gjerde, H. (2014). Which drugs are associated with highest risk for being arrested for driving under the influence? A case-control study. *Forensic Science International, 240*, 21-28. doi: 10.1016/j.forsciint.2014.03.02.7.

[52] See NIDA Drug Supply Program Catalog, 25th Edition at https://www.drugabuse.gov/sites/default/files/ndsp_catalog_25th_v3_2016.pdf.

lengthy (4-8 weeks) and elaborate, with a visit or phone interview to review security measures.[53] Once research is permitted, there is extensive recordkeeping required, and researchers are subject to annual audits by the Environmental Health and Safety Office of the University. Furthermore, there are potentially significant fiscal consequences for researchers and universities involved in marijuana research if there are deviations or mistakes in following the guidelines set forth.

Besides the restrictions described above, there are research consistency issues when considering the variety of methods and metabolites associated with cannabis consumption. While the main psychoactive component of marijuana is Delta-9 THC, many people cite research or statistics that describe the presence of other cannabinoids. High levels of Delta-9 THC reflect more recent use, whereas other cannabinoids can be detected many days later and are not necessarily indicative of recent use.[54] A person can have cannabis metabolites present in their system while having none of the psychoactive effects of cannabis.

In addition to the variety of metabolites and miscommunication that occurs regarding statistics, there are also multiple methods of consumption that have made this a difficult research topic. That is, one potential controversy, even in a well-controlled experimental study, are the many routes of cannabis administration available. Cannabis can be smoked or vaped in its flower form, vaped or dabbed and inhaled in its concentrate form (i.e. wax, shatter, oil, resin), ingested in its edible form (i.e. candy, cookies, drinks), and even puffed through an inhaler. The onset of effects from edible cannabis can take from 45 minutes to two hours, while the onset of smoked or vaped cannabis occurs within the first ten minutes.[55]

In sum, challenges exist to conducting research that involves marijuana, in part because it is a Schedule I drug in federal law and access to the drug is restricted, and because of the variation in study approaches. However, as this review reflects, there is a pressing need for additional research in the area of drug impaired driving.

DUI Charges and the Court Process

Arrest Process

Generally, an individual is stopped by a peace officer for a traffic infraction and the officer observes signs of impairment or recent substance use. Examples of initial observations can include the smell of alcohol or cannabis, the sight of open containers, slurred speech, slowed reaction, or failure to follow instructions.

Once an officer notices an initial sign of impairment and has probable cause to suspect impairment, then he/she may ask the individual to voluntarily perform a battery of psychophysical tests and, potentially, a

[53] For more information on the University of Colorado, Denver's processes for researchers engaging in research involving drugs under the CSA, refer to http://www.ucdenver.edu/research/EHS/hazmat/Pages/DEA.aspx.
[54] Studies cited in factsheet produced by the National Drug Court Institute range from 25 days to 67 days for maximum cannabinoid detection times. See the fact sheet at https://www.ndci.org/sites/default/files/ndci/THC_Detection_Window_0.pdf.
[55] Vandrey, R., Herrmann, E. S., Mitchell, J. M., Bigelow, G. E., Flegel, R., LoDico, C., & Cone, E. J. (2017). Pharmacokinetic profile of oral cannabis in humans: blood and oral fluid disposition and relation to pharmacodynamic outcomes. *Journal of Analytical Toxicology*, *41*(2), 83-99; Hartman, R. & Huestis, M. (2013). Cannabis effects on driving skills. *Clinical Chemistry*, *59*(3), 478-492.

preliminary breath alcohol test (PBAT) if alcohol is the suspected substance of impairment. If other drug impairment is suspected, then the arresting officer may call a Drug Recognition Expert (DRE) to assist, or proceed with toxicological exams. Under Colorado's Expressed Consent law, "any person who drives any motor vehicle upon the streets and highways and elsewhere throughout this state" is required to provide a chemical sample or lose their license upon refusal if the arresting officer has reasonable grounds to suspect impairment.

The arresting officer will provide the person with a choice of a breath or blood test if alcohol is the suspected impairing substance. Once the choice is made, the person cannot renege and choose the other test. If the individual has a breath alcohol test result at or above 0.08 or refuses the test, the person's license is surrendered to law enforcement and the individual has seven days to request a hearing by the Division of Motor Vehicles. However, if the driver chooses a blood test or the officer has reasonable grounds to suspect drug-related impairment and requires a blood test, then the license is not automatically surrendered because the results of a blood test are not readily available. Generally, if the PBAT result is above the *per se* limit, the officer may choose not to test for additional drugs as this is costly. This practice likely results in an underrepresentation of drug impaired driving in relevant data sets.

Two possible paths exist when a legal case is initiated. These are described below.

Legal Process[56]

Misdemeanor. When the case is being charged as a misdemeanor, the arresting officer completes the Uniform Summons and Complaint form that is generated by the law enforcement agency when the defendant is arrested. The original copy is filed with the court, and copies are given to both the defendant and the district attorney's (DA's) office.

The DA can add, amend or dismiss charges, either as part of plea agreement or because such actions better reflect the facts of the case. Because the case is a misdemeanor, the defendant is not entitled to a preliminary hearing. Rather, the defendant will be advised of his/her rights by the judge either while in jail or, if he/she is released on bond before seeing a judge, when he/she returns to court. Thereafter, the case will be set for either an appearance of counsel (for the defendant to hire a lawyer or apply for the services of a public defender) or an arraignment (where the defendant will enter a plea of guilty or not guilty). If the defendant enters a "not guilty" plea, a trial date will be set and, most of the time, a date to litigate constitutional and/or evidentiary motions will be set prior to trial. If the defendant enters a guilty plea (usually as part of a plea agreement), the court may sentence the defendant immediately or, more likely, will set the case for a sentencing hearing and direct the probation department to meet with the defendant and prepare a pre-sentence investigation report in time for the sentencing hearing.

Felony. If the case is being charged as a felony, the law enforcement officer will arrest the defendant and submit a Warrantless Arrest affidavit to the court and to the DA's office. The judge will advise the defendant of his/her rights, set a bond, and set a return date for filing of charges. If the defendant is unable to post bond, this date will be within three working days. If the defendant is able to post bond, a later date may be set. If the DA determines that misdemeanor charges are appropriate, a misdemeanor

[56] This summary was provided by attorney Han Ng and Colorado Traffic Safety Resource prosecutor Jennifer Knudsen.

complaint will be filed, and the case will thereafter be treated as a misdemeanor. Otherwise, the case will continue to be treated as a felony.

Once the defendant obtains or waives counsel, the case will be set for a preliminary hearing in the county court. Meanwhile, the DA and the defense attorney may negotiate an agreement. If they agree to a misdemeanor, the preliminary hearing will likely be vacated and a date(s) for entering a plea and sentencing will likely be set in the county court. If they agree to a felony, the case will be bound over to the district court for an arraignment where the defendant will enter a plea.

Dispositions

There are six common dispositions in impaired driving cases. A *guilty* disposition occurs when the defendant either pleads guilty to the charge or is found guilty at trial. In a *deferred judgment and sentence* the defendant enters a conditional guilty plea but the final judgment is postponed. In these cases, the court sets a period of *probation supervision* which includes written stipulations about the conditions of supervision, before sentencing or the entry of a conviction into the court record. If the supervision term is completed successfully the court may then *dismiss* the charges against the defendant. However, if the defendant does not comply with the terms of the agreement then the individual will appear before the judge for a sentencing hearing, where the judge may choose to sentence the person under the original conditional plea. A *deferred dismissed* disposition is entered into the court record after the successful completion of probation supervision. For the purposes of this report guilty, deferred judgment, and deferred dismissed dispositions are considered "guilty" outcomes when discussing conviction rates.

If the prosecution or court does not believe that the evidence will support the charges beyond a reasonable doubt, then charges can be *dismissed*. Dismissal of certain charges is often used as part of a plea deal, where the defendant will plead guilty to some charges in exchange for the dismissal of other charges. A *not guilty* disposition is entered when a defendant goes to trial and the jury or judge finds that the prosecution did not prove the charges beyond a reasonable doubt. Finally, a prosecutor may elect not to prosecute and instead offer a *diversion* program. This results in no charges being filed as long as the defendant completes the terms of the diversion. For the purposes of this report, dismissed, not guilty, diversion, and not proven are categorized as "not guilty" outcomes.

Probation Assessment

Once convicted, the Alcohol and Drug Driving Safety (ADDS) program, administered by the state Judicial Department's Division of Probation Services, "provides pre-sentence and post-sentence alcohol and drug evaluations on all persons convicted of" DUI or DWAI.[57] This includes administering the Adult Substance Use and Driving Survey (ASUDS), a questionnaire that asks about prior substance use, prior impaired driving, demographics, BAC in the present case, and other factors. The findings from the assessment result in a treatment recommendation that is provided to the sentencing judge and, if convicted, the Office of Behavioral Health for use by ADDS treatment providers.

[57] Colorado Revised Statutes, 42-4-1301.3.

SECTION THREE
DATA AND METHODS

Data

House Bill 17-1315 mandated that the Division of Criminal Justice report annually to the General Assembly regarding specific information relating to substance-affected driving citations that occurred in the previous year. The mandate requires linking information across multiple data sets to provide a comprehensive analysis of impaired driving. Data from calendar year 2017 were obtained from the following entities:

- Colorado Bureau of Investigation, Toxicology Services
- ChemaTox Laboratories, Inc.
- Denver Police Department, Denver Crime Lab
- Colorado Department of Public Health and Environment, Laboratory Services Division
- Colorado State Judicial Branch via DCJ's Colorado Justice Analytics Support System (CJASS)
- Denver County Court
- Colorado Department of Human Services, Office of Behavioral Health

Data were extracted from each source and analyzed by the Division of Criminal Justice (DCJ). Tables and figures in this report were created by DCJ.

Case Filings

Traffic, misdemeanor, and criminal case filings between 1/1/2017 and 12/31/2017 containing at least one DUI or DWAI charge were used for analyses. These were obtained from the Colorado Judicial Branch (ICON) and Denver County Court. The Denver County Court tracks misdemeanor cases in its court management system, information that is not available in ICON. Note that the number of case filings presented here will not match with data from reports distributed by Judicial since, among other reasons, its reporting is based on fiscal year and it only reports on traffic cases with a DUI or DWAI case type rather than any case with a DUI or DWAI charge.

Toxicology

Results from breath alcohol tests conducted on Intoxilyzers, the specific type of breathalyzer device used for evidentiary breath testing in Colorado, were obtained from the Colorado Department of Public Health and Environment (CDPHE). Breath alcohol tests were conducted by law enforcement officers, either at a jail or police department, and the data from these tests are maintained by CDPHE.

The Denver Crime Lab, in the Denver Police Department, provided results for blood alcohol tests performed only for Denver cases.

The toxicology results from CDPHE and the Denver Crime Lab included only tests for alcohol. Data regarding further drug toxicology results were obtained from the Colorado Bureau of Investigation (CBI) and ChemaTox Laboratory, Inc. Both sources provided data on a number of marijuana variables including the primary psychoactive component Delta-9 THC. Although both labs provided drug

toxicology data, each lab's processes and procedures for DUI toxicology testing differ somewhat. In 2017, CBI transitioned from a 9-panel to an 11-panel drug screen on all blood vials that were submitted for a drug screen, with supplemental specialty testing upon request. ChemaTox offered drug panels for the arresting officer to choose from, including 5-panel, 7-panel, and 11-panel screens. CBI included three results pertaining to marijuana whereas ChemaTox provided five results.

Interpreting toxicology results requires understanding that the tests have limits of detection (LoD) and limits of quantitation (LoQ) that vary across drug metabolites.[58] As a result, some test results did not have quantitative values, such as when the threshold for detection is met but the threshold for quantitation is not. Generally, these test results appeared on toxicology reports as values such as '< 1.0 ng/mL' indicating the presence of a metabolite, but with no corresponding quantitative value.

Individual Assessment Data

The Alcohol/Drugged Driving Safety Coordinated Data System (ADDSCODS), probation assessment data, were obtained from the Colorado Department of Human Services, Office of Behavioral Health (OBH). Due to the sensitive nature of this dataset and its legal protections under 42 CFR Part 2 of the Federal Code, OBH performed the data matching and provided de-identified data for analysis.

Methods

To undertake the analysis required in House Bill 17-1315, it was necessary to match individual cases across data sets. To this end, two phases of data preparation were undertaken, (1) data cleaning and (2) data linking.

Data Cleaning

One primary issue associated with disparate datasets was the lack of consistent formatting or operational definitions of the variables. The open source software R was the primary tool used to perform data cleaning.

Judicial Case Filings

Data obtained from the Colorado Judicial Branch included all charges for case filings that contained at least one DUI or DWAI charge during calendar year 2017. One case filing, or case, typically contains multiple charges. Any charge of operating a vehicle under the influence or while ability impaired is referred to as DUI unless otherwise specified.

Duplicate cases were common and occurred for a number of reasons including, but not limited to, the following:

1. Cases were erroneously filed twice.
2. DUI misdemeanors were re-filed as felonies.
3. Duplicate tickets were submitted to the court by law enforcement.
4. Charges from one case were consolidated to a different case.

[58] See Armbruster, D. A. & Pry, T. (2008). Limit of Blank, Limit of Detection and Limit of Quantitation. *Clinical Biochemistry Review, 29,* S49-S52.

Cases were matched on name, date of birth, and offense date to identify duplicates. Duplicate cases were removed by matching law enforcement agency (LEA), LEA case numbers, arrest numbers, and offense dates. Finally, potential duplicates were manually confirmed. A total of 345 duplicate cases were removed.

Next, initial charges and amended charges were identified; initial charges were mapped to the appropriate final charge. The presence of all charges, charge numbers, and charge sequences permitted the accurate mapping of initial charges to final amended charges. Finally, age was imputed based on dates of birth from other datasets, if available.

Denver County Court Case Filings

The process of identifying and eliminating duplicates was the same as described above. The Denver Court data were similar to the Judicial data in many ways, however, this dataset lacked the critical variable of *charge number*, which complicated the mapping of initial to final charges. Consequently, mapping was accomplished manually.

Final Disposition Selection

Cases often contained multiple DUI charges. When this occurred, the most serious disposition was linked to the case. For example, if a case had two final DUI charges with two different dispositions of dismissed and guilty, the guilty disposition trumped the former regardless of severity of the charges (see Table 2). Dispositions were ranked from highest to lowest in the following order: guilty, deferred, deferred dismissed, diversion, not guilty, not proven, and dismissed.

Table 2. Example of selection of maximum finding for multiple DUI charge

Initial Charge	Final Charge	Finding	Selected
DRIVING UNDER THE INFLUENCE	DRIVING WHILE ABILITY IMPAIRED	Guilty	Yes
DRIVING UNDER THE INFLUENCE *PER SE*	DRIVING UNDER THE INFLUENCE *PER SE*	Dismissed	No

CDPHE Breath Alcohol Tests

CDPHE provided breath test results from December 2016 through June 2018. This allowed for analysis of DUI cases that were filed in 2017 with tests that occurred just prior to 2017.

Denver Crime Lab Alcohol Tests

Tests with 2017 offense dates were included in this dataset.

CBI Toxicology Tests

The Colorado Bureau of Investigation provided data from toxicology results spanning from 2016 to 2018, ensuring data were available to match cases filed in 2017. As mentioned previously CBI had a 9-panel and then 11-panel drugs-of-abuse screen available for officers with specialty tests available upon request. The 9-panel screen included testing for Barbiturates, Benzodiazepines, Cocaine, Carisoprodol and Meprobamate, Opiates, Oxycodone and Oxymorphone, Cannabinoids, Zolpidem, and Methamphetamine. The 11-panel screen added Buprenorphine and Fentanyl. Any values that appeared for prescription drug screens generally appeared in a non-standard format and were manually corrected to better examine DUIs associated with prescription drugs. This dataset also contained results for BAC if

requested by the arresting officer.

For this analysis, CBI provided an additional dataset indicating if a toxicology test involved an alcohol screen and/or a drug-of-abuse screen. This permitted more accurate analysis of toxicological profiles of case filings that were assessed by CBI. Additionally, as a result of multiple blood draws, some cases contained multiple test results for the same substance. In these cases, the test with the shortest time period between offense time and blood draw was selected for analysis. If this information was not available, then the maximum value for the tested substance was used in the analysis.

ChemaTox Toxicology Tests

ChemaTox provided data from 2017 toxicology tests. ChemaTox provided officers with multiple options for screens including 5-, 7-, and 11-panel screens. These screens did not always include cannabis. This dataset also contained results for BAC testing if the officer requested it.

Similar to the CBI dataset, the ChemaTox dataset also contained multiple results for the same substance due to multiple blood draws. This was handled in the same way as described above for CBI toxicology tests.

Drug Categories used by Drug Recognition Experts

Seven DRE categories of drugs exist, and these were created based on behavioral effects observed by the officer. The DRE course manuals describe these categories as follows:

> *Central Nervous System (CNS) Depressants.* Causes slowed reaction time, slowed information processing, decreased anxiety and tension, and induced sedation or drowsiness. Examples of drugs in this category include alcohol, barbiturates, and benzodiazepines.
>
> *CNS Stimulants.* Impairment is exhibited as hyperactivity, increased heart rate, blood pressure, and body temperature, emotional excitement, and restlessness. Examples of drugs in this category include cocaine, methamphetamine, and pseudoephedrine.
>
> *Hallucinogens.* Distortion of the user's perception, can result in synesthesia and hallucinations. Signs of impairment can include paranoia, body tremors, and disorientation. Examples of drugs in this category are psilocybin, MDMA, and LSD.
>
> *Dissociative Anesthetics.* Inhibits the brain's perception of pain and can be exhibited as blank stares, disorientation, or a lack of communication. Examples of drugs in this category are ketamine, phencyclidine, and dextromethorphan.
>
> *Narcotic Analgesics*. Drugs in this group relieve pain and produce euphoria. Signs of impairment include drowsiness, droopy eyelids, and depressed reflexes. Codeine, heroin, and methadone are a few examples of narcotic analgesics.
>
> *Inhalants.* These are any drugs that can be inhaled and generally produce mind-altering results. There are many subcategories and these produce effects that can be similar to CNS depressants, stimulants, and hallucinogens. Toluene, paint thinners, and gasoline are a few examples of this drug category.

Cannabis. Interferes with the attention process and distorts the perception of time and distance. Signs of impairment can include reddening of conjunctiva, body and eyelid tremors, and relaxed inhibitions.

These seven categories are used to present the toxicology results in the next section. Additionally, prescription drugs, such as antidepressants and anticonvulsants, among others, were included in the analysis. It should be noted that some prescriptions drugs overlap with a DRE drug category. For example, Sertraline is an antidepressant that could be categorized as a CNS depressant, but given that it is not typically abused or impairing, it is categorized in this study as a prescription drug to avoid inflating the detection of potentially impairing CNS depressants. See Appendix A for a list of drugs and categories.

Data Linking

To match the datasets, the Fine-grained Records Integration and Linkage tool (FRIL)[59] was used. FRIL is an open source instrument created by Emory University and the Centers for Disease Control and Prevention. FRIL allows the user to specify pre-designated algorithms to better match datasets that lack variable standardization. FRIL was used to match court case filings to toxicology results. The Office of Behavioral Health then linked the matched dataset to ADDSCODS and provided a de-identified dataset to the authors.

[59] For more information on FRIL see http://fril.sourceforge.net/.

SECTION FOUR
RESULTS

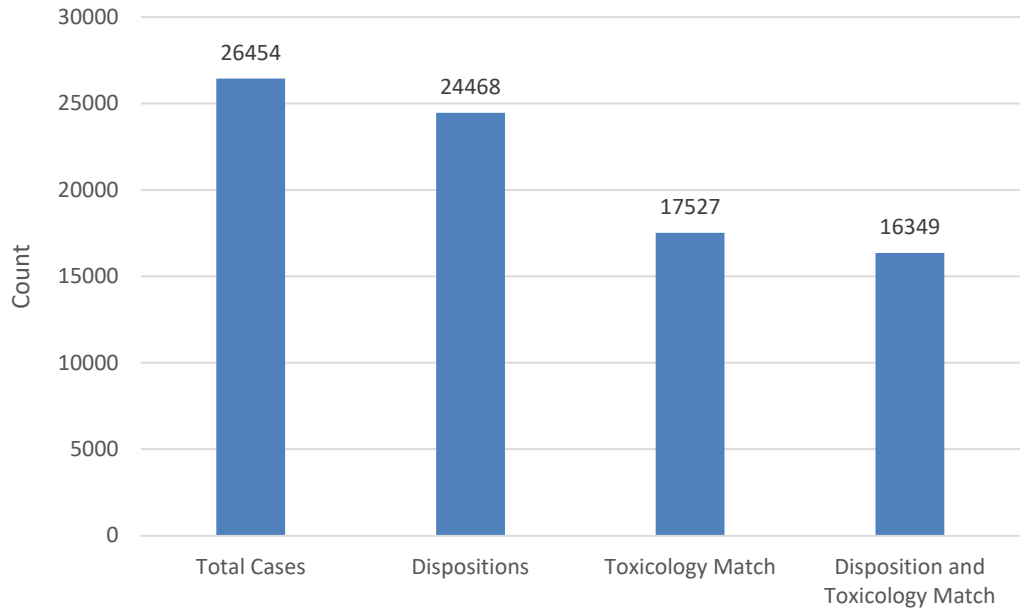
This section begins by describing DUI case filings overall and by judicial district and county, followed by a description of the age and gender of those with DUI case filings in 2017. Following this is a discussion of the DUI law classification, charge amendments, and additional information on selected other offenses involved in DUI incidents. Next, court dispositions are provided, followed by toxicology findings, toxicology plus disposition information, and sentencing findings. Finally, probation assessment data provide a description of those who received a sentence with a stipulation for drug treatment.

