2018

KENTUCKY DUI ASSESSMENT REPORT

Prepared for:

Koleen Slusher
Director
Division of Behavioral Health

Prepared by:

Center on Drug and Alcohol Research
University of Kentucky
February 2019

Division of Behavioral Health
Driving Under the Influence Program

DUI Program Manager — Megan Kissel

Central Region Coordinator — Deniece Bell

Eastern Region Coordinator — Wilma Terry

Western Central Region Coordinator — Vacant

Western Region Coordinator — Stephen Shore

UK Center on Drug and Alcohol Research

Table of Contents

EXECUTIVE SUMMARY

In calendar year 2018, there were approximately 136 licensed and certified DUI Assessment Programs and 16,773 DUI assessment records were submitted to the Kentucky Division of Behavioral Health, a decrease from the 17,197 submitted in 2017. These records include education and treatment information for persons convicted of DUI who were assessed and referred for an intervention. Using the web-based Kentucky DUI Assessment Instrument (KDAI), records are submitted by certified DUI assessors once the initial substance use assessment is performed. The University of Kentucky Center on Drug and Alcohol Research is contracted by the Division of Behavioral Health, Department for Behavioral Health, Developmental and Intellectual Disabilities to receive these records from DUI assessment programs and to maintain this information in a database. This report provides information on assessments conducted from January 1, 2018 through December 31, 2018 and also provides 5-year and 10-year trends using assessment data from 2009 to 2018.

The typical person receiving a substance use assessment as a result of a DUI conviction in Kentucky in 2018 a) was a low-income White male in his 20's or 30's who was convicted of a first offense DUI with a blood alcohol level between 0.08 and 0.15 g/dL, b) met DSM-5 diagnostic criteria for a substance use disorder in the past 12 months, and c) was referred to either a 20-hour education intervention or to outpatient substance use treatment.

DEMOGRAPHICS

Three out of four DUI assessments were for males, and more than 80.0% were for White persons (of those who reported race). The majority of DUI assessments were also for persons between 21 and 39 years old, with 5.9% of assessments being for persons younger than 21. Of DUI clients reporting income, nearly 60% reported a yearly household income less than $20,000.

SUBSTANCES INVOLVED IN DUI ARREST

One of every 3 DUI assessments (33.4%) were for DUIs that involved drugs – an increase from previous years. Females (40.6%) and White (37.6%) DUI clients were more likely to have driven under the influence of drugs in relation to males (30.7%) and non-Whites (20.1%). Age was also related to drug involvement. Drug-involved DUI clients were more likely to be younger than 21 and were more likely to have been convicted of a first offense DUI. A majority (54.2%) of individuals reported that they were alcohol tested with their current DUI while only 21.0% were drug tested. Marijuana was the most commonly involved non-alcohol drug (14.1%).

SCREENING

On the alcohol (AUDIT) and drug use (DAST) screening instruments, a higher percentage of clients had a positive DAST score (30.1%) than a positive AUDIT score (26.8%). Females had higher DAST scores but lower AUDIT scores than males while persons younger than 40 years old had higher DAST scores but lower AUDIT scores than those clients 40 years old and older. More than half (53.2%) of the submitted assessments were for DUI clients who met DSM-5 criteria for a substance use disorder, which is a slight decrease from 2017 (54.8%). Demographic

differences in the DSM-5 indicated, similar to the DAST, that females were more drug-involved, being more likely to meet drug use disorder criteria (26.9% vs. 20.9%). Females were also more likely to meet criteria for a severe substance use disorder. Lastly, individuals whose current DUI involved drugs were more likely to meet two or more substance use disorder criteria in the past 12 months than those involved in alcohol-only DUIs (58.2% vs. 50.6%).

TREATMENT REFERRALS

Most of the persons assessed during 2018 were referred to 20-hour education (42.0%) or an outpatient treatment (53.9%) intervention as their highest level of care. The rate of referrals to a treatment intervention has steadily increased since 2013. Underage (< 21 years old) clients (54.9%) were more likely to be referred to an education intervention than their older counterparts (41.2%). Clients whose current DUI was drug-involved (including those involving both drugs and alcohol) were more likely to be referred to a treatment intervention. There is also a relationship between the level of care recommended and DSM-5 criteria, with the intensity of the treatment modality increasing as problem severity increases. Further, persons assessed as having both an alcohol and drug use disorder were most likely to be referred to either IOP or residential treatment as their highest level of care (9.3%).

COMPLIANCE

A majority of assessment records completed in 2018 were for individuals who were compliant with their recommended intervention (83.4%). This is similar to previous years. Lower compliance is related to having a drug-involved DUI, more DUI convictions, higher AUDIT and

DAST scores, more severe substance use disorders, and referrals to outpatient/intensive outpatient treatment. Non-compliant offenders were also more likely to be younger and African American. The most frequently cited reason for non-compliance was failure to comply with attendance requirements.

COMMUNITY MENTAL HEALTH CENTER REGIONS

Although there are fewer community mental health centers (CMHC), these programs submitted a higher average number of assessments per program compared to privately-owned programs (248.9 vs. 112.3). There was variability between CMHC regions in demographics, past DUI offenses, screening instrument results, intervention referrals, and education/treatment outcomes. Regions in the western part of the state had both the highest (River Valley) and lowest (Pennyroyal and Four Rivers) percentage of assessments for males. The North Key region had the lowest average number of lifetime DUIs (1.42). Clients in the North Key region were also the least likely to report their current DUI involved drugs (17.7%). Clients from the Comprehend region were more likely to report being under the influence of both drugs and alcohol at the time of their current DUI. Compared to other CMHC regions in Kentucky, the Cumberland River region had the highest rate of referral to education (57.7%) and the Kentucky River region had