DUI Filings

In 2017, 26,454 cases were filed in court with at least one DUI charge. Most cases have multiple charges; these DUI cases had a total of 93,508 charges. There were 790 fewer case filings in 2017 (-2.9%) compared to 2016 (n=27,244).[60] This may be the result of a true decrease in DUI case filings or the result of improved deduplication methods.

The majority (92.5%, n=24,468) of case filings had dispositions by the date of data extraction[61] and 66.3% (n=17,527) of all case filings had a toxicology match. A total of 16,349, or 61.8% of all case filings, had both a DUI disposition and a toxicology match (Figure 3).

Figure 3. Cases filed with at least one DUI charge, 2917



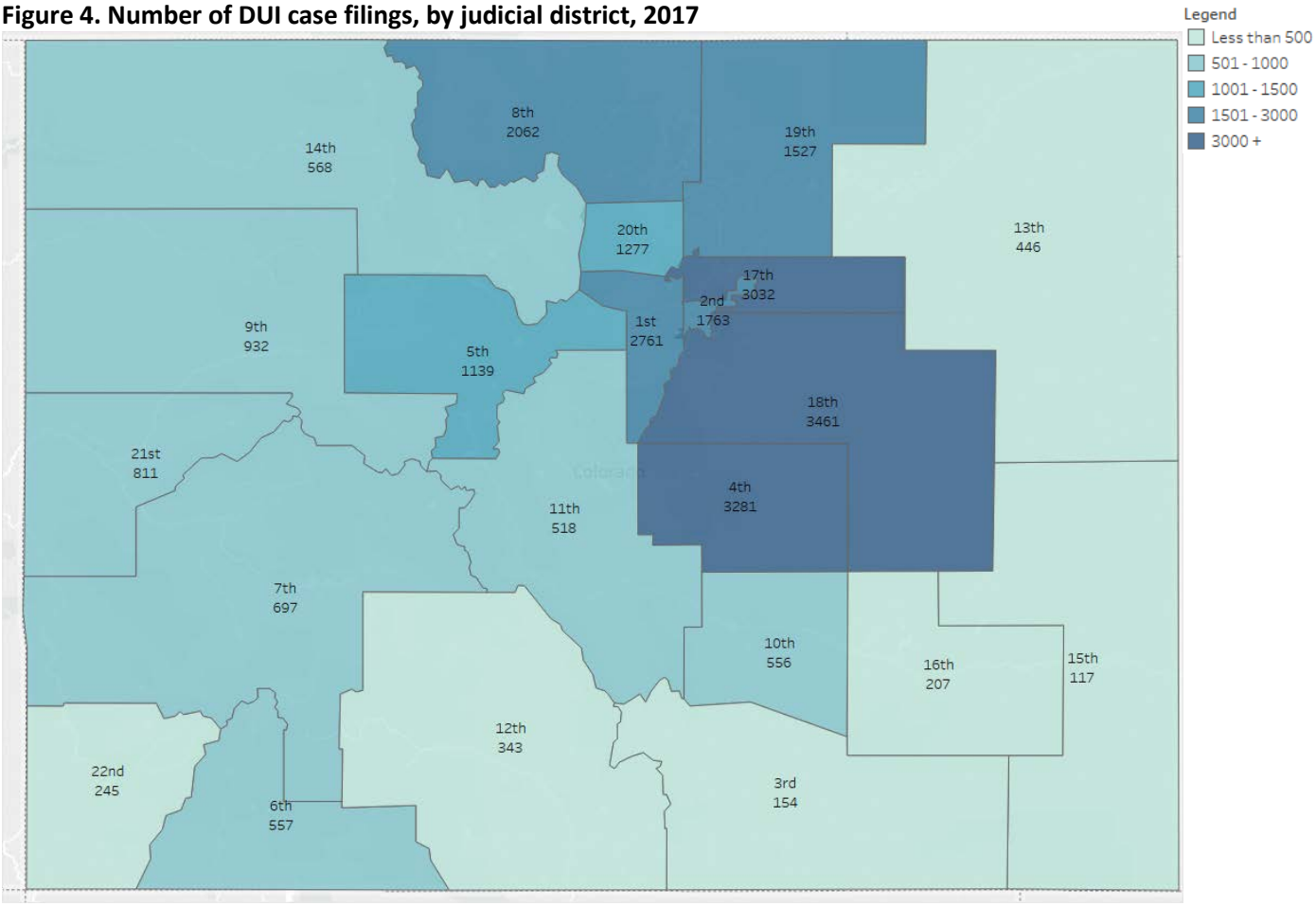
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

[60] See http://cdpsdocs.state.co.us/ors/docs/reports/2018-DUI_HB17-1315.pdf.
[61] Date of extraction was December 4, 2018.

DUI Cases by Judicial District and County

Judicial districts in large metropolitan areas had more DUI case filings in 2017. Judicial districts with the most case filings were the 18th (Arapahoe, Douglas, Elbert, and Lincoln Counties), the 4th (El Paso and Teller Counties), and 17th (Adams and Broomfield Counties). See Figure 4 for the number of DUI filings by judicial district.

Figure 4. Number of DUI case filings, by judicial district, 2017



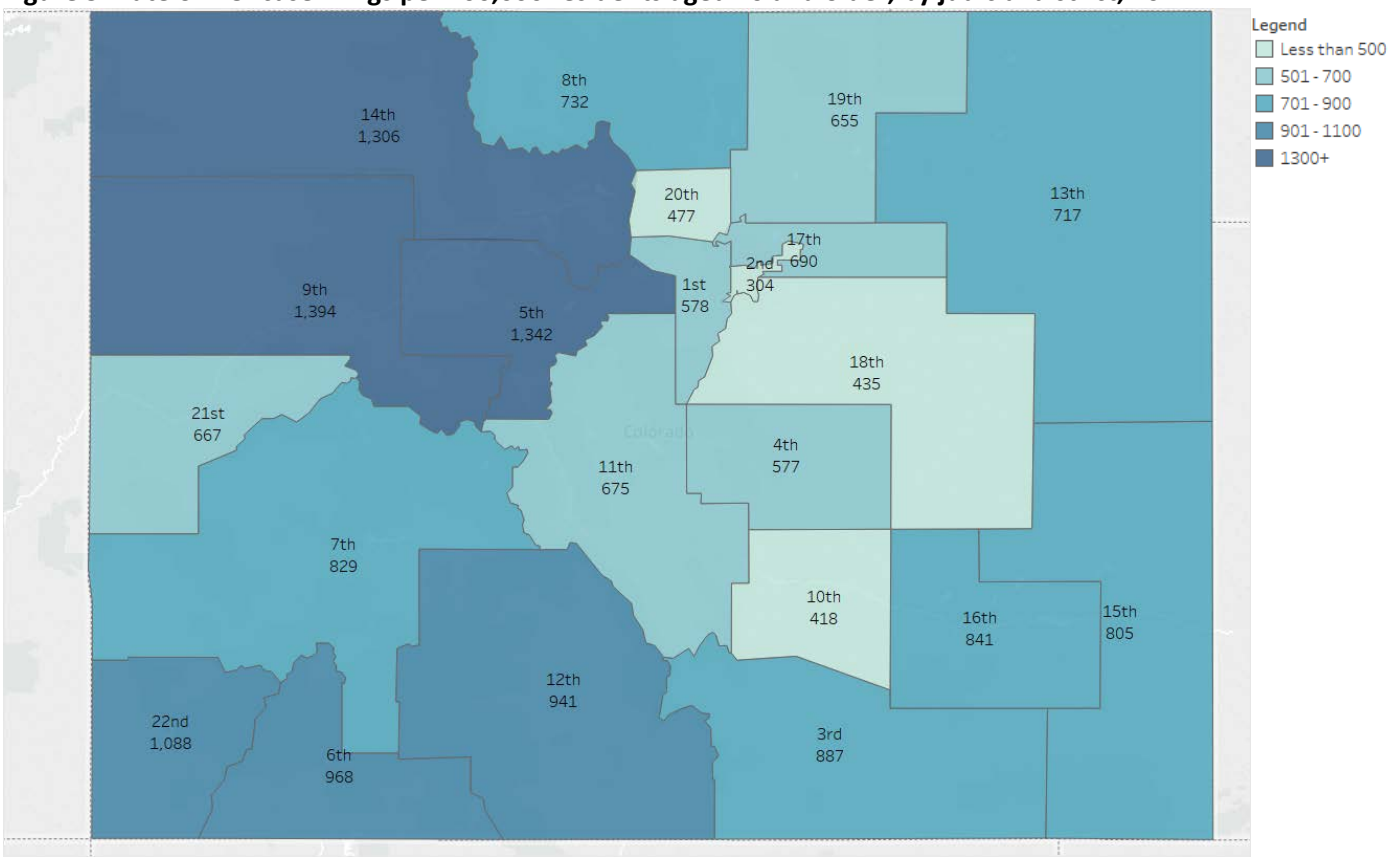
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Population estimates for those aged 16 and older were obtained from the State Demography Office to calculate the rate of impaired driving case filings per 100,000 residents by judicial district to better assess disproportionate occurrences of impaired driving. District and county numbers for noncommercial driver's licenses were unavailable, therefore population estimates were used to calculate rates.

Figure 5 shows that districts in northwestern Colorado generally had the highest rate of case filings per 100,000 residents. The 5th, 9th, and 14th judicial districts all had 1,300 or more case filings per 100,000 residents. This is followed by southwestern Colorado with the 6th, 12th, and 22nd judicial districts, with between 941 and 1,088 case filings per 100,000 residents. This indicates that these regions had a higher

rate of DUI case filings based on population when compared to other regions.

Figure 5. Rate of DUI case filings per 100,000 residents aged 16 and older, by judicial district, 2017

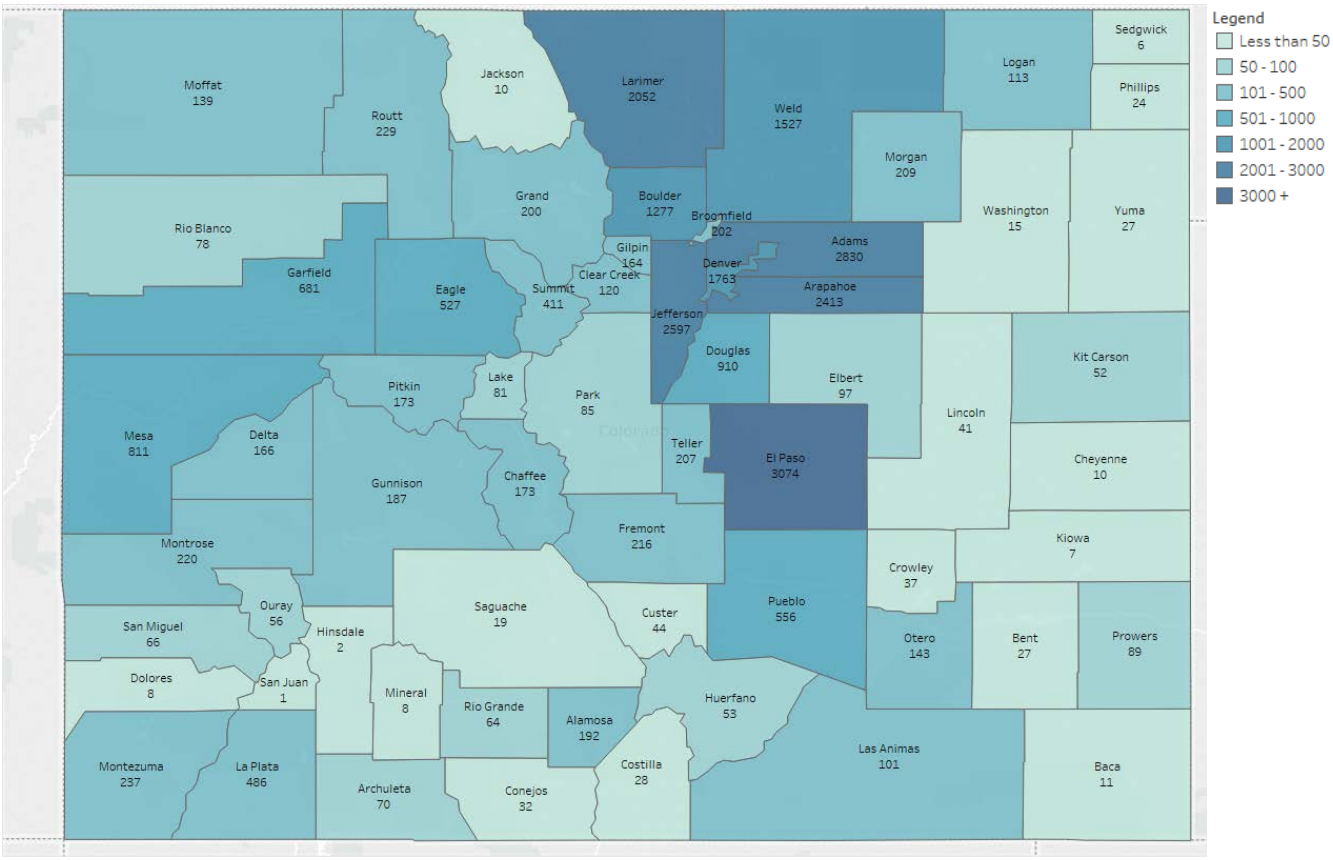


Data source: State Judicial Department, Denver County Court, and State Demography Office; analyzed by DCJ.

Figure 6 reflects the number of DUI case filings by county. El Paso, Adams, and Jefferson had the largest number of case filings in 2017. Both El Paso and Adams were in the top three during the 2016 reporting period as well. However, Jefferson county was not in the top three in 2016, but Arapahoe County was instead. Arresting agencies with the most case filings were the Colorado State Patrol (4,821), Colorado Springs Police Department (1,899), and Denver Police Department (1,763). See Appendix B for the

number and rate of cases by county, and Appendix C for the number of cases by arresting agency for both 2016 and 2017.

Figure 6. Number of DUI case filings, by county, 2017

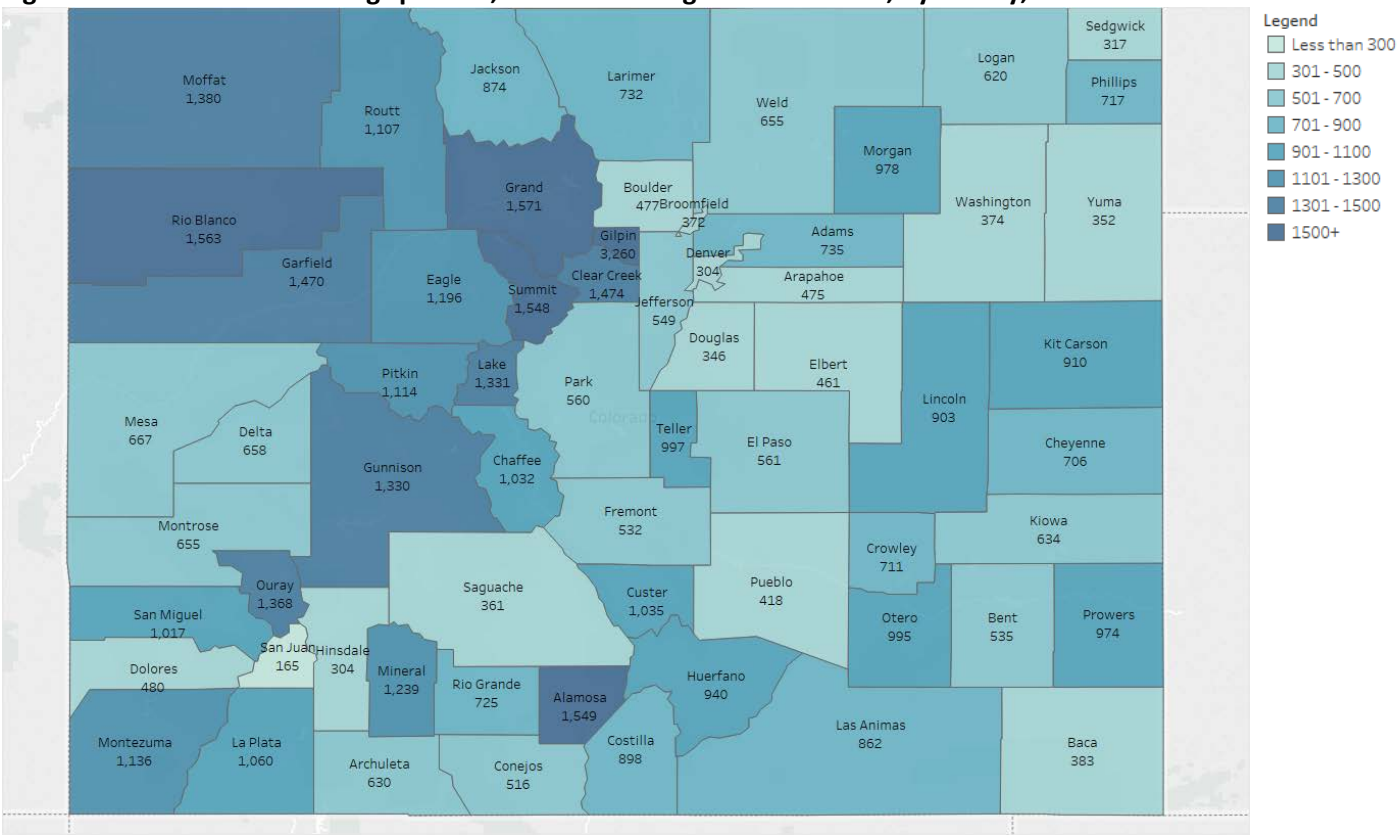


Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Again, population estimates from the State Demography Office of residents aged 16 and above were obtained to calculate rates of case filings for counties. Figure 7 shows these rates. Northwestern Colorado counties have higher rates with the highest rates in Gilpin, Grand, and Rio Blanco counties.

Gilpin County had 3,260 case filings per 100,000 residents aged 16 and older, Grand County's rate was 1,571, and Rio Blanco County's rate was 1,563.

Figure 7. Rate of DUI case filings per 100,000 residents aged 16 and older, by county, 2017



Data source: State Judicial Department, Denver County Court, and State Demography Office; analyzed by DCJ.

Description of Individuals with DUI Case Filings

Of 26,454 case filings, 74.4% involved male defendants and, not surprisingly, 92.1% of all case filings had defendants aged 21 or older at the date of case filing (see Table 3). Ages of defendants ranged from 14 to 90.

Table 3. DUI case filings, by age group and gender, 2017

	Female		Male		Total	
Age group	n	%	n	%	n	%
Under 18 years	71	1.0%	248	1.3%	319	1.2%
18 to 20 years	403	5.9%	1,367	6.9%	1,770	6.7%
21 years or older	6,293	93.0%	18,072	91.8%	24,365	92.1%
Total	6,767	100.0%*	19,687	100.0%	26,454	100%

*Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Table 4 shows the rate of DUI case filings per 100,000 residents ages 16 and older. Across both genders, those age 18 to 20 had the highest rate of case filings with 767 per 100,000 residents. Males age 18 to

20 had the highest rate at 1,135 case filings per 100,000 residents, and this is followed by males 21 years or older at 885 per 100,000 residents.

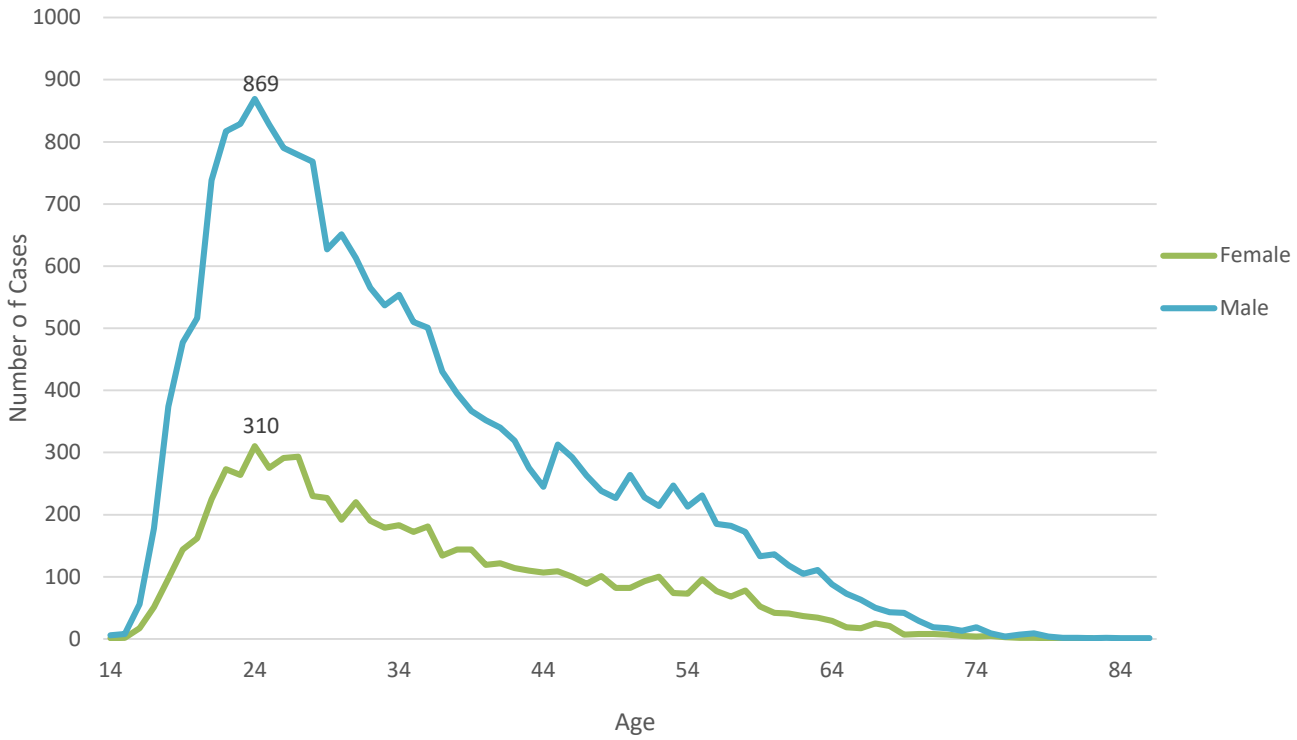
Table 4. Rate of DUI case filings per 100,000 residents 16 and older, by age group and gender, 2017

Age group	Female	Male	Overall
Under 18 years	100	336	220
18 to 20 years	366	1,135	767
21 years or older	304	885	592
Total	300	880	589

Data source: State Judicial Department, Denver County Court, and State Demography Office; analyzed by DCJ.

As shown in Figure 8, the number of male (n=869) and female (n=310) defendants both peak at age 24. As age increases, the disparity between males and females suspected of impaired driving increases quickly and then steadily declines.

Figure 8. Age and gender distribution of DUI defendants, 2017



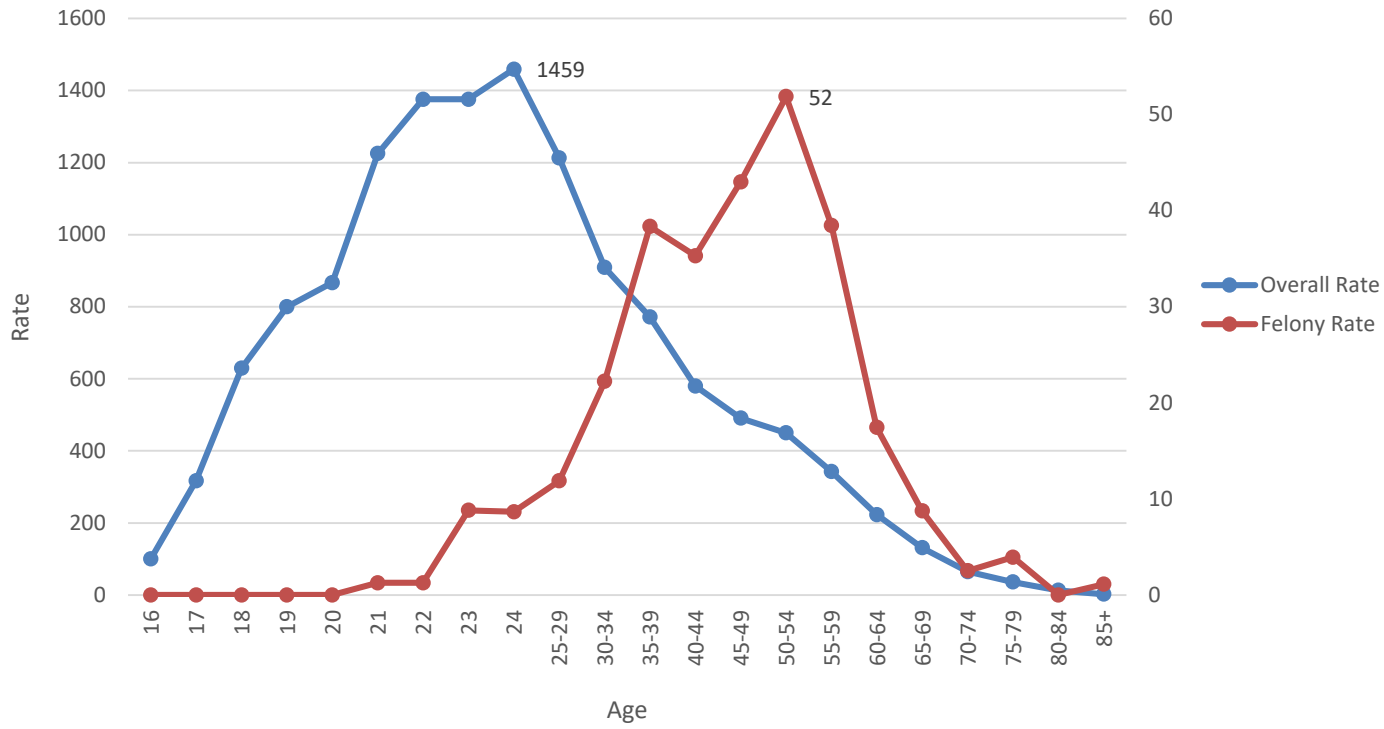
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Population estimates according to age were obtained to calculate the rate of DUIs or DWAIs per 100,000 residents. Figure 9 shows that the rate of DUI case filings by age and age group ranged from 2 per 100,000 to 1,459 per 100,000. The maximum rate of 1,459 DUI case filings occurred at age 24 and then declined steadily as age increased.

Additionally, Figure 9 shows the rate of felony DUI charges by age group. As expected, the rate of felony DUI charges per 100,000 residents increased with age but peaked later than the overall DUI rate. The highest rate of felony DUI charges was observed for those in the 50-54 age group with 52 per 100,000.

This was not only the highest rate, but the highest overall count as well with 183 felony DUI charges (data not presented).

Figure 9. Rate of total DUI case filings and felony DUI case filings per 100,000 residents aged 16 and above, by age group, 2017



Data source: State Judicial Department, Denver County Court, and State Demography Office; analyzed by DCJ.

Law Classification

DUI charges are filed under four law classifications: Traffic, Misdemeanor, Felony, and Unknown. In 2017, the majority of these charges were filed as misdemeanors (Table 5). Compared to 2016, there were fewer case filings overall, but there was a 2.8% increase in the number of felony DUI charges, from 987 to 1,015.

Table 5. Law classification of DUI charge, 2016 and 2017

Case Class	2016	2017
Traffic	134	126
Misdemeanor	25,765	25,021
Felony	987	1,015
Unknown	8	11
Final Non-DUI Charge	350	281
Total	27,244	26,454

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Initial and Final Classification of DUI Charges

Initial charges can be modified later in the legal process. Table 6 shows the number of charges with the initial law classification compared to the final law classification, and indicates that it was rare to modify

the law classification. There were 81 initial DUI charges classified as a traffic, all of which were underage drinking and driving (UDD) infractions. The majority of charges (n=24,972) were initially classified as misdemeanors while 1,066 charges were initially classified as felonies. Final misdemeanor charges numbered 25,027 compared to 1,016 final felony charges. Note that these charges did not all begin and end as DUI charges; 281 cases ended with a non-DUI charge. There were 26,173 final DUI charges, 3.9% (n=1,015) of which were classified as felony DUIs.

Table 6. Initial and final law class of final DUI and final non-DUI charges, 2017

		Final Law Class					
	Initial Law Class	Traffic	Misdemeanor	Felony	Petty Offense	Unknown	Total
Final DUI Charge	Traffic	73	8				81
	Misdemeanor	52	24,899	21			24,972
	Felony		72	994			1,066
	Petty Offense	1	1				2
	Unknown		41			11	52
Final Other Charge	Misdemeanor	267	6		6	1	280
	Felony			1			1
Total		393	25,027	1,016	6	12	26,454

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

DUI Charge Amendments

Table 7 provides the number of initial and final DUI charges for the most serious DUI disposition; initial charges that were not amended are in bold font. There were initially 21,656 charges specifically for driving under the influence with no noted priors; 56.2% of these were not amended (n=12,162), 31.4% (n=6,791) were amended to a lesser DUI charge and 11.5% (n=2,483) were amended to more severe charges, perhaps due to the discovery of prior DUI convictions. The most common final charge was DUI (n=12,232) and this was followed by DWAI (n=9,522).

The more serious the charge, the less likely it was to be amended. For example, 83.7% of charges with priors (DUI 1-2 Prior) were not amended (Table 6). In DUI cases with three or more priors, 91.5% of charges were not amended.

Finally, there was one initial vehicular assault charge that was amended to a DUI charge. However, it is important to use caution when interpreting results about a single observation.

Table 7. Detailed initial charges and final DUI charges, 2017

		Final Charge								
		UDD	DWAI	DUI	DWAI 1-2 Prior	DUI 1-2 Prior	DWAI 3+ Prior	DUI 3+ Prior	Other	Total
Initial Charge	UDD	**73**								73
	DWAI	10	**2,737**	16	38	2			49	2,852
	DUI	42	6,749	**12,162**	885	1581	1	16	220	21,656
	DWAI 1-2 Prior				**149**	1	1		1	152
	DUI 1-2 Prior		18	23	49	**530**		3	10	633
	DWAI 3+ Prior		1	1			**29**	1		32
	DUI 3+ Prior		4	25	4	35	19	**945**	1	1,033
	Vehicular Assault			1						1
	Other	1	13	4	2	2				22
	Total	126	9,522	12,232	1,127	2,151	50	965	310	26,454

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

DUI Charges and Demographics

Most DUI defendants were 21 years or older at the time of case filing, comprising 92.1% (n=24,365) of the total case filing population (see Table 8).Those in the 21 years or older age group were most often charged with DUI (46.3%), followed by DWAI (35.3%). This age group made up all of the felony DUI cases with three of more prior DUI/DWAI convictions (n=1,015).

Table 8. Final DUI charge, by age group, 2017

	Under 18 years		18 to 20 years		21 years or older		Total	
	n	%	n	%	n	%	n	%
UDD	30	9.4%	94	5.3%	2	0.0%	126	0.5%
DWAI	134	42.0%	790	44.6%	8,598	35.3%	9,522	36.0%
DUI	143	44.8%	809	45.7%	11,280	46.3%	12,232	46.2%
DWAI 1-2 Prior	1	0.3%	20	1.1%	1,106	4.5%	1,127	4.3%
DUI 1-2 Prior	2	0.6%	32	1.8%	2,117	8.7%	2,151	8.1%
DWAI 3+ Prior	0	0.0%	0	0.0%	50	0.2%	50	0.2%
DUI 3+ Prior	0	0.0%	0	0.0%	965	4.0%	965	3.6%
Other	9	2.8%	25	1.4%	247	1.0%	281	1.1%
Total	319	100.0%*	1,770	100.0%*	24,365	100.0%	26,454	100.0%

*Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Males comprised the majority of offenders in all DUI charge categories. Any small differences by gender can be seen in Table 9. The most common final charge for both genders was DUI, with 46.1% and 46.3% of females and males charged, respectively. A larger proportion of men had prior offenses. Felony DUIs—i.e., DWAI/DUI 3+ Prior—comprised 4.5% (n=896) of DUI charges for males and 1.8% (n=119) of charges for females. Given this, males made up 88.3% of defendants charged with a felony DUI in 2017, while making up 74.4% (n=19,687) of defendants across all impaired driving case filings.

Table 9. Final DUI charge, by gender, 2017

	Female		Male		Total	
	n	%	n	%	n	%
UDD	25	0.4%	101	0.5%	126	0.5%
DWAI	2,708	40.0%	6,814	34.6%	9,522	36.0%
DUI	3,117	46.1%	9,115	46.3%	12,232	46.2%
DWAI 1-2 Prior	245	3.6%	882	4.5%	1,127	4.3%
DUI 1-2 Prior	476	7.0%	1,675	8.5%	2,151	8.1%
DWAI 3+ Prior	6	0.1%	44	0.2%	50	0.2%
DUI 3+ Prior	113	1.7%	852	4.3%	965	3.6%
Other	77	1.1%	204	1.0%	281	1.1%
Total	6,767	100.0%	19,687	100.0%*	26,454	100.0%

*Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Other Offenses

The three most common charges associated with DUI case filings were careless driving, lane usage violation, and failure to display proof of insurance. See Table 10 for the frequency of the top three initial and final charges. Appendices D and E provide a detailed list of the most common initial and final charges associated with DUI case filings.

Table 10. Top three most common initial and final charges associated with DUI case filings, 2017

	Initial Count	Final Count
Careless Driving	7,506	7,550
Lane Usage Violation	4,839	4,939
Failure to Display Proof of Insurance	4,511	4,502

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Particular charges of interest from cases filed in 2016 and 2017 are highlighted in Table 11, including child abuse, vehicular assault, and vehicular homicide. The number of each of these charges and counts within charges increased between 2016 and 2017. The number of vehicular homicide charges increased from 30 in 2016 to 41 in 2017, as seen in Table 11.

Table 11. Number of cases and charges for other specific offenses, 2016 and 2017

	2016		2017		% Change in Number of Cases
Charge Type	Case Count	Charge Count	Case Count	Charge Count	
Child Abuse	664	898	737	967	+11.0%
Vehicular Assault	195	356	212	376	+8.7%
Vehicular Homicide	30	53	41	71	+36.7%

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Dispositions

Data on dispositions were available for 92.5% (n=24,468) of DUI-related charges. Nearly all cases (n=24,188) were adjudicated with a final DUI or DWAI charge.

DUI Dispositions

Four-fifths (81.1%) of case filings were found guilty, 7% received a deferred sentence (see Table 12) and nearly 10% (9.7%) of cases were dismissed. An additional 280 case filings had a DUI charge that was amended to a non-DUI charge and further adjudicated (1.1%). The dispositions observed for 2017 were similar to those observed in 2016 (see Table 12). See Appendix F for more detail on dispositions of final DUI charges.

Table 12. Disposition of DUI Charges, 2016 and 2017

	2016		2017	
	N	%	N	%
Guilty	20,545	80.5%	19,846	81.1%
Deferred Judgment	1,182	4.6%	1,185	4.8%
Deferred Dismissed	745	2.9%	548	2.2%
Diversion	26	0.1%	53	0.2%
Dismissed	2,493	9.8%	2,363	9.7%
Not Guilty	178	0.7%	192	0.8%
Not Proven	2	0.0%	1	0.0%
Non-DUI Disposition+	348	1.4%	280	1.1%
Total	25,519	100.0%	24,468	100.0%^

+Aggregated dispositions for final charges that were not DUIs.
^Sum may be less than 100.0% due to rounding.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Table 13 shows disposition by final charge type. The proportion of Guilty dispositions varied by charge type, ranging from 72.0% for DUI to 98.7% for DWAI 1 – 2 Prior. Nearly one-fifth (18.8%, n=1,975) of DUI charges were dismissed. Note that many of the cells in Table 13 have few cases, and caution should be used when interpreting these figures.

Table 13. Disposition by DUI type, 2017

	UDD		DWAI		DUI		DWAI 1-2 Prior		DUI 1-2 Prior		DWAI 3+ Prior		DUI 3+ Prior		Non-DUI Disposition	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Guilty	105	84.0%	8276	87.5%	7572	72.0%	1101	98.7%	2001	96.3%	40	85.1%	751	87.9%	266	95.0%
Deferred Judgment	4	3.2%	612	6.5%	532	5.1%	10	0.9%	12	0.6%		0.0%	15	1.8%	10	3.6%
Deferred Dismissed	7	5.6%	314	3.3%	227	2.2%		0.0%		0.0%		0.0%		0.0%	4	1.4%
Diversion		0.0%	3	0.0%	50	0.5%		0.0%		0.0%		0.0%		0.0%		0.0%
Dismissed	9	7.2%	241	2.5%	1975	18.8%	4	0.4%	56	2.7%	6	12.8%	72	8.4%		0.0%
Not Guilty		0.0%	10	0.1%	155	1.5%	1	0.1%	9	0.4%	1	2.1%	16	1.9%		0.0%
Not Proven		0.0%		0.0%	1	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%
Total	125	100%	9456	100%+	10512	100%+	1116	100%+	2078	100%	47	100%	854	100%	280	100%

+ Sum may be less than 100.0% due to rounding.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Time to Disposition

On average, the time elapsed between case filing and disposition date for DUI charges was 173 days (median=138). The time to disposition for final DUI charges varied by law class, with felonies taking the longest number of days to resolve (mean=242, median=214) and traffic charges taking the least amount of time (mean=131, median=101). See Table 14 for more details on time to disposition.

Table 14. Mean and median time to finding for final DUI and non-DUI charges by law class (days), 2017

	Final Law Class	Mean Time to Disposition	Median Time to Disposition	Number of Cases
Final DUI Charge	Traffic	131	101	125
	Misdemeanor	170	136	23,154
	Felony	242	214	901
	Unknown	77	69	8
Final Other Charge	Traffic	176	152	266
	Misdemeanor	135	93	6
	Felony	89	89	1
	Unknown	128	128	1
	Petty offense	151	134	6
	Overall	173	138	24,468

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Time to disposition was shortest for charges with a Diversion outcome (mean=134, median=92), as shown in Table 15. However, very few DUI charges received this disposition. Deferred Dismissed dispositions took the longest amount of time to disposition, with an average of 455 and a median of 459 days. This is because, for the disposition to be changed from Deferred to Deferred Dismissed', the defendant must successfully complete the terms of the deferral agreement.

Charges that remained or ended as DUI charges were quicker to have a Guilty disposition than charges with the same disposition that ended up as a non-DUI charge (means of 161 days versus 174 days).

Table 15. Mean and median time to finding for final DUI and non-DUI charges by disposition (days), 2017

		Mean Time to Disposition	Median Time to Disposition	Number of Records
Final DUI Charge	Guilty	161	134	19,846
	Deferred Judgment	158	138	1,185
	Deferred Dismissed	455	459	548
	Diversion	134	92	53
	Dismissed	198	144	2,363
	Not Guilty	315	306	192
	Not Proven	204	204	1
Final Other Charge	Guilty	171	139	266
	Deferred	193	189	10
	Deferred Dismissed	385	441	4
	Overall	173	138	24,468

Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Child Abuse, Vehicular Assault, and Vehicular Homicide Dispositions in DUI Cases

For cases with at least one conviction for child abuse, vehicular assault, and vehicular homicide, the most serious disposition is presented in Table 16. There were 663 case filings that had at least one initial or final child abuse charge with a disposition recorded. Initial child abuse charges that were amended to final non-child abuse charges accounted for 1.1% (n=7) of the dispositions. When combining guilty, deferred, and deferred dismissed dispositions, 27.6% of DUI cases with a child abuse charge resulted in a conviction for the charge. The majority of the child abuse charges were dismissed (69.7%, n=462).

Most (89.2%, n=189) of the 212 DUI cases with a vehicular assault charge had a disposition for the charge, and the conviction rate was 82.0%. Two cases had charges that were amended to non-vehicular assault charges. Charges that were amended from vehicular assault included driving under the influence and careless driving.

For the 36 cases with vehicular homicide initial charges, 1 was amended to a vehicular assault charge. Over three-fourths (77.8%) received a guilty disposition for the vehicular homicide charge.

Table 16. Dispositions of child abuse, vehicular assault, and vehicular homicide, 2017

	Child Abuse		Vehicular Assault		Vehicular Homicide	
	n	%	n	%	n	%
Guilty	89	13.4%	124	65.6%	28	77.8%
Deferred Judgment	81	12.2%	30	15.9%	0	0.0%
Deferred Dismissed	13	2.0%	1	0.5%	0	0.0%
Diversion	4	0.6%	0	0.0%	0	0.0%
Dismissed	462	69.7%	32	16.9%	7	19.4%
Not Guilty	7	1.1%	0	0.0%	0	0.0%
Other Charge Disposition+	7	1.1%	2	1.1%	1	2.8%
Total	663	100.0%^	189	100.0%	36	100.0%

+ Other Charge indicates any disposition for a charge that did not end up as the final charge
^Sum may be less or greater than 100.0% due to rounding.
category specified.
Data source: State Judicial Department and Denver County Court; analyzed by DCJ.

Toxicology Findings

Nearly two-thirds (66.3%, n=17,527) of total DUI case filings (n=26,454) were linked to at least one toxicology breath or blood test result. The majority, 90.5%, included test results for alcohol (n=15,856). A cannabis toxicology screen was available for 4,792 cases, or 27.3% of tests (some cases had both tests). Detailed findings from the analyses of toxicology data are presented below.

Alcohol

DUI case filings were matched with 15,856 alcohol test results obtained from CDPHE, the Denver Crime Lab, CBI, and ChemaTox. Similar to 2016 findings, the majority (83.7%) of 2017 case filings with an alcohol toxicology test result had a BAC that was 0.08 or more (see Table 17). Only 4.8% of the BAC tests detected no alcohol in 2017. The median BAC for cases with alcohol toxicology tests was 0.154 and the mean was 0.160.

Table 17. BAC results, by group, 2016 and 2017

	2016		2017	
	Count	Percent	Count	Percent
Not Detected	429	2.7%	769	4.8%
< 0.05	486	3.1%	524	3.3%
0.05 - 0.079	1,389	8.7%	1,286	8.1%
0.08 +	13,620	85.5%	13,277	83.7%
Total	15,924	100.0%	15,856	100.0%*

*Sum may be greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Common Charges Associated with the Presence of Alcohol

There were 27,910 non-DUI charges associated with the presence of alcohol. The top 20 most common charges associated with the presence of alcohol can be found in Appendix G. The top three charges were careless driving (n=4,239), lane usage violation (n=3,010), and failure to display proof of insurance (n=2,479).

Marijuana

Cannabinoid screens were conducted for 4,792 of the 26,483 case filings (Table 18). Of these 4,792 screens, 33.8% (n=1,622) indicated that no cannabinoids were detected.[62] Those cases with a positive cannabinoid screen (66.2%, n=3,170) were further confirmed for Delta-9 THC and other cannabis metabolites.[63]

The presence of Delta-9 THC typically indicates recent use of cannabis. The median value of Delta-9 THC was 5.4 and the mean was 8.2 ng/mL. Since the publication of the first annual report of 2016 data,[64] cannabinoid screen data accuracy improved, resulting in more screens finding no cannabinoids present in 2017 compared to 2016, but the difference is due to data quality improvements.

Table 18. Cannabinoid screen results, 2017

	2017	
Screen Result	n	%
Cannabinoids Not Present	1,622	33.8%
Cannabinoids Present	3,170	66.2%
Total	4,792	100.0%

Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Table 19 compares positive cannabinoid screens for 2016 and 2017, showing that nearly the same percentage of blood tests did not have Delta-9 THC detected (13.6%). However, there was a small increase in the proportion of blood tests that were confirmed at 5.0 ng/mL and above, from 47.5% in 2016 to 50.7% in 2017. This reflects a 17.4% increase in the overall number of these confirmed tests, from 1,369 to 1,607.

[62] The cannabinoid screen is an enzyme-linked immunosorbent assay (ELISA) which primarily targets THC-COOH.
[63] The confirmation test is done via liquid chromatography-mass spectrometry (LC-MS).
[64] See http://cdpsdocs.state.co.us/ors/docs/reports/2018-DUI_HB17-1315.pdf.

Table 19. Delta-9 THC groups for those with THC confirmation test, 2016 and 2017

	2016		2017	
THC level	n	%	n	%
Not Detected	396	13.7%	431	13.6%
Present but <1.0	90	3.1%	63	2.0%
1.0 - 4.9	1,030	35.7%	1,069	33.7%
5.0+	1,369	47.5%	1,607	50.7%
Total	2,885	100.0%	3,170	100.0%

Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

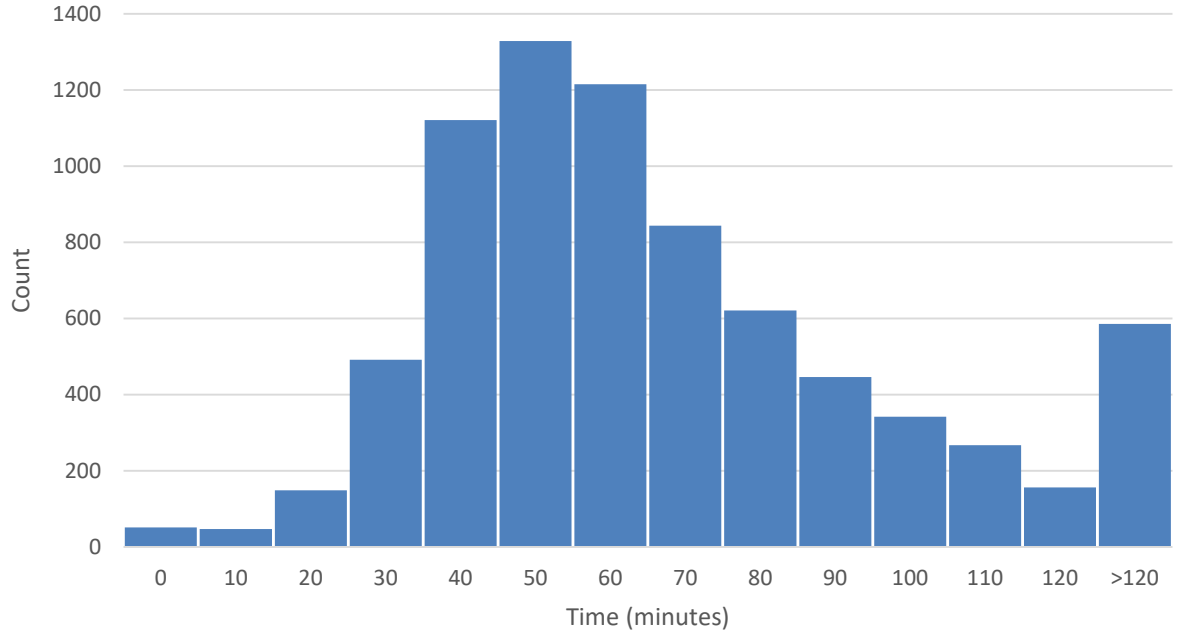
Time to Blood Test

In 2017, data were available for 7,667 blood test records to calculate the time between traffic stop and blood test. It should be noted that this is an 84.6% increase in the number of these records compared to 2016 (n=4,154). This increase is the result of manual data entry of information obtained from CBI's Requests for Laboratory Exam forms.

The mean time from offense to blood draw was 76 minutes while the median time for a blood draw was 64 minutes. Given the large range, and possible errors in data entry, the median value is most useful here.

The time interval of 50 – 59 minutes (i.e., category of 50) had the greatest number of blood draws (n=1,329) as seen in Figure 10. Less than 10% (7.6%, n=586) of records exceeded an elapsed time of 120 minutes from time of offense to time of blood draw.

Figure 10. Time (minutes) from traffic stop to time of blood draw, 2017



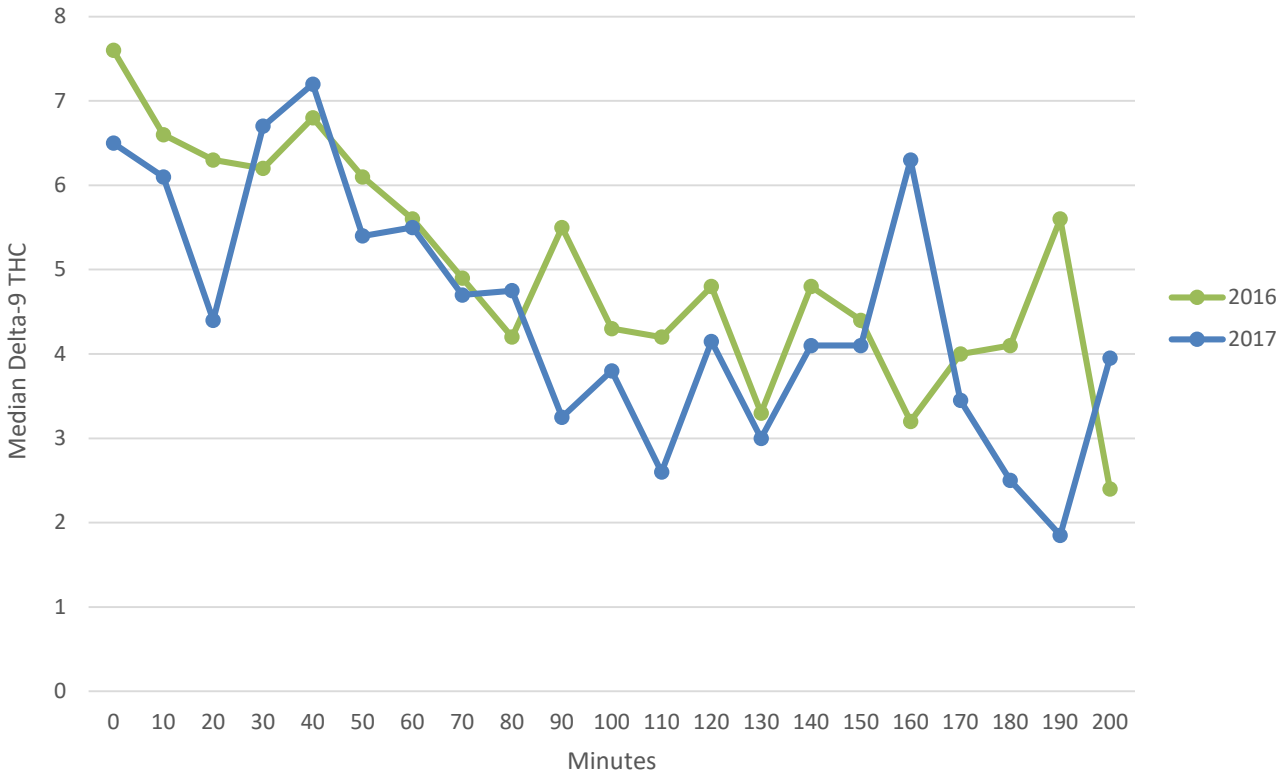
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Marijuana and Time to Test

A comparison of time to blood draw by median Delta-9 THC value for 2016 and 2017 can be seen in Figure 11. Any elapsed time of more than 200 minutes was excluded from the analysis due to concerns of reliability. Comparing data from 2016 and 2017, here were few differences in the recorded time from offense to the time of blood draw and median Delta-9 THC levels.

Figure 11 reflects that Delta-9 THC levels were higher when the elapsed time to blood draw was shorter, reflecting the dissipation of Delta-9 THC levels in the blood.

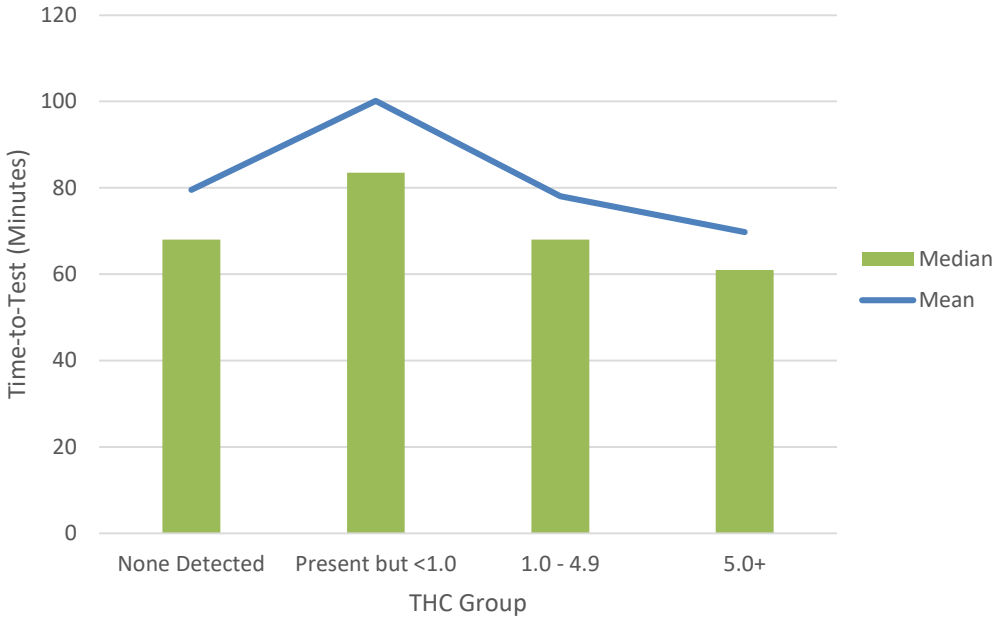
Figure 11. Median Delta-9 THC value by time (minutes) to test and number of cases, 2016 and 2017



Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Figure 12 depicts the mean and median elapsed time for cases with a positive cannabinoid screen along with offense time, draw time, and positive values of Delta-9 THC. The median and mean of the elapsed time for each Delta-9 THC category decreases as the THC values increase. This aligns with evidence in the research literature that Delta-9 THC levels peak early and then quickly dissipate, as also reflected in Figure 11.

Figure 12. Mean and median Delta-9 THC value by time-to-test (minutes), 2017



Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Common Charges Associated with Marijuana.

A total of 6,051 final non-DUI charges were associated with the presence of Delta-9 THC; see Appendix H for the top 20. Similar to alcohol, the top three charges were for careless driving (n=614), failure to display proof of insurance (n=437), and lane usage violation (n=421). Approximately 7% (n=428) of these charges were associated with speeding.

Alcohol and Marijuana in Combination

Table 20 shows both BAC results, cannabinoid screens, and Delta-9 THC results as a proportion of all DUI case filings, including case filings with no toxicology test match. The latter filings are included in Table 20 to show the frequency of cases not tested when the BAC was 0.08+. Specifically, 14.7% (n=1,955) of cases with a BAC at 0.08+ were further screened for cannabinoids while 50.8% (n=266) of cases with a BAC < 0.05 were screened for cannabinoids.

Table 20. BAC group, cannabinoid screen, and THC group test outcome, 2017

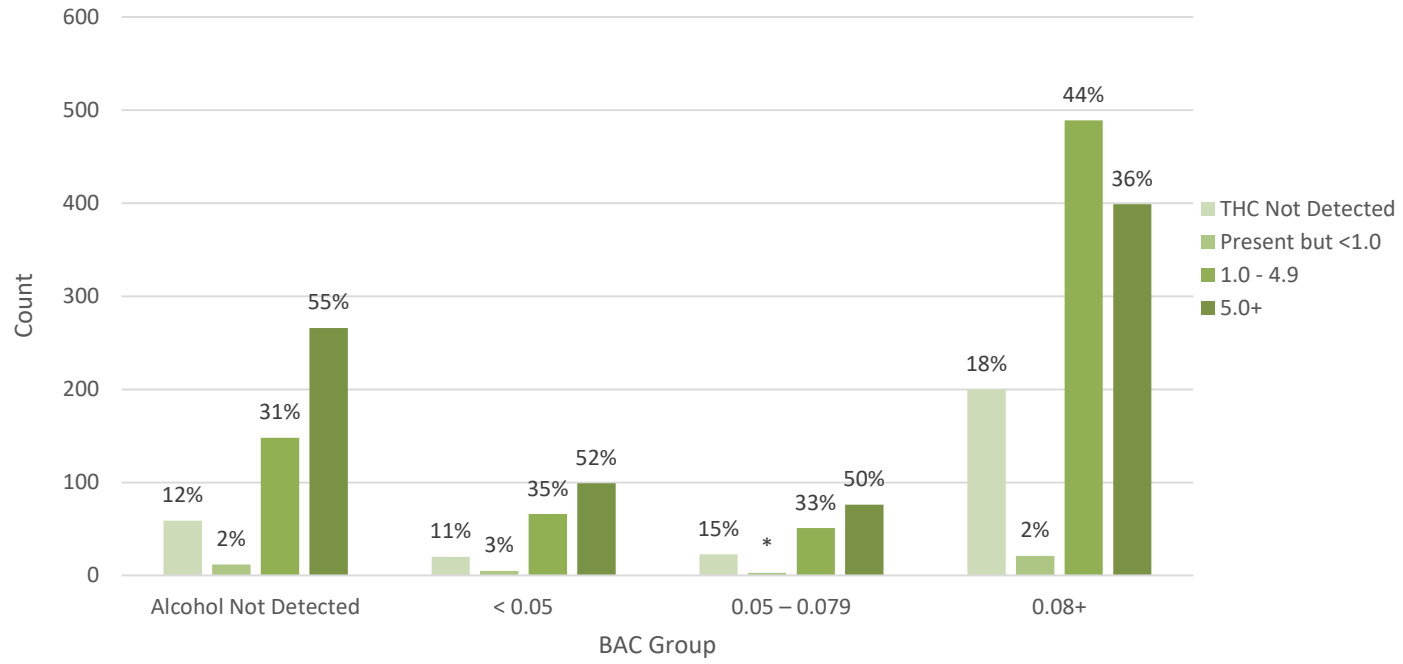
			Delta-9 THC Confirmation Tests				
BAC	No Cannabinoid Screen	No Cannabinoid Detected	Not Detected	Present but <1.0	1.0 - 4.9	5.0+	Sum
Not Detected	56	228	59	12	148	266	769
< 0.05	258	76	20	5	66	99	524
0.05 - 0.079	1,050	83	23	*	51	76	1,286
0.08 +	11,323	846	200	21	489	399	13,278
No BAC test	8,975	389	129	22	315	767	10,597
Total	21,662	1,622	431	63	1,069	1,607	26,454

*Ns less than five were suppressed to maintain privacy.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Figure 13 shows only cases that were tested for alcohol and also had a THC confirmation (n=1,937). Almost all BAC categories, except the 0.08+ category, had 50% or more cases at or above the 5.0 ng/mL *permissible inference* level for Delta-9 THC.

Overall, the majority of these 1,937 (62.4%, n=1,209) defendants tested positive for both substances. When compared to data from 2016,[65] this is an increase in the number of defendants, but a decrease in the proportion (2016: 70.0%, n=1,063). It is important to note again that these figures likely underrepresent the presence of marijuana and other drugs because, during a traffic stop, officers may confirm the presence of alcohol above the *per se* limit and stop further testing at that point.

Figure 13. BAC group, by THC group, 2017



Note: Ns less than five were suppressed to maintain privacy.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Other Polydrug Detection

Polydrug detection is the detection of any amount of two or more drugs in a toxicology result.[66] Again, please note that polydrug detection is likely underrepresented because, when alcohol is obviously present, many officers do not request further drug testing due to the cost and time associated with additional testing.

Keeping in mind that this is likely an underestimate, 13.6% (n=2,362) of cases with toxicology results had more than one drug present (see Table 21). Other drugs included illicit drugs and/or prescription drugs.

[65] See http://cdpsdocs.state.co.us/ors/docs/reports/2018-DUI_HB17-1315.pdf.
[66] The findings presented here reflect drugs detected and not the number of metabolites.

A very small percentage (1.0%, n=170) of toxicology results showed no drug detected, while 85.5% (n=14,947) of suspects were found to have only one drug present.

Alcohol was the primary substance detected for those with one drug present, followed by marijuana, and other drugs. Of those cases with only one drug present, 90.0% of cases had alcohol only present compared to 7.2% of cases with only marijuana present. However, note that not all alcohol tests had a drug screen and not all drugs are included in a drug screen.

When further examining the 13.6% (n=2,362) of cases with polydrug use, 40.6% (n=958) were a combination of alcohol and marijuana and 18.9% (n=447) involved marijuana and an additional drug. Another 10.6% (n=251) of polydrug cases involved alcohol, marijuana, and at least one other drug. A little over half (51.2%, n=1,209) of all polydrug results had both alcohol and Delta-9 THC present. Additionally, 11.7% (n=276) of the 2,362 polydrug cases had no alcohol or marijuana use reported (see Table 21).

Overall, in 2017, alcohol was present alone or in combination with another drug in 86.3% of results compared to 86.9% in 2016. In 2017 Delta-9 THC was present alone or in combination with another drug in 15.7% of results compared to 14.0% in 2016.

Again, these results should be interpreted cautiously because of the practice of limited drug testing when the presence of alcohol is obvious to the arresting officer.

Table 21. Presence of single drug or polydrug, 2016 and 2017

		2016			2017		
Drug Count	Drug(s) Detected	N	% Subtotal	% Total	N	% Subtotal	% Total
No Drug	None Detected	165	100.0%	0.9%	170	100.0%	1.0%
One Drug	Alcohol Only	14,052	91.3%	78.8%	13,449	90.0%	76.9%
	THC Only	957	6.2%	5.4%	1083	7.2%	6.2%
	Single Other Drug	386	2.5%	2.2%	415	2.8%	2.4%
	Subtotal	15,395	100.0%		14,947	100.0%	
Polydrug	Alcohol and THC	829	36.6%	4.7%	958	40.6%	5.5%
	Alcohol and Other	380	16.8%	2.1%	430	18.2%	2.5%
	THC and Other	469	20.7%	2.6%	447	18.9%	2.6%
	Alcohol, THC, and Other(s)	234	10.3%	1.3%	251	10.6%	1.4%
	Polydrug Not Alcohol or THC	352	15.5%	2.0%	276	11.7%	1.6%
	Subtotal	2,264	100.0%		2,362	100.0%	
Total		17,824		100.0%	17,479		100.0%*

*Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Table 22 shows cases with a toxicology result, by age group. The proportion of the cases in the Alcohol Only category increased with age. Conversely, the proportion of cases in the THC Only category decreased with age. A majority (79.4%) of those in the 21 or older age category fell in the Alcohol Only group, whereas less than half (41.1%) of those that were under 18 were in the Alcohol Only group.

Table 22. Presence of single drug or polydrug, by age group, 2017

		Under 18 years		18 to 20 years		21 years or older	
Drug Count	Drug(s) Detected	n	%	n	%	n	%
No Drug	None Detected	8	3.4%	16	1.2%	146	0.9%
One Drug	Alcohol Only	97	41.1%	703	53.3%	12,649	79.4%
	THC Only	93	39.4%	337	25.6%	653	4.1%
	Single Other Drug	**	**	25	1.9%	386	2.4%
Polydrug	Alcohol and THC	11	4.7%	102	7.7%	845	5.3%
	Alcohol and Other	**	**	22	1.7%	407	2.6%
	THC and Other	18	7.6%	77	5.8%	352	2.2%
	Alcohol, THC, and Other(s)	**	**	32	2.4%	215	1.4%
	Polydrug Not Alcohol or THC	0	0.0%	**	**	272	1.7%
Total		236	100.0%	1,318	100.0%*	15,925	100.0%

*Sum may be less or greater than 100.0% due to rounding.
Note: Ns less than five were suppressed to maintain privacy.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Table 23 shows drug tests by gender. Males outnumbered females in every drug category. Males and females had similar proportions of case filings in the Alcohol Only group (76.8% versus 77.3%, respectively). Females had higher percentages when compared to males in the following drug categories: Alcohol Only, Single Other Drug, Alcohol and Other, and Polydrug Not Alcohol or THC. The drug category for which there was the smallest numerical difference across gender was Polydrug Not Alcohol or THC, with 127 females and 149 males.

Table 23. Presence of single drug or polydrug, by gender, 2017

		Female		Male	
Drug Count	Drug(s) Detected	n	%	n	%
No Drug	None Detected	39	0.8%	131	1.0%
One Drug	Alcohol Only	3,578	77.3%	9,871	76.8%
	THC Only	198	4.3%	885	6.9%
	Single Other Drug	141	3.0%	274	2.1%
Polydrug	Alcohol and THC	193	4.2%	765	6.0%
	Alcohol and Other	177	3.8%	253	2.0%
	THC and Other	113	2.4%	334	2.6%
	Alcohol, THC, and Other(s)	65	1.4%	186	1.4%
	Polydrug Not Alcohol or THC	127	2.7%	149	1.2%
Total		4,631	100.0%*	12,848	100.0%

*Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Other Drug Categories

Drug Schedules

House Bill 17-1315 mandates analysis by drug schedule, as defined in Colorado Revised Statues in 2018.[67] It should be noted that, while THC is considered a Schedule I drug according to Colorado statutes, it is not included in this analysis.

The number of cases in 2016 and 2017 with Scheduled drugs is provided in Table 24. Schedule II drugs (e.g., cocaine, methamphetamine, and hydrocodone) were most commonly found in blood tests, followed by Schedule IV drugs (e.g., phenobarbital, diazepam, and alprazolam). These categories are not mutually exclusive because cases can involve multiple drugs, so if summed these numbers will include duplicate cases.

Table 24. Number of cases, by scheduled drug category, 2016 and 2017

Colorado Drug Schedule	2016	2017
Schedule I	27	50
Schedule II	1,132	1,188
Schedule III	*	7
Schedule IV	948	838

Note: Ns less than five were suppressed to maintain privacy.
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Drug Recognition Expert Drug Categories

For this analysis, toxicology results were categorized into the seven DRE drug categories (see Appendix A for a detailed list of drugs included in each DRE category). DRE drug categories are based on behaviors that are induced by the drug. Prescription drugs are generally not a DRE category (except when the drug is commonly abused), but these are included in this analysis and, when not likely to be abused, are in the prescription drug category. Finally, cannabis results are not included here but can be found in Table 19.

Excluding alcohol (which is a CNS depressant), CNS stimulants were the most common drugs detected in toxicology screens (see Table 25). This represents a decrease from 2016 in which CNS depressants were more prevalent. Overall, dissociative anesthetics were detected the least frequently out of all the categories (n=7).[68] Again, please note that this likely underrepresents the number of drugs present in DUIs because frequently many individuals are not tested for additional drugs if alcohol is obviously present.

[67] See C.R.S. §18-18-203 for Schedule I drugs as defined by the state of Colorado.

[68] Following the detection of alcohol and cannabis in the toxicology results, the most common drugs detected for 2017 case filings were methamphetamine (n = 632), alprazolam (n = 367), and cocaine (n = 354). See Appendix I for the list of individual drugs and case counts.

Table 25. Number of cases, by DRE drug categories, 2016 and 2017

DRE Drug Category	2016	2017
CNS Depressant	957	845
CNS Stimulant	887	978
Hallucinogen	20	26
Dissociative Anesthetic	*	7
Narcotic Analgesic	402	358
Inhalant	9	20
Prescription or Over-the-Counter	183	106

Note: Ns less than five were suppressed to maintain privacy.
Note: See Table 19 for Delta-9 THC results.
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Toxicology and Dispositions

Table 26 shows court case disposition by the absence or presence of a matched toxicology test. See Table 12 for overall dispositions. Most cases were guilty, regardless of the presence of a toxicology result. Combining guilty, deferred, and deferred/dismissed, there was a slightly lower conviction rate for cases with no toxicology test (85.2%, n=6,921) when compared to those with a toxicology test (89.7%, n=14,658). For initial to final DUI charge information, based on the presence or absence of a toxicology result, see Appendix J.

Table 26. Final disposition, by presence of toxicology test, 2017

	No Toxicology Test		Toxicology Test	
Disposition	n	%	n	%
Guilty	6,547	80.6%	13,299	81.3%
Deferred Judgment	276	3.4%	909	5.6%
Deferred Dismissed	98	1.2%	450	2.8%
Diversion	11	0.1%	42	0.3%
Dismissed	960	11.8%	1,403	8.6%
Not Guilty	132	1.6%	60	0.4%
Not Proven	0	0.0%	1	0.0%
Non-DUI Disposition+	95	1.2%	185	1.1%
Total	8,119	100.0%^	16,349	100.0%^

+ Aggregated dispositions for final charges that were not DUIs.
^ Sum may be greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Alcohol and DUI Dispositions

Recall that 17,527 toxicology tests were available for 26,454 case filings. Of case filings with toxicology tests, 16,349 DUI charges (93.3%) had reached disposition at the time of data analysis.

Table 27 shows the number of DUI dispositions with a known alcohol test (n=14,816). This table includes the disposition for all amended charges with an alcohol test, but does not show the specific disposition of final charges that were not DUI charges (last row of Table 27). The highest proportion of Guilty dispositions was for the group with BACs at or above 0.08 (89.7%, n=11,139), while the highest dismissal rate occurred for those with BACs less than 0.05 (51.8%, n=250). Note that this table shows information on alcohol tests only; the 456 charges with no alcohol detected and a guilty disposition may have had

other drug test results.

Table 27. Disposition of DUI Charges by BAC group, 2017

	Not Detected		< 0.05		0.05 – 0.079		0.08+	
Disposition	n	%	n	%	n	%	n	%
Guilty	456	64.7%	178	36.9%	569	46.9%	11,139	89.7%
Deferred Judgment	47	6.7%	22	4.6%	230	18.9%	449	3.6%
Deferred Dismissed	13	1.8%	8	1.7%	135	11.1%	244	2.0%
Diversion	0	0.0%	**	**	**	**	33	0.3%
Dismissed	170	24.1%	250	51.8%	205	16.9%	469	3.8%
Not Guilty	**	**	**	**	9	0.7%	35	0.3%
Not Proven	0	0.0%	0	0.0%	0	0.0%	**	**
Non-DUI Disposition+	16	2.3%	23	4.8%	63	5.2%	44	0.4%
Total	705	100.0%	483	100.0%^	1,214	100.0%^	12,414	100.0%^

Note: Ns less than five were suppressed to maintain privacy.
+ Aggregated dispositions for final charges that were not DUIs.
^ Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Marijuana and DUI Dispositions

Table 28 shows the dispositions of DUI charges with a known Delta-9 THC confirmation result (n=2,917). As with the previous table, this information includes all other charges that were amended, but does not show the specific disposition of final charges that were not DUI charges. The highest proportion of guilty dispositions occurred for those in the '5.0+ ng' (78.0%, n=1,160) category.

Overall, more than half of all cases in each THC category had a disposition of guilty. However, cases with a THC result less than 5 ng/mL had dismissal rates of approximately 20.0% to 30.0% while the 5.0+ ng/mL group had a dismissal rate of 6.4%.

Table 28. Disposition of DUI charges, by THC group, 2017

	Not Detected		Present but <1.0ng/mL		1.0 - 4.9 ng/mL		5.0+ ng/mL	
Disposition	n	%	n	%	n	%	n	%
Guilty	296	76.7%	28	52.8%	652	65.8%	1,160	78.0%
Deferred Judgment	12	3.1%	**	**	71	7.2%	154	10.4%
Deferred Dismissed	**	**	0	0.0%	19	1.9%	47	3.2%
Diversion	0	0.0%	0	0.0%	**	**	**	**
Dismissed	68	17.6%	17	32.1%	215	21.7%	95	6.4%
Not Guilty	0	0.0%	0	0.0%	**	**	13	0.9%
Non-DUI Disposition+	6	1.6%	**	**	28	2.8%	15	1.0%
Total	386	100.0%	53	100.0%^	991	100.0%^	1,487	100.0%^

Note: Ns less than five were suppressed to maintain privacy.
+Aggregated dispositions for final charges that were not DUIs.
^Sum is greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Alcohol, Marijuana, and DUI Dispositions

Median BAC and Delta-9 THC values by disposition can be seen in Table 29. A median BAC of 0.15 and a median THC of 5.5 ng/mL were found across dispositions. Guilty dispositions had medians of 0.16 and 5.9 for BAC and THC, respectively. Dispositions of dismissed cases had medians of 0.08 and 2.8 for BAC and THC, respectively.

Table 29. Median BAC and median Delta-9 THC, by disposition, 2017

	BAC		Delta-9 THC	
Disposition	Median	Case Count*	Median	Case Count+
Guilty	0.16	11,887	5.9	1,840
Deferred Judgment	0.09	701	7.0	229
Deferred Dismissed	0.09	387	7.7	66
Diversion	0.14	37	5.4	6
Dismissed	0.08	924	2.8	327
Not Guilty	0.15	45	10.5	16
Not Proven	**	**		
Non-DUI Disposition$^{\Delta}$	0.06	130	4.3	47
Overall	0.15	14,112	5.5	2,531

* Includes those with dispositions and a quantitative value for BAC.
Note: Ns less than five were suppressed to maintain privacy.
+ Includes those with dispositions and a quantitative value for Delta-9 THC.
Δ Aggregated dispositions for final charges that were not DUIs.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Dispositions of Guilty, Deferred Judgment, and Deferred Dismissed were combined to calculate overall conviction rates for the various categories of BAC and Delta-9 THC results (see Table 30). Final non-DUI charges were included in the analysis, but a guilty disposition for a non-DUI charge is not counted as a DUI conviction. This analysis involved 1,778 case filings with results for both alcohol and Delta-9 THC. Only 51 of these toxicology results indicated no alcohol or marijuana was present. Fewer than a quarter (20.9%, n=371) of all cases that had dispositions and tests for both alcohol and Delta-9 THC fell into both the 0.08+ BAC category and in the 5.0 ng/mL THC category.

Generally, conviction rates were the highest for BAC values of 0.08+ (88.2% to 95.7%). This was followed by conviction rates for Delta-9 THC values of 5.0+ ng/mL with rates ranging from 87.6% to 95.7%. These findings suggest that convictions are more common at the *per se* level for alcohol and at the *permissible inference* level for Delta-9 THC.

Table 30. Conviction rate of final DUI charges, by BAC group and Delta-9 THC group, 2017

BAC level	THC level: Not Detected		Present but <1.0 ng/mL		1.0 - 4.9 ng/mL		5.0+ ng/mL		Grand Total
	Total Cases	Conviction Rate	Total Cases	Conviction Rate	Total Cases	Conviction Rate	Total Cases	Conviction Rate	
Not Detected	51	66.7%	9	11.1%	136	61.8%	246	92.7%	442
< 0.05	17	52.9%	*	*	57	43.9%	89	87.6%	167
0.05 - 0.079	23	78.3%	*	*	48	89.6%	73	93.2%	147
0.08 +	176	92.0%	17	88.2%	458	95.2%	371	95.7%	1,022
Grand Total	267		33		699		779		1,778

Note: Ns less than five were suppressed to maintain privacy.
Note: Final non-DUI charges were included in the analysis.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Polydrug Use and DUI Dispositions

The proportion of cases with Guilty dispositions for one drug versus polydrug detection were very similar at 81.9% and 83.2%, respectively (see Table 31). Those cases with toxicology results but no drug detected had the highest proportion of dismissed charges, at 70.7% (n=111). DUI charges for one drug versus polydrug detected were dismissed at a rate of 7.6% and 8.6%, respectively. An even smaller proportion of DUI charges within these categories were amended to a non-DUI charge.

Table 31. Disposition of DUI charges, by single or polydrug detection, 2017

Disposition	No Drug		One Drug		Polydrug	
	n	%	n	%	n	%
Guilty	38	24.2%	11461	81.9%	1794	83.2%
Deferred Judgment	0	0.0%	798	5.7%	110	5.1%
Deferred Dismissed	**	**	413	3.0%	35	1.6%
Diversion	0	0.0%	41	0.3%	**	**
Dismissed	111	70.7%	1067	7.6%	186	8.6%
Not Guilty	0	0.0%	53	0.4%	7	0.3%
Not Proven	0	0.0%	**	**	0	0.0%
Non-DUI Disposition+	6	3.8%	155	1.1%	23	1.1%
Total	157	100.0%	13989	100.0%	2156	100.0%^

Note: Ns less than five were suppressed to maintain privacy.
+ Aggregated dispositions for final charges that were not DUIs.
^ Sum may be less or greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Table 32 shows drug categories and conviction rates where guilty, deferred judgment, and deferred dismissed dispositions are combined, for both 2016 and 2017. Note cases that had *any* amount of THC or *any* amount of alcohol were included in Table 32. Generally, DUI charges with alcohol present had the highest conviction rates. In cases with one drug present, alcohol had the highest conviction rate (92.0%, n=12,608), followed by a single other drug (84.0%, n=374), and then marijuana (75.5%, n=1,007). This suggests that DUI cases involving marijuana alone were less likely to be convicted compared to cases with other drugs.

In 2017, 2,156 case filings had evidence of polydrug use and a disposition (see Table 32). This represents a 2.7% increase from 2016 (n=2,100). Polydrug case filings containing both or either alcohol and Delta-9 THC had conviction rates ranging from 86.8% to 91.9%. Polydrug cases that did not include alcohol and/or Delta-9 THC had a lower slightly lower conviction rate of 85.1%.

Table 32. Conviction rate of final DUI charges, by single or polydrug detection, 2016 and 2017

		2016		2017	
Drug Count	Drug(s) Detected	Total Cases	Conviction Rate	Total Cases	Conviction Rate
No Drug	None Detected	157	22.3%	157	25.5%
One Drug	Alcohol Only	13,323	91.9%	12,608	92.0%
	THC Only	878	68.7%	1,007	75.5%
	Single Other Drug	348	77.3%	374	84.0%
Polydrug	Alcohol and THC	787	91.0%	890	91.6%
	Alcohol and Other	346	89.9%	383	91.9%
	THC and Other	426	91.1%	403	86.8%
	Alcohol, THC, and Other(s)	223	90.6%	231	90.9%
	Polydrug Not Alcohol or THC	318	75.5%	249	85.1%
Total		16,806	89.3%	16,302	89.9%

Data source: State Judicial Department, Denver County Court, CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Scheduled and DRE Drug Categories and DUI Dispositions

Scheduled Drug Categories and DUI Disposition

The percentage of guilty dispositions by drug Schedule varied from 76.6% to 85.7% (see Table 33) (note Schedule III has only seven cases; caution should be used when interpreting these results). Case filings with a Schedule I drug present had the lowest proportion of guilty dispositions for DUI charges. Note that the small number of cases in some categories makes interpretation difficult.

Table 33. DUI dispositions, by Scheduled drug category, 2017

	Schedule I		Schedule II		Schedule III		Schedule IV	
Disposition	n	%	n	%	n	%	n	%
Guilty	36	76.6%	887	84.6%	6	85.7%	600	77.5%
Deferred Judgment	5	10.6%	44	4.2%	0	0.0%	49	6.3%
Deferred Dismissed	0	0.0%	12	1.1%	0	0.0%	16	2.1%
Diversion	0	0.0%	0	0.0%	0	0.0%	94	12.1%
Dismissed	5	10.6%	93	8.9%	**	**	0	0.0%
Not Guilty	0	0.0%	**	**	0	0.0%	**	**
Non-DUI Disposition+	**	**	11	1.0%	0	0.0%	11	1.4%
Total	47	100.0%^	1,049	100.0%	7	100.0%	774	100.0%^

Note: Ns less than five were suppressed to maintain privacy.
+ Aggregated dispositions for final charges that were not DUIs.
^ Sum may be greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

DRE Drug Categories and DUI Disposition

Table 34 shows dispositions for DRE drug categories. The proportion of guilty dispositions by DRE drug category ranged from 61.3% to 90.0%. However, the 90.0% guilty dispositions are for a small number of cases with an inhalant present (n=20).

DUI cases with prescription drugs had the lowest proportion of guilty dispositions, at 61.3% (n=57). This was followed by CNS depressants (77.6%, n=606). When looking across the drug categories, CNS stimulants had the highest number of guilty DUI charges (n=746) and CNS depressants had the highest number of dismissed charges (n=94).

Table 34. DUI disposition, by DRE drug category, 2017

	CNS Depressant		CNS Stimulant		Hallucinogen		Dissociative Anesthetic		Narcotic Analgesic		Inhalant		Prescription	
Disposition	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Guilty	606	77.6%	746	86.8%	19	79.2%	6	85.7%	261	80.3%	18	90.0%	57	61.3%
Deferred Judgment	50	6.4%	29	3.4%	0	0.0%	0	0.0%	19	5.8%	0	0.0%	8	8.6%
Deferred Dismissed	16	2.0%	6	0.7%	0	0.0%	0	0.0%	8	2.5%	0	0.0%	**	**
Dismissed	94	12.0%	69	8.0%	**	**	**	**	32	9.8%	**	**	19	20.4%
Not Guilty	**	**	0	0.0%	0	0.0%	0	0.0%	**	**	0	0.0%	**	**
Non-DUI Disposition+	11	1.4%	9	1.0%	**	**	0	0.0%	**	**	0	0.0%	**	**
Total	781	100.0%^	859	100.0%^	24	100.0%^	7	100.0%	325	100.0%^	20	100.0%	93	100.0%

Note: Ns less than five were suppressed to maintain privacy.
+ Aggregated dispositions for final charges that were not DUIs.
^ Sum is greater than 100.0% due to rounding.
Data source: State Judicial Department, Denver County Court, CBI, and ChemaTox; analyzed by DCJ.

Sentencing Data

Sentencing data were obtained for all charges associated with operating a vehicle while impaired or under the influence of alcohol, drugs, or any combination of alcohol and drugs. However, this analysis is limited to State Judicial cases only as it was not possible to link Denver Court sentencing data to specific charges. Due to the complicated nature of sentencing, the current analyses includes the initial sentences associated with the final DUI or DWAI charge. At a later point the sentence may be suspended, reduced, or amended. Each case is unique and the ability to reliably analyze sentencing data beyond the initial sentence is extremely difficult.

Monetary Sentences

Monetary sentences include fines, surcharges, fees, and restitution. Table 35 shows the number of distinct cases which received each type of monetary sentence. Note that cells with few cases should be interpreted with caution. Offenders most frequently were sentenced with surcharges (n=20,098) and this was followed by fees and restitution. Variances in final DUI charge can be seen in the table. It should be noted that offenders can receive all three types of monetary sentences and there are frequently multiple fee and surcharge sentences.

Table 35. Distinct number of cases and percentages, by monetary sentence, 2017

Final Charge	Number of Convicted Cases	Fines		Surcharges		Restitution	
	n	n	%	n	%	n	%
UDD	116	105	90.5%	112	96.6%	1	0.9%
DWAI	9,202	8,506	92.4%	8,534	92.7%	137	1.5%
DUI	8,331	7,565	90.8%	7,625	91.5%	286	3.4%
DWAI 1-2 Prior	1,111	1,064	95.8%	1,074	96.7%	16	1.4%
DUI 1-2 Prior	2,013	1,651	82.0%	1,725	85.7%	62	3.1%
DWAI 3+ Prior	40	31	77.5%	38	95.0%	1	2.5%
DUI 3+ Prior	766	688	89.8%	747	97.5%	39	5.1%
Other	319	182	57.1%	243	76.2%	3	0.9%
Total	21,898	19,792	90.4%	20,098	91.8%	545	2.5%

Data source: State Judicial Department; analyzed by DCJ.

The most common fine across cases was for the Law Enforcement Assistance Fund, with 19,401 of cases sentenced to pay a total of $1,747,985. The most common surcharge or fee was for the Victims Assistance Fund, with 20,008 cases sentenced to pay a total of $3,401,104. Finally, restitution was the least common monetary sentence with 536 cases resulting in a total of $1,234,553 (for more information, see Appendix K). It is important to note that while these were sentences received by defendants, it does not mean that these fines, fees, surcharges, and restitution orders were paid.

Table 36 shows the average dollar amount of monetary sentences according to the final DUI charge observed in the case. On average, offenders were sentenced to $534 in fines, $1,500 in surcharges, and $2,797 in restitution for a total of $4,831. Overall there were higher fines for less severe charges (UDD, first time DUI or DWAI) and generally higher surcharges and restitution costs for more severe charges (DUI or DWAI with prior offenses).

Table 36. Average monetary sentence, by type of impaired driving charges, 2017

Final Charge	Fines	Surcharges	Restitution	Total
UDD	$103.14	$235.88	$1,000.00*	$1,339.02
DWAI	$362.55	$1,185.97	$2,536.49	$4,085.02
DUI	$708.19	$1,717.82	$2,840.07	$5,266.08
DWAI 1-2 Prior	$657.30	$1,854.67	$3,432.27	$5,944.24
DUI 1-2 Prior	$683.27	$1,856.72	$3,157.01	$5,697.00
DWAI 3+ Prior	$442.90	$2,465.80	$ 900.00*	$3,808.71
DUI 3+ Prior	$367.65	$2,052.11	$2,859.91	$5,279.66
Other	$164.27	$353.61	$187.29*	$705.17
Total	$534.37	$1,500.31	$2,797.08	$4,831.75

Data source: State Judicial Department; analyzed by DCJ.

Supervision and Incarceration Sentences

Table 37 shows the number of cases that received the following sentences: community service, probation, jail, community corrections, or prison. Average sentence lengths (in days) are provided in Table 38. The most common sentence for these case filings was community service with 18,632 cases

receiving this outcome. This was followed by probation (n=17,658) and jail (n=14,368). It is important to keep in mind that an offender may receive more than one of these sentences.

Table 37. Number and percentages of cases, by sentence, 2017

	Number of Convicted Cases	Community Service		Probation		Jail		Community Corrections		Prison	
	n	n	%	n	%	n	%	n	%	n	%
UDD	116	80	69.0%	45	38.8%	5	4.3%	0	0.0%	0	0.0%
DWAI	9,202	8,314	90.3%	7,620	82.8%	5,738	62.4%	2	0.0%	3	0.0%
DUI	8,331	7,182	86.2%	6,805	81.7%	5,550	66.6%	2	0.0%	3	0.0%
DWAI 1-2 Prior	1,111	1,039	93.5%	1,049	94.4%	1,016	91.4%	0	0.0%	0	0.0%
DUI 1-2 Prior	2,013	1,604	79.7%	1,652	82.1%	1,644	81.7%	4	0.2%	3	0.1%
DWAI 3+ Prior	40	18	45.0%	28	70.0%	25	62.5%	6	15.0%	5	12.5%
DUI 3+ Prior	766	313	40.9%	365	47.7%	323	42.2%	223	29.1%	192	25.1%
Other	319	82	25.7%	94	29.5%	67	21.0%	0	0.0%	0	0.0%
Total	21,898	18,632	85.1%	17,658	80.6%	14,368	65.6%	237	1.1%	206	0.9%

Data source: State Judicial Department; analyzed by DCJ.

On average, offenders received sentences of five days of community service, 636 days of probation, and 235 days of jail. As expected, this varies by the severity of the offense. Note that some of the cells in Tables 37 and 38 have few cases; caution should be used when interpreting these findings.

Table 38. Average sentence time (in days), by impaired driving charge, 2017

	Community Service	Probation	Jail	Community Corrections	Prison
UDD	10	353	45	--	--
DWAI	3	526	133	365*	426*
DUI	6	658	242	457*	1,095*
DWAI 1-2 Prior	2	823	449	--	--
DUI 1-2 Prior	13	815	444	388*	608*
DWAI 3+ Prior	3	1173	203	1,491	1,241
DUI 3+ Prior	7	1249	249	1.348	1,399
Other	24	402	22	--	--
Total	5	636	235	1,320	1,365

Data source: State Judicial Department; analyzed by DCJ.

Probation Assessment Data

Probation assessment data were obtained from the Office of Behavioral Health, Department of Human Services. These data are gathered as part of the probation intake process for individuals who receive a sentence that involves community supervision and who are referred to drug treatment as a condition of supervision. These data include demographics, drug involvement, and DUI history, among other factors. These data were linked to court case filings by the Office of Behavioral Health and returned de-identified for analyses.

In 2017, 18,383 records were linked to the 26,454 case filings and available for analysis from the Alcohol/Drug Driving Safety Coordinated Data System (ADDSCODS). Because of the time lag between case filing, conviction, and the probation assessment, thousands of 2017 DUI case filings had not reached disposition or assessment.

This section begins with an overview of demographic information; later, demographic information is combined with other data.

Convicted Offender Demographics

Ethnicity

Table 39 provides information on gender and ethnicity. White males represented the largest group of DUI offenders (n=10,886) assessed in 2017. Note, however, that ethnicity is not systematically collected by Judicial; most Hispanics are in the White category.

Table 39. Offender ethnicity* by gender, 2017

	Female		Male		Total	
	n	%	n	%	n	%
Asian/Pacific Islander	44	0.9%	175	1.3%	219	1.2%
Black	239	4.7%	785	5.9%	1,024	5.6%
Hispanic	355	7.0%	1,241	9.3%	1,596	8.7%
Native American/Alaskan Native	67	1.3%	108	0.8%	175	1.0%
White	4,268	84.6%	10,886	81.6%	15,154	82.4%
Other	72	1.4%	143	1.1%	215	1.2%
Total	5,045	100.0%**	13,338	100.0%	18,383	100.0%**

*Ethnicity is not systematically collected by the State Judicial Department. Consequently, most persons that identify as Hispanic are counted in the White category.
**Sum may be less or greater than 100.0% due to rounding.
Data source; Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Education

Only 17.6% of DUI offenders receiving treatment did not have a high school diploma or General Education Diploma (GED) (see Table 40). Those that earned a high school diploma or a were the largest group (43.3%). This was followed by the Some College/College Graduate group with 38.6% of all the records.

Table 40. Offender education level, 2016 and 2017

	2016 N	2016 %	2017 N	2017 %
No Diploma or GED	3,553	18.7%	3,237	17.6%
High School Diploma or GED	8,099	42.7%	7,953	43.3%
Some College/College Graduate	7,210	38.1%	7,091	38.6%
Unknown	94	0.5%	102	0.6%
Total	18,956	100.0%	18,383	100.0%*

*Sum greater than 100.0% due to rounding.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Prior DUIs

As shown in Table 41, among those who received an assessment, over one-third of cases (37.7%) had at least one prior DUI; 6.6% had three or more priors. The presence of three or more priors indicates that the charge was likely a felony.

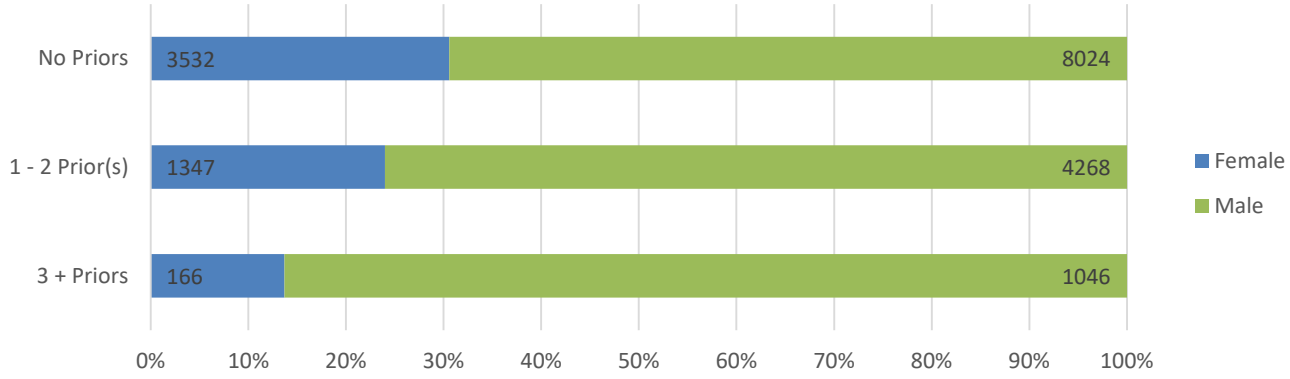
Table 41. Number of prior DUI offenses, 2016 and 2017

	2016 N	%	2017 N	%
No Priors	11,795	62.2%	11,556	62.9%
1 - 2 Prior(s)	5,991	31.6%	5,615	30.5%
3 + Priors	1,170	6.2%	1,212	6.6%
Total	18,956	100.0%	18,383	100.0%

Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Figure 14 shows that, as the number of priors increases, the proportion of male offenders increases. Females comprised of 30.6% (n=3,532) of those with no prior DUI/DWAI offenses and 13.7% of those with three or more priors (n=166).

Figure 14. Number of priors by gender, 2017



Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Table 42 shows DUI history by ethnicity for those who received an assessment. The majority (62.9%) of individuals in treatment for DUI had no prior DUIs. However, this varied by race/ethnicity. The proportion without priors ranged from 52.6% for Native American/Alaskan Native defendants to 74.9% for those in the Other ethnicity group (Table 42).

Table 42. Number of prior DUI offenses by race/ethnicity,* 2017

	Race/Ethnicity											
	Asian-Pacific Islander		Black		Hispanic		Native American/ Alaskan Native		White		Other	
Prior convictions	n	%	n	%	n	%	n	%	n	%	n	%
No Priors	159	72.6%	657	64.2%	1,100	68.9%	92	52.6%	9,387	61.9%	161	74.9%
1 - 2 Prior(s)	52	23.7%	318	31.1%	413	25.9%	65	37.1%	4,722	31.2%	45	20.9%
3 + Priors	^	^	49	4.8%	83	5.2%	^	^	1,045	6.9%	^	^
Total	219	100.0%	1,024	100.0%**	1,596	100.0%	175	100.0%	15,154	100.0%	215	100.0%

* Ethnicity is not systematically collected by the State Judicial Department. Consequently, most persons that identify as Hispanic are counted in the White category.
^ Counts under 30 have been suppressed to maintain confidentiality.
**Sum is greater than 100.0% due to rounding.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Table 43 shows the number of DUIs by the average BAC measured for those who received an assessment. Generally, as the number of priors increases, the average BAC increases. Those with no priors had an average BAC of 0.157 and those with three or more priors had an average BAC of 0.191.

Table 43. Number of priors DUI offenses by average BAC, 2017

	None detected	
	N	Average BAC
No Priors	7639	0.157
1 - 2 Prior(s)	3156	0.178
3 + Priors	559	0.191
Total	11354	0.164

Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Table 44 shows the number of prior DUIs by drug category from toxicology results (see Table 21 for overall counts) for those who received an assessment. The presence of prior DUIs varies with drug category and ranges from 53.9% (n=89) for Polydrug Not Alcohol or THC with no priors to 86.9% (n=555) of THC Only results with no priors. The high proportion for three or more priors was observed for the Polydrug Not Alcohol or THC at 9.1% (n=15). However, it is important to note that this is the drug category with the fewest records (n=165).

Table 44. Number of priors DUI offense by drug category, 2017

	Alcohol Only		THC Only		Single Other Drug		Alcohol and THC		Alcohol and Other		THC and Other		Alcohol, THC, and Other		Polydrug Not Alcohol or THC	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No Priors	6,812	67.3%	555	86.9%	130	56.0%	529	73.1%	168	55.4%	208	73.5%	122	65.2%	89	53.9%
1 - 2 Prior(s)	2,820	27.8%	77	12.1%	84	36.2%	170	23.5%	110	36.3%	64	22.6%	52	27.8%	61	37.0%
3 + Priors	496	4.9%	^	^	^	^	^	^	^	^	^	^	^	^	^	^
Total	10,128	100.0%	639	100.0%*	232	100.0%	724	100.0%*	303	100.0%	283	100.0%	187	100.0%	165	100.0%

^Counts under 30 have been suppressed to maintain confidentiality.
*Sum is greater than 100.0% due to rounding.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; CBI, CDPHE, ChemaTox, and Denver Crime Lab at DPD; analyzed by DCJ.

Crash Involvement

Almost three-quarters (74.2%) of those that received a probation assessment in 2017 had no crash reported with the DUI incident (see Table 45). Twenty-five (0.1%) defendants were involved in a fatal crash, 1,019 (5.6%) were involved in a crash with injury, and 2,484 (13.5%) were involved in a crash with property damage.

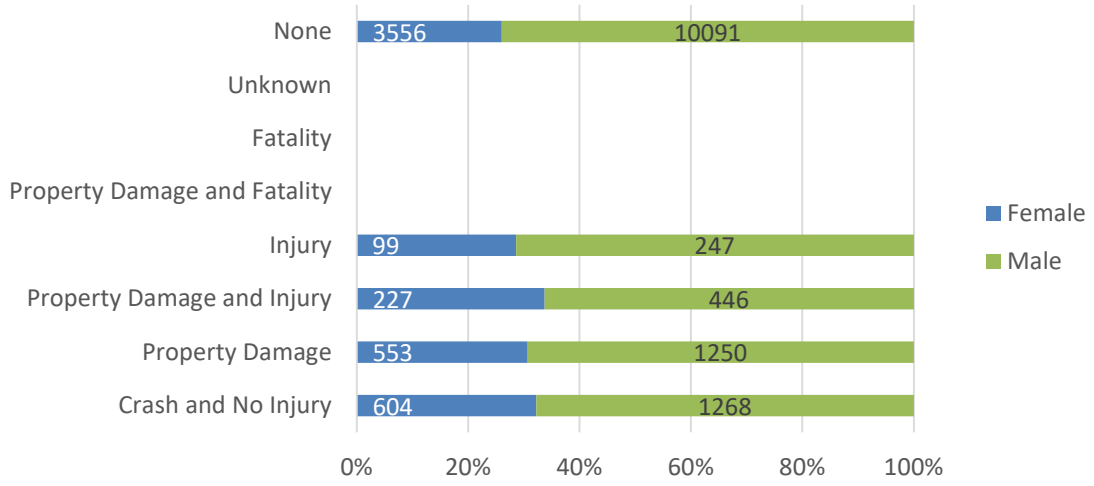
Table 45. Crash involvement, 2017

	n	%
None	13,647	74.2%
Unknown	^	^
Fatality	^	^
Property Damage and Fatality	^	^
Injury	346	1.9%
Property Damage and Injury	673	3.7%
Property Damage	1,803	9.8%
Crash and No Injury	1,872	10.2%
Total	18,383	100.0%*

^ Counts under 30 have been suppressed to maintain confidentiality.
*Sum is greater than 100.0% due to rounding.
Data source: Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Figure 15 shows crash involvement by gender. Females were less likely than males to be involved in a crash. When females were involved in an incident it was most often a crash with no injury or one with only property damage; this was also the case for males.

Figure 15. Crash involvement by gender, 2017^



^ Counts under 30 in the Unknown, Fatality, and Property Damage and Fatality categories have been suppressed to maintain confidentiality.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Table 46 shows crash involvement by race/ethnicity for those that received a probation assessment. Most of DUI cases were not involved in a crash, and this does not vary much across race/ethnicity. White offenders were most likely to be involved in fatal crashes (20 of 25 offenders).

Table 46. Crash involvement by race/ethnicity,* 2017

	Race/Ethnicity											
	Asian-Pacific Islander		Black		Hispanic		Native American/ Alaskan Native		White		Other	
Crash Involvement	n	%	n	%	n	%	n	%	n	%	n	%
None	156	71.2%	752	73.4%	1,198	75.1%	129	73.7%	11,250	74.2%	162	75.3%
Unknown	^	^	^	^	^	^	^	^	^	^	^	^
Fatality	^	^	^	^	^	^	^	^	15	0.1%	^	^
Property Damage and Fatality	^	^	^	^	^	^	^	^	^	^	^	^
Injury	^	^	22	2.1%	^	^	^	^	294	1.9%	^	^
Property Damage and Injury	^	^	30	2.9%	66	4.1%	^	^	554	3.7%	^	^
Property Damage	26	11.9%	107	10.4%	177	11.1%	^	^	1,449	9.6%	^	^
Crash and No Injury	27	12.3%	109	10.6%	131	8.2%	^	^	1,576	10.4%	^	^
Total	219	100.0%**	1,024	100.0%**	1,596	100.0%**	175	100.0%**	15,154	100.0%	215	100.0%

*Ethnicity is not systematically collected by the State Judicial Department. Consequently, most Hispanics are in the White category.
^ Counts under 30 have been suppressed to maintain confidentiality.
**Sum is less than or greater than 100.0% due to rounding.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Table 47 shows the number of prior DUIs by accident involvement among those that received a probation assessment. Most cases were not involved in a crash (73.3% to 74.5%).

Table 47. Crash involvement by number of priors DUIs, 2017

	No Priors		1 - 2 Prior(s)		3 + Priors	
	N	%	N	%	N	%
None	8,610	74.5%	4,148	73.9%	889	73.3%
Unknown	^	^	^	^	^	^
Fatality	^	^	^	^	^	^
Property Damage and Fatality	^	^	^	^	^	^
Injury	221	1.9%	98	1.7%	^	2.2%
Property Damage and Injury	423	3.7%	210	3.7%	40	3.3%
Property Damage	1,105	9.6%	555	9.9%	143	11.8%
Crash and No Injury	1,168	10.1%	591	10.5%	113	9.3%
Total	11,556	100.0%	5,615	100.0%	1,212	100.0%*

*Sum is less than 100.0% due to rounding.
^ Counts under 30 have been suppressed to maintain confidentiality.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Adjuncts to Treatment

Adjunct treatments for those with probation assessment data can be seen in Table 45. The most common adjunct was breath testing at 55.9% (n=10,267). This was followed by the Victim Impact Panel at 20.4% (n=3,750). The least common adjuncts to treatment were medication to reduce drug use (0.1%, n=18) and opioid maintenance medication (0.1%, n=20).

Table 48. Count and percent of adjunct treatments, 2017

	N	% of cases*
Medication to Reduce Alcohol Use	191	1.0%
Medication to Reduce Drug Use	^	^
Random Urine Analysis	2718	14.8%
Victim Impact Panel	3750	20.4%
Interlock	1185	6.4%
Electronic Monitoring	325	1.8%
Support Groups	698	3.8%
Opioid Maintenance Medication	^	^
Breath Testing	10267	55.9%
Other	879	4.8%

* A case can be ordered to more than one adjunct treatment. The 18,383 cases received orders for a total of 20,051 adjunct treatments.
^ Counts under 30 have been suppressed to maintain confidentiality.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

Table 49 shows the intersection between the number of prior DUIs and adjuncts to treatment for those who received a probation assessment. Again, the most common adjunct to treatment was breath testing. This varied with the number of priors. This was followed by Victim Impact Panels for those with no priors or 1-2 priors, 20.4% and 20.8%, respectively. However, for those with three or more priors, the second most common adjunct was random urine analysis (19.9%).

Table 49. Adjuncts to treatment by number of prior DUIs, 2017

	No Priors		1 - 2 Prior(s)		3 + Priors	
	N	%*	N	%*	N	%*
Medication to Reduce Alcohol Use	64	0.6%	88	1.6%	39	3.2%
Medication to Reduce Drug Use	^	^	^	^	^	^
Random Urine Analysis	1,638	14.2%	839	14.9%	241	19.9%
Victim Impact Panel	2,359	20.4%	1,167	20.8%	224	18.5%
Interlock	541	4.7%	515	9.2%	129	10.6%
Electronic Monitoring	145	1.3%	145	2.6%	35	2.9%
Support Groups	278	2.4%	268	4.8%	149	12.3%
Opioid Maintenance Medication	^	^	^	^	^	^
Breath Testing	6,167	53.4%	3,427	61.0%	673	55.5%
Other	548	4.7%	254	4.5%	77	6.4%
Unique Case Count	11,556		5,615		1,212	

*Percent is based on the number of unique cases in each prior DUI category.
^ Counts under 30 have been suppressed to maintain confidentiality.
Data source: Probation assessment data, Colorado Department of Human Services, Office of Behavioral Health; analyzed by DCJ.

SECTION FIVE
CONCLUSIONS

Drug impaired driving has tangible impacts on public safety. Nationally, drug detection in fatally-injured drivers with toxicology results has been steadily increasing, from 27.8% in 2005, 32.8% in 2009, 44.0% in 2016.[69, 70] This increase over time underscores the need to better understand driving under the influence. However, challenges associated with data collection, data quality, data completeness, and a lack of research on non-alcohol impairment reflect the complexity of studying drug impaired driving.

Toxicology results are difficult to interpret due to the variation in procedures involved in testing at multiple labs. For cases in which law enforcement officers detect alcohol at or above the *per se* limit, they may not request additional drug testing, particularly since the cost associated with testing blood for drugs can be ten times the cost of testing for alcohol.[71, 72] The labs providing data for this analysis offered different 5-, 7-, 9- and 11-panel drug screens, so the drug information that was available was inconsistent across labs. In addition, an officer unfamiliar with the behavioral manifestations of drugs may find it difficult to request the correct panel.

In 2017, alcohol, cannabis, methamphetamine, alprazolam, and cocaine were the five drugs most often detected in toxicology reports associated with case filings, with alcohol leading by a wide margin. This highlights the importance of understanding that, while alcohol and marijuana are commonly detected, they are not the only drugs that lead to impaired driving. The fact that law enforcement officers often obtain information on alcohol and do not pursue additional drug testing ensures that information about other drugs is underrepresented.

Despite the shortcomings of the data presented here, the percentage of DUI/DWAI cases that receive a conviction is relatively high. This is true even in cases where there was no toxicology result available.

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[69] NHTSA, 2010 and FARS, 2016 as cited in Governors Highway Safety Association's (GHSA) Drug Impaired Driving: A Guide for States see https://www.ghsa.org/sites/default/files/2017-07/GHSA_DruggedDriving2017_FINAL_revised.pdf

[70] 2016 number released May 31, 2018 by GHSA. See press release at the following: https://www.ghsa.org/resources/news-releases/DUID18.

[71] See costs for CBI DUI testing services here: https://www.colorado.gov/pacific/cbi/toxicology-services.

[72] Costs for ChemaTox testing services available at https://www.chematox.com/forms/chematox%20request%20for%20analysis%20instructions.pdf.

APPENDIX A
DRE CATEGORY AND SCHEDULE OF DRUGS

DRE Category	Drug Category	Drug	Schedule
CNS Depressant	Anesthetic	GHB	I
	Barbiturates	Butalbital	
	Barbiturates	Phenobarbital	IV
	Benzodiazepines	Alprazolam	IV
	Benzodiazepines	Clonazepam	IV
	Benzodiazepines	Diazepam or Chlordiazepoxide	IV
	Benzodiazepines	Demoxepam	
	Benzodiazepines	Etizolam	
	Benzodiazepines	Lorazepam	IV
	Benzodiazepines	Midazolam	IV
	Benzodiazepines	Nordiazepam	IV
	Benzodiazepines	Oxazepam	IV
	Benzodiazepines	Temazepam	IV
	Benzodiazepines	Triazolam	IV
	Benzodiazepines	Zolpidem	IV
	Benzodiazepines	Zopiclone	
	Tranquilizer	Carisoprodol	IV
	Tranquilizer	Meprobamate	IV
CNS Stimulant	Stimulant	Cocaine	II
	Stimulant	Modafinil	IV
	Sympathomimetic amine	Amphetamine	II
	Sympathomimetic amine	Methamphetamine	II
	Sympathomimetic amine	Phentermine	IV
	Sympathomimetic amine	Psuedoephedrine	
Dissociative Anesthetic	Anesthetic	Ketamine	III
Hallucinogen	Sympathomimetic amine	Methylenedioxyamphetamine (MDA)	I
	Sympathomimetic amine	Methylenedioxymethamphetamine (MDMA)	I
Inhalant	Inhalant	Polyfluorinated ethane	
	Inhalant	Toluene	
Narcotic Analgesic	Kratom	Mitragynine	
	Opioid	Buprenorphine	
	Opioid	Codeine	II
	Opioid	Fentanyl	II
	Opioid	Heroin	I
	Opioid	Hydrocodone	II
	Opioid	Hydromorphone	II
	Opioid	Methadone	II
	Opioid	Morphine	II
	Opioid	Oxycodone	II
	Opioid	Oxymorphone	II
	Opioid	Tramadol	
	Opioid	U-47700	
Cannabis	Cannabis	Cannabis	

DRE Category	Drug Category	Drug	Schedule
Prescription Drug	Anesthetic	Bupivacaine	
	Anesthetic	Lidocaine	
	Anesthetic	Propofol	
	Antiarrhythmic	Flecainide	
	Antibiotic	Trimethoprim	
	Anticholinergic	Dicyclomine	
	Anticonvulsant	Carbamazepine	
	Anticonvulsant	Lacosamide	
	Anticonvulsant	Lamotrigine	
	Anticonvulsant	Levetiracetam	
	Anticonvulsant	Phenytoin	
	Anticonvulsant	Topiramate	
	Anticonvulsant	Valproic Acid	
	Antidepressant	Amitriptyline	
	Antidepressant	Bupropion	
	Antidepressant	Cyclobenzaprine	
	Antidepressant	Doxepin	
	Antidepressant	Duloxetine	
	Antidepressant	Mirtazapine	
	Antidepressant	Trazodone	
	Antifungal	Fluconazole	
	Antihistamine	Cetirizine	
	Antihistamine	Chlorpheniramine	
	Antihistamine	Diphenhydramine	
	Antihistamine	Doxylamine	
	Antihistamine	Hydroxyzine	
	Antihistamine	Promethazine	
	Antihypertensive	Diltiazem	
	Antihypertensive	Metoprolol	
	Antihypertensive	Verapamil	
	Antiparasitic	Levamisole	
	Antiplatelet	Ticlopidine	
	Antipsychotic	Aripiprazole	
	Antipsychotic	Brexpiprazole	
	Antipsychotic	Olanzapine	
	Antipsychotic	Quetiapine	
	Antipsychotic	Ziprasidone	
	Antitussive	Dextromethorphan	
	SSRI	Citalopram	
	SSRI	Fluoxetine	
	SSRI	Sertraline	
	SSRI	Venlafaxine	

Source: CBI, ChemaTox, DRE Manual, CRS 18-18-203, analyzed by DCJ.

APPENDIX B
DUI CASE FILINGS AND RATE BY JUDICIAL DISTRICT AND COUNTY, 2016 and 2017

District	County	2016 Count	2016 Rate (per 100,000 16 and older)	2017 Count	2017 Rate (per 100,000 16 and older)
1	Gilpin	117	2,369	164	3,260
1	Jefferson	2,489	532	2,597	549
2	Denver	2,269	399	1,763	304
3	Huerfano	68	1,216	53	940
3	Las Animas	111	957	101	862
4	El Paso	2,750	512	3,074	561
4	Teller	176	870	207	997
5	Clear Creek	110	1,382	120	1,474
5	Eagle	568	1,303	527	1,196
5	Lake	70	1,176	81	1,331
5	Summit	395	1,502	411	1,548
6	Archuleta	85	793	70	630
6	La Plata	671	1,474	486	1,060
6	San Juan	8	1,365	1	165
7	Delta	204	816	166	658
7	Gunnison	186	1,361	187	1,330
7	Hinsdale		0	2	304
7	Montrose	224	680	220	655
7	Ouray	58	1,424	56	1,368
7	San Miguel	115	1,778	66	1,017
8	Jackson	6	529	10	874
8	Larimer	1,789	649	2,052	732
9	Garfield	633	1,379	681	1,470
9	Pitkin	150	969	173	1,114
9	Rio Blanco	43	853	78	1,563
10	Pueblo	656	500	556	418
11	Chaffee	115	705	173	1,032
11	Custer	18	448	44	1,035
11	Fremont	281	701	216	532
11	Park	78	530	85	560
12	Alamosa	189	1,534	192	1,549
12	Conejos	35	573	32	516
12	Costilla	25	814	28	898
12	Mineral	4	614	8	1,239
12	Rio Grande	72	813	64	725
12	Saguache	24	471	19	361
13	Kit Carson	65	1,054	52	910

District	County	2016 Count	2016 Rate (per 100,000 16 and older)	2017 Count	2017 Rate (per 100,000 16 and older)
13	Logan	103	561	113	620
13	Morgan	165	775	209	978
13	Phillips	15	449	24	717
13	Sedgwick	11	562	6	317
13	Washington	23	585	15	374
13	Yuma	37	480	27	352
14	Grand	167	1,329	200	1,571
14	Moffat	149	1,482	139	1,380
14	Routt	165	815	229	1,107
15	Baca	19	663	11	383
15	Cheyenne	20	1,414	10	706
15	Kiowa	9	828	7	634
15	Prowers	121	1,332	89	974
16	Bent	15	308	27	535
16	Crowley	14	296	37	711
16	Otero	96	674	143	995
17	Adams	2,853	755	2,830	735
17	Broomfield	235	447	202	372
18	Arapahoe	3,157	630	2,413	475
18	Douglas	1,016	400	910	346
18	Elbert	98	477	97	461
18	Lincoln	37	812	41	903
19	Weld	1,378	613	1,527	655
20	Boulder	1,426	537	1,277	477
21	Mesa	834	695	811	667
22	Dolores	11	661	8	480
22	Montezuma	213	1,029	237	1,136

Source: State Judicial Department, Denver County Court, and State Demography Office, analyzed by DCJ.

APPENDIX C
DUI CASE FILINGS BY ARRESTING AGENCY, 2016 and 2017

Arresting Agency	2016	2017	Percent Change
Adams County Sheriff's Office	576	566	-2%
Adams State Public Safety	4	4	0%
Alamosa Police Dept	79	91	15%
Alamosa Sheriff's Office	22	44	100%
Alma Police Dept	2		-100%
Antonito Police Dept	8	1	-88%
Arapahoe County Sheriff's Office	280	204	-27%
Arapahoe District Attorney	5	1	-80%
Archuleta County Sheriff's Office	19	15	-21%
Arvada Police Dept	459	467	2%
Aspen Police Dept	41	50	22%
Ault Police Dept	8	7	-13%
Aurora Police Dept	2,221	1,570	-29%
Avon Police Dept	101	130	29%
Baca County Sheriff's Office	4	4	0%
Basalt Police Dept	47	27	-43%
Bayfield Police Dept	9	3	-67%
Bent County Sheriff's Office	5	18	260%
Berthoud Police Dept	2	1	-50%
Black Hawk Police Dept	31	40	29%
Boulder County Sheriff's Office	217	190	-12%
Boulder District Attorney	1	3	200%
Boulder Police Dept	479	351	-27%
Breckenridge Police Dept	62	74	19%
Brighton Police Dept	233	222	-5%
Broomfield County Sheriff's Office	234	199	-15%
Brush Police Dept	32	12	-63%
Buena Vista Police Dept	27	27	0%
Burlington Police Dept	18	19	6%
Calhan Town Marshal	6	1	-83%
Campo Police Department	1		-100%
Canon City Police Dept	52	62	19%
Carbondale Police Dept	86	102	19%
Castle Rock Police Dept	181	163	-10%
Cedaredge Marshall Office	3	5	67%
Centennial Police Dept	280	174	-38%
Center Police Dept	10	3	-70%
Chaffee County Sheriff's Office	22	26	18%
Chatfield State Park Rangers	1	1	0%
Cherry Creek State Park-Aurora	2	1	-50%
Cherry Hills Police Dept	34	53	56%
Cheyenne County Sheriff's Office	19	7	-63%
Clear Creek Sheriff's Office	21	28	33%
CO Div of Wildlife	2	1	-50%
CO Div of Wildlife Central Cty	1		-100%
CO Div of Wildlife Pueblo	2	2	0%
CO Div Parks Law Enf	8	13	63%
CO MH Institute at Pueblo	2	5	150%
CO School of Mines PD	6	1	-83%
CO Springs Police Dept	1,614	1,899	18%
CO State University PD	181	200	10%
Collbran Town Marshall	3	1	-67%

Arresting Agency	2016	2017	Percent Change
Colorado Attorney General	1		-100%
Colorado State Patrol	4,586	4,821	5%
Columbine Valley Police Dept	16	17	6%
Commerce City Police Dept	201	219	9%
Conejos County Sheriff's Office	12	4	-67%
Cortez Police Dept	133	126	-5%
Costilla County Sheriff's Office	19	21	11%
Craig Police Dept	75	51	-32%
Creede Police Dept	1		-100%
Crested Butte Marshal	18	13	-28%
Cripple Creek Police Dept	12	24	100%
Crowley County Sheriff's Office	11	30	173%
Custer County Sheriff's Office	16	41	156%
Dacono Police Dept	70	41	-41%
DeBeque Police Dept	6	3	-50%
Del Norte Police Dept	16	6	-63%
Delta County Sheriff's Office	20	26	30%
Delta District Attorney	1		-100%
Delta Police Dept	50	42	-16%
Denver Police Dept	2,269	1,763	-22%
Dillon Police Dept	39	23	-41%
Dolores County Sheriff's Office	7	4	-43%
Douglas County Sheriff's Office	397	360	-9%
Douglas District Atty	1		-100%
Durango Police Dept	280	221	-21%
Eagle County Drug Task Force	1		-100%
Eagle Police Dept	73	49	-33%
Eagle Sheriff's Office	96	67	-30%
Eaton Police Dept	11	14	27%
Edgewater Police Dept	194	128	-34%
El Paso County Sheriff's Office	424	359	-15%
El Paso District Attorney	23	15	-35%
Elbert County Sheriff's Office	76	68	-11%
Elizabeth Police Dept	11	7	-36%
Englewood Police Dept	180	173	-4%
Erie Police Dept	83	69	-17%
Estes Park Police Dept	58	45	-22%
Evans Police Dept	90	104	16%
Fairplay Police Dept	3	3	0%
Federal Heights Police Dept	37	72	95%
Firestone Police Dept	21	18	-14%
Florence Police Dept	22	15	-32%
Fort Lupton Police Dept	112	148	32%
Fort Morgan Police Dept	52	90	73%
Fountain Police Dept	141	185	31%
Fowler Police Dept	14		-100%
Frederick Police Dept	52	42	-19%
Fremont County Sheriff's Office	150	88	-41%
Fremont District Attorney	1		-100%
Frisco Police Dept	48	42	-13%
Fruita Police Dept	20	27	35%
Ft Collins Police Dept	464	441	-5%
Ft Lewis St College Security	3	10	233%
Garfield County Sheriff's Office	107	101	-6%
Garfield District Attorney	5	6	20%
Georgetown Police Dept	8	11	38%

Arresting Agency	2016	2017	Percent Change
Gilpin County Sheriff's Office	48	92	92%
Glendale Police Dept	23	27	17%
Glenwood Springs Police Dept	155	211	36%
Golden Police Dept	131	189	44%
Granby Police Department	15	21	40%
Grand County Sheriff's Office	55	69	25%
Grand District Attorney	1		-100%
Grand Junction Police Dept	400	346	-14%
Greeley Police Dept	350	442	26%
Green Mountain Falls Marshall	2		-100%
Greenwood Village Police Dept	136	124	-9%
Gunnison County Sheriff's Office	38	47	24%
Gunnison Police Dept	58	71	22%
Haxtun Police Dept	2		-100%
Hayden Police Dept	1	4	300%
Highline State Park -Loma	1		-100%
Hinsdale County Sheriff's Office		2	
Holyoke Police Dept	10	11	10%
Hotchkiss Police Dept	1	4	300%
Hudson Municipal Court		1	
Hudson Police Dept	2	4	100%
Huerfano County Sheriff's Office	2	11	450%
Huerfano District Attorney	3		-100%
Hugo Marshal	1	2	100%
Idaho Springs Police Dept	25	33	32%
Ignacio Police Dept	5	3	-40%
Jackson County Sheriff's Office	5	9	80%
Jackson Lake State Park-Orchard		2	
Jefferson County Sheriff's Office	313	384	23%
Jefferson District Attorney		1	
Johnstown Police Dept	32	28	-13%
Keenesburg Police Dept	3	2	-33%
Kersey Police Dept	5	10	100%
Kiowa City Police Dept.	2	4	100%
Kiowa County Sheriff's Office	8	3	-63%
Kit Carson County Sheriff's Office	26	21	-19%
Kremmling Police Dept	4	7	75%
La Jara Police Dept	3	3	0%
La Junta Police Dept	18	49	172%
La Plata County Sheriff's Office	198	113	-43%
Lafayette Police Dept	81	97	20%
Lake County Sheriff's Office	38	51	34%
Lakeside Police Dept	6	18	200%
Lakewood Police Dept	606	534	-12%
Lamar Police Dept	67	41	-39%
Larimer County Sheriff's Office	487	548	13%
Larimer District Attorney	2		-100%
Las Animas County Sheriff's Office	11	8	-27%
LaSalle Police Dept	33	27	-18%
Leadville Police Dept	18	12	-33%
Limon Police Dept	6	15	150%
Lincoln County Sheriff's Office	7	5	-29%
Littleton Police Dept	126	91	-28%
Lochbuie Police Dept	33	29	-12%
Log Lane Police Dept	4	24	500%
Logan County Sheriff's Office	46	31	-33%

Arresting Agency	2016	2017	Percent Change
Lone Tree Police Dept	92	83	-10%
Longmont Police Dept	380	340	-11%
Louisville Police Dept	65	99	52%
Loveland Police Dept	359	490	36%
Manassa Police Dept		1	
Mancos Police Dept	2	2	0%
Manitou Springs Police Dept	60	122	103%
Manzanola Police Dept		1	
Mead Police Department		1	
Meeker Police Dept	8	7	-13%
Mesa County Sheriff's Office	158	153	-3%
Mesa District Attorney		2	
Metro Auto Theft Task Force	1		-100%
Milliken Police Dept	38	37	-3%
Mineral County Sheriff's Office	1		-100%
Moffat County Sheriff's Office	28	17	-39%
Moffat District Attorney	1		-100%
Monte Vista Police Dept	29	18	-38%
Montezuma County Sheriff's Office	31	54	74%
Montrose County Sheriff's Office	39	38	-3%
Montrose County Sheriff's Office-Nucla	4		-100%
Montrose Police Dept	84	81	-4%
Monument Police Dept	21	20	-5%
Morgan County Sheriff's Office	32	34	6%
Morrison Police Dept	20	26	30%
Mountain View Police Dept	22	15	-32%
Mountain Village Police Dept	4	3	-25%
Mt. Crested Butte Police Dept	33	29	-12%
Nederland Marshal's Office	8		-100%
New Castle Police Dept	18	7	-61%
North Metro Task Force	2	5	150%
North Sterling Res State Park	1		-100%
Northglenn Police Dept	258	224	-13%
Norwood Police Department		3	
Nunn Police Dept	1		-100%
Oak Creek Police Dept	1	5	400%
Olathe Police Dept	7	7	0%
Otero County Sheriff's Office	7	19	171%
Ouray Police Dept	5	5	0%
Ouray Sheriff's Office	21	14	-33%
Pagosa Springs Police Dept	37	29	-22%
Palisade Police Dept	17	21	24%
Palmer Lake Police Dept	4	4	0%
Paonia Police Dept	2	4	100%
Parachute Police Dept	43	27	-37%
Park County Sheriff's Office	50	57	14%
Park District Attorney		1	
Parker Police Dept	189	158	-16%
Phillips County Sheriff's Office	1	13	1200%
Pitkin County Sheriff's Office	58	70	21%
Pitkin District Attorney	1	5	400%
Platteville Police Dept	32	21	-34%
Prowers County Sheriff's Office	31	31	0%
Pueblo Community College PD	1		-100%
Pueblo County Sheriff's Office	173	148	-14%
Pueblo Police Dept	334	269	-19%

Arresting Agency	2016	2017	Percent Change
Pueblo State Park Rangers	3	11	267%
Rangely Police Dept	16	44	175%
Red Rocks Community College Police Dept	3	1	-67%
Ridgway Marshall's Office	3	1	-67%
Rifle Gap/Falls St Pk Rangers	1		-100%
Rifle Police Dept	63	55	-13%
Rio Blanco County Sheriff's Office	14	21	50%
Rio Grande County Sheriff's Office	9	16	78%
Rocky Ford Police Dept	8	6	-25%
Routt County Sheriff's Office	21	34	62%
Sagauche County Sheriff's Office	8	5	-38%
Salida Police Dept	39	83	113%
San Juan County Sheriff's Office	6	1	-83%
San Miguel County Sheriff's Office	16	15	-6%
San Miguel District Attorney	1		-100%
Sedgwick County Sheriff's Office	7	6	-14%
Sheridan Police Dept	74	49	-34%
Silt Police Dept	8	9	13%
Silverthorne Police Dept	29	34	17%
Simla Police Dept	2	6	200%
Snowmass Village Police Dept	16	20	25%
South Fork Police Department		2	
Southern Ute Tribal Police	1		-100%
Springfield Police Dept	8	2	-75%
Stagecoach State Park Rangers		2	
Steamboat Springs Police Dept	74	80	8%
Sterling Police Dept	34	58	71%
Stratton Police Dept	2		-100%
Summit County Sheriff's Office	84	88	5%
Teller County Sheriff's Office	80	86	8%
Teller District Attorney 4th	2	1	-50%
Telluride Marshal	81	31	-62%
Thornton Police Dept	455	514	13%
Timnath Police Dept	6	7	17%
Trinidad Police Dept	31	33	6%
Univ CO at CO Springs	1	5	400%
Univ CO Health Sciences PD-Denver	6	4	-33%
Univ Hlth Scien PD Fitzsimmons	7	3	-57%
Univ of CO Police	65	30	-54%
Univ of Northern CO PD	3	4	33%
Vail Police Dept	61	52	-15%
Weld County Sheriff's Office	134	166	24%
Weld District Attorney		1	
West Metro Task Force	40	44	10%
Westminster Police Dept	341	441	29%
Wheat Ridge Police Dept	121	114	-6%
Wiggins Police Dept		1	
Windsor Police Dept	44	56	27%
Winter Park/Fraser Police Dept	55	74	35%
Woodland Park Police Dept	48	67	40%
Wray Police Dept	1	4	300%
Yuma County Sheriff's Office	6	9	50%
Yuma Police Dept	14	4	-71%

Source: State Judicial Department and Denver County Court, analyzed by DCJ

APPENDIX D
COMMON INITIAL CHARGES, EXCLUDING DUI, 2017

Initial Charge	Count
CARELESS DRIVING	7,506
LANE USAGE VIOLATION	4,839
FAILURE TO DISPLAY PROOF OF INSURANCE	4,511
DRIVING UNDER RESTRAINT	2,844
ALCOHOL-OPEN CONTAINER/DRINK IN VEHICLE	2,019
DRIVER'S LICENSE-DRIVING W/OUT	1,854
SPEEDING 10-19 OVER LIMIT	1,633
RECKLESS DRIVING	1,301
DRIVING UNDER RESTRAINT-ALCOHOL-RELATED	958
FAILING TO REPORT ACCIDENT-CALL POLICE	867
CONTROLLED SUB-POSS SCH 1/2/FL/KT/CT	859
NO INSURANCE-DRIVER	807
HEADLAMPS-FAILURE TO DISPLAY	724
NO INSURANCE-OWNER	685
LEAVING SCENE/ACCIDENT-DAMAGE ONLY	581
DRIVING AFTER REVOCATION PROHIBITED (HTO	575
DRUG PARAPHERNALIA-POSSESS	569
VIOLATION P/O-CRIMINAL	566
CHILD ABUSE-KNOWINGLY/RECKLESS-NO INJURY	546
ALCOHOL-UNDER 21- POSSESS/CONSUMP	533
SIGNALING VIOLATION	521
LICENSE PLATES-EXPIRED	520
RED LIGHT-FAIL TO STOP	494
LEAVING SCENE/ACCIDENT-UNATTENDED VEH	462
SEAT BELT NOT USED	440
SPEEDING 20-24 OVER LIMIT	424
FAIL OBEY TRAFFIC CONTROL DEVICE	411
SPEEDING 25-39 OVER LIMIT	405
CARELESS DRIVING RESULTING IN INJURY	388
WEAPON-PROHIBITED USE-DRUNK W/GUN	383
MARIJUANA-POSSESS OPEN CONTAINER IN VEH	375
TURNING IMPROPERLY	370
OBSTRUCTING A PEACE OFFICER	361
RESISTING ARREST	340
REGISTRATION-FICTITIOUS PLATE	330
CONTROLLED SUBSTANCE-POSS SCH 3/4/5	325
MARIJUANA-UNDER21- POSSESS/CONSUMP	306
TURNING W/O SIGNALING	306
CHILD ABUSE-NEGLIGENCE-NO INJURY	302
STOP SIGN-FAIL TO STOP	289

Source: State Judicial Department and Denver County Court, analyzed by DCJ.

APPENDIX E
COMMON FINAL CHARGES, EXCLUDING DUI, 2017

Final Charge	Count
CARELESS DRIVING	7,550
LANE USAGE VIOLATION	4,939
FAILURE TO DISPLAY PROOF OF INSURANCE	4,502
DRIVING UNDER RESTRAINT	2,770
ALCOHOL-OPEN CONTAINER/DRINK IN VEHICLE	2,017
DRIVER'S LICENSE-DRIVING W/OUT	1,857
SPEEDING 10-19 OVER LIMIT	1,625
RECKLESS DRIVING	1,482
DRIVING UNDER RESTRAINT-ALCOHOL-RELATED	1,011
FAILING TO REPORT ACCIDENT-CALL POLICE	864
CONTROLLED SUB-POSS SCH 1/2/FL/KT/CT	818
NO INSURANCE-DRIVER	808
HEADLAMPS-FAILURE TO DISPLAY	724
NO INSURANCE-OWNER	683
LEAVING SCENE/ACCIDENT-DAMAGE ONLY	578
DRUG PARAPHERNALIA-POSSESS	571
DRIVING AFTER REVOCATION PROHIBITED (HTO	569
VIOLATION P/O-CRIMINAL	545
ALCOHOL-UNDER 21- POSSESS/CONSUMP	536
CHILD ABUSE-KNOWINGLY/RECKLESS-NO INJURY	518
LICENSE PLATES-EXPIRED	517
SIGNALING VIOLATION	517
RED LIGHT-FAIL TO STOP	492
LEAVING SCENE/ACCIDENT-UNATTENDED VEH	464
SEAT BELT NOT USED	440
SPEEDING 20-24 OVER LIMIT	418
FAIL OBEY TRAFFIC CONTROL DEVICE	410
SPEEDING 25-39 OVER LIMIT	398
WEAPON-PROHIBITED USE-DRUNK W/GUN	382
CARELESS DRIVING RESULTING IN INJURY	378
MARIJUANA-POSSESS OPEN CONTAINER IN VEH	374
TURNING IMPROPERLY	367
OBSTRUCTING A PEACE OFFICER	366
CONTROLLED SUBSTANCE-POSS SCH 3/4/5	350
RESISTING ARREST	333
REGISTRATION-FICTITIOUS PLATE	332
CHILD ABUSE-NEGLIGENCE-NO INJURY	328
MARIJUANA-UNDER21- POSSESS/CONSUMP	307
TURNING W/O SIGNALING	303
STOP SIGN-FAIL TO STOP	288

Source: State Judicial Department and Denver County Court, analyzed by DCJ.

APPENDIX F
DUI FINAL CHARGE, BY DISPOSITION, 2017

		Guilty	Deferred Judgment	Deferred Dismissed	Diversion	Dismissed	Not Guilty	Not Proven	Awaiting Disposition	Sum
Final DUI Charge	UDD	105	4	7		9			1	126
	DWAI	8,276	612	314	3	241	10		66	9,514
	DUI	7,572	532	227	50	1,975	155	1	1,720	12,240
	DWAI 1-2 Prior	1,101	10			4	1		11	1,127
	DUI 1-2 Prior	2,001	12			56	9		73	2,151
	DWAI 3+ Prior	40				6	1		3	50
	DUI 3+ Prior	751	15			72	16		111	965
Final Other Charge	ALCOHOL-UNDER 21- POSSESS/CONSUMP	2		1						3
	ALCOHOL-UNDERAGE POSSESSION/CONSUMPTION			1						1
	CARELESS DRIVING	88	5						1	94
	CARELESS DRIVING-BICYCLE/ELEC BICYCLE	4								4
	CONTROLLED SUBSTANCE-UNLAWFUL USE	1								1
	DISORDERLY CONDUCT-UNREASONABLE NOISE	1								1
	DRIVER'S LICENSE-DRIVING W/OUT	1								1
	DRIVER'S LICENSE-NOT IN POSSESSION	1								1
	DRIVER'S LICENSE-PERMIT UNAUTH MINOR/DR	1								1
	DRIVER'S LICENSE-PERMIT UNAUTH PERSON/DR	2								2
	DRIVING UNDER RESTRAINT		1							1
	DRIVING UNDER RESTRAINT-ALCOHOL-RELATED	1								1
	IMPROPER MOUNTAIN DRIVING	2								2
	LANE USAGE VIOLATION	5								5
	MARIJUANA-UNDER21- POSSESS/CONSUMP	2								2
	MARIJUANA-USE OR CONSUME IN VEHICLE	1								1
	MENACING	1								1
	OBSTRUCTING A PEACE OFFICER	1								1
	PERJURY 2		1							1
	RECKLESS DRIVING	141	3	2						146
	RECKLESS DRIVING-BICYCLE/ELEC BICYCLE	1								1
	SIGNALING W/OUT TURNING	1								1
	SPEEDING 10-19 OVER LIMIT	1								1
	SPEEDING 5-9 OVER LIMIT	1								1
	SPEEDING TOO FAST FOR CONDITIONS	2								2
	TAIL LAMP VIOLATION	1								1
	UNSAFE BACKING	1								1
	UNSAFE OR DEFECTIVE VEHICLE	2								2
	VEHICULAR ELUDING	1								1
	Total	20,112	1,195	552	53	2,363	192	1	1,986	26,454

Source: State Judicial Department and Denver County Court, analyzed by DCJ.

APPENDIX G
TOP 20 COMMON FINAL CHARGES ASSOCIATED WITH ALCOHOL PRESENCE, EXCLUDING DUI, 2017

Final Charge	Count
CARELESS DRIVING	4,239
LANE USAGE VIOLATION	3,010
FAILURE TO DISPLAY PROOF OF INSURANCE	2,479
DRIVING UNDER RESTRAINT	1,266
ALCOHOL-OPEN CONTAINER/DRINK IN VEHICLE	1,200
DRIVER'S LICENSE-DRIVING W/OUT	1,050
SPEEDING 10-19 OVER LIMIT	1,015
RECKLESS DRIVING	681
DRIVING UNDER RESTRAINT-ALCOHOL-RELATED	458
HEADLAMPS-FAILURE TO DISPLAY	452
FAILING TO REPORT ACCIDENT-CALL POLICE	431
NO INSURANCE-DRIVER	374
ALCOHOL-UNDER 21- POSSESS/CONSUMP	371
NO INSURANCE-OWNER	364
SIGNALING VIOLATION	327
RED LIGHT-FAIL TO STOP	300
SPEEDING 20-24 OVER LIMIT	287
LICENSE PLATES-EXPIRED	279
LEAVING SCENE/ACCIDENT-DAMAGE ONLY	276
CHILD ABUSE-KNOWINGLY/RECKLESS-NO INJURY	260

Source: Judicial, Denver Court, CBI, CDPHE, ChemaTox, Denver Crime Lab at DPD, analyzed by DCJ.

APPENDIX H
TOP 20 COMMON FINAL CHARGES ASSOCIATED WITH DELTA-9 THC PRESENCE, EXCLUDING DUI, 2017

Final Charge	Count
CARELESS DRIVING	614
FAILURE TO DISPLAY PROOF OF INSURANCE	437
LANE USAGE VIOLATION	421
DRIVING UNDER RESTRAINT	260
SPEEDING 10-19 OVER LIMIT	251
MARIJUANA-UNDER21- POSSESS/CONSUMP	208
MARIJUANA-POSSESS OPEN CONTAINER IN VEH	185
RECKLESS DRIVING	176
DRIVER'S LICENSE-DRIVING W/OUT	166
ALCOHOL-OPEN CONTAINER/DRINK IN VEHICLE	141
DRUG PARAPHERNALIA-POSSESS	129
CONTROLLED SUB-POSS SCH 1/2/FL/KT/CT	103
ALCOHOL-UNDER 21- POSSESS/CONSUMP	99
HEADLAMPS-FAILURE TO DISPLAY	98
NO INSURANCE-OWNER	92
NO INSURANCE-DRIVER	82
SEAT BELT NOT USED	79
MARIJUANA PARAPHERNALIA-UNDER21	69
LICENSE PLATES-EXPIRED	61
FAILING TO REPORT ACCIDENT-CALL POLICE	60

Source: Judicial, Denver Court, CBI, CDPHE, ChemaTox, Denver Crime Lab at DPD, analyzed by DCJ.

APPENDIX I
COUNT OF DRUGS, 2016 and 2017

	2016	2017
Alcohol	15,495	15,088
Marijuana (Delta-9 THC)	2,489	2,739
Methamphetamine	567	632
Alprazolam	481	367
Cocaine	337	354
Clonazepam	206	184
Diazepam or Chlordiazepoxide	163	151
Lorazepam	115	129
Morphine	145	115
Oxycodone	125	106
Zolpidem	107	105
Tramadol	49	45
Hydrocodone	49	42
Amphetamine	33	40
Codeine	16	34
Heroin	7	24
MDMA	17	24
Buprenorphine	3	21
Carisoprodol	41	21
Methadone	33	21
Polyfluorinated ethane	8	20
Diphenhydramine	15	18
Venlafaxine	23	17
Lamotrigine	20	14
Midazolam	12	12
Butalbital	15	11
Citalopram	33	11
Fluoxetine	14	10
Meprobamate	10	9
Fentanyl	6	8
Ketamine	3	7
Sertraline	11	7
Topiramate	13	6
Hydroxyzine	13	5
Phenobarbital	5	5
Propofol	2	5
Quetiapine	15	5
Trazodone	29	5
Dextromethorphan	5	4
Hydromorphone		4
Levetiracetam	3	4
Amitriptyline	7	3
Cetirizine	4	3

	2016	2017
Doxylamine	1	3
Mirtazapine	6	3
Nordiazepam	2	3
Promethazine	6	3
Bupropion	5	2
Carbamazepine	1	2
Cyclobenzaprine	7	2
MDA	3	2
Temazepam	3	2
Trimethoprim	4	2
Valproic Acid	3	2
Aripiprazole		1
Brexpiprazole		1
Bupivacaine	1	1
Chlorpheniramine	1	
Demoxepam		1
Dicyclomine	1	
Diltiazem	2	
Doxepin		1
Duloxetine		1
Etizolam	2	1
Flecainide		1
Fluconazole	1	1
Lacosamide	1	
Levamisole		1
Lidocaine	9	1
Metoprolol		1
Mitragynine		1
Modafinil	1	1
Olanzapine	1	
Oxazepam		1
Oxymorphone	1	
Phenytoin	2	
Psuedoephedrine	1	1
Toluene	1	
Triazolam	1	
U-47700		1
Verapamil		1
Ziprasidone		1
Zopiclone	2	

Source: Judicial, Denver Court, CBI, CDPHE, ChemaTox, Denver Crime Lab at DPD, analyzed by DCJ.

APPENDIX J
AMENDED DUI CHARGES BASED ON PRESENCE OF TOXICOLOGY DATA, 2017

Initial to Final DUI Charges for Cases without Toxicology Data, 2017

Initial Charge	Final Charge: UDD	DWAI	DUI	DWAI 1-2 Prior	DUI 1-2 Prior	DWAI 3+ Prior	DUI 3+ Prior	Other	Total
UDD	8								8
DWAI		729	4	2				1	736
DUI	11	1,995	4,114	404	573		9	137	7,243
DWAI 1-2 Prior				81	1	1			83
DUI 1-2 Prior		10	8	33	267		3	6	327
DWAI 3+ Prior						15			15
DUI 3+ Prior		3	10	3	19	18	499		552
Other	1	4	3	2	1				11
Total	20	2,741	4,139	525	861	34	511	144	8,975

Source: State Judicial Department and Denver County Court, analyzed by DCJ.

Initial to Final DUI Charges for Cases with Toxicology Data, 2017

Initial Charge	Final Charge: UDD	DWAI	DUI	DWAI 1-2 Prior	DUI 1-2 Prior	DWAI 3+ Prior	DUI 3+ Prior	Other	Total
UDD	65								65
DWAI	10	2,008	12	36	2			48	2,116
DUI	31	4,754	8,048	481	1,008	1	7	131	14,461
DWAI 1-2 Prior				68				1	69
DUI 1-2 Prior		8	15	16	263			4	306
DWAI 3+ Prior		1	1			14	1		17
DUI 3+ Prior		1	15	1	16	1	446	1	481
VEHICULAR ASSAULT			1						1
Other		9	1		1				11
Total	106	6,781	8,093	602	1,290	16	454	185	17,527

Source: State Judicial Department and Denver County Court, analyzed by DCJ.

APPENDIX K
MONETARY SENTENCES FOR OFFENDERS, 2017

Sentence Description	Case Count	Total Amount	Average Amount
Victims Assistance Fund	20,008	$3,401,104.30	$169.99
Rural Youth Alcohol/Sub Abuse Surcharge	19,738	$101,198.00	$5.13
Brain Injury Fund (Traumatic)	19,462	$389,645.00	$20.02
LEAF Fine	19,401	$1,747,985.00	$90.10
Persistent Drunk Driving Surcharge	19,159	$2,042,462.50	$106.61
Restorative Justice Surcharge	19,130	$191,473.00	$10.01
Victim Compensation Fund	19,129	$785,944.00	$41.09
Genetic Testing Surcharge	19,126	$47,880.00	$2.50
Alcohol Evaluation Fee	19,088	$3,828,318.50	$200.56
Driving Und Influence/Ability Impaired	17,998	$8,666,966.75	$481.55
Court Costs	17,931	$397,995.53	$22.20
Court Security Fund	17,903	$89,636.50	$5.01
E-discovery	13,432	$67,885.00	$5.05
Probation Supervision Fee	13,155	$15,215,016.81	$1,156.60
Substance Affected Driving Data Surcharge	7,019	$14,222.00	$2.03
Cost of Prosecution-Charge Agency	4,202	$553,483.53	$131.72
Public Defender Accts Receivable	4,015	$101,250.00	$25.22
Useful Public Service	3,515	$310,786.50	$88.42
Request for Time to Pay	1,763	$44,425.00	$25.20
Cost of Care - Probation/Adult	1,096	$2,385,710.82	$2,176.74
Family Friendly Surcharge	903	$908.00	$1.01
Restitution	536	$1,234,552.61	$2,303.27
Drug Standardized Assessment	471	$23,792.00	$50.51
Traffic Fine	331	$91,577.80	$276.67
Cost of Prosecution-Sheriff	306	$49,477.88	$161.69
Court Ordered Contribution	159	$33,840.00	$212.83
Cost of Care - Jail	156	$36,683.00	$235.15
District Attorney Cost Recovery	115	$17,913.45	$155.77
Misdemeanor Fine	94	$43,575.50	$463.57
Warrant/Extradition Fee Sheriff	64	$10,211.78	$159.56
Address Confidentiality Fund	38	$1,061.00	$27.92
Restitution-Insurance	28	$204,967.91	$7,320.28
Drug Test - Cost Recovery	20	$1,126.46	$56.32
Felony Fine	18	$25,100.00	$1,394.44
Restitution-Victims Compensation	11	$84,888.27	$7,717.12
Minor in Possession of Alcohol	7	$175.00	$25.00
Cost of Prosecution-Other	7	$1,564.60	$223.51
Cost of Prosecution-Jud Pd Cost	6	$375.74	$62.62
Cost of Proceedings	5	$1,094.28	$218.86
Drug Offender Surcharge	4	$3,400.00	$850.00
District Attorney Local Payment	4	$265.60	$66.40
Alt Def Counsel Cost Recovery	3	$75.00	$25.00
Outstanding Judg/Warrant Fee	3	$70.00	$23.33
Request to Transfer Probation Fee	3	$300.00	$100.00

Sentence Description	Case Count	Total Amount	Average Amount
Offender Identification Fund	2	$256.00	$128.00
Late Fee	2	$20.00	$10.00
Cost of Care - Outside Agency	2	$161.24	$80.62
Sex Offender Evaluation Fee	2	$1,021.00	$510.50
Offender Services	1	$850.00	$850.00
County Traffic Fine	1	$600.00	$600.00
Assessed Costs - Other	1	$255.00	$255.00
Juvenile Fine	1	$216.00	$216.00
Special Advocate Surcharge	1	$2.00	$2.00
Assessed Costs - Sheriff	1	$16.00	$16.00

Source: State Judicial Department, analyzed by DCJ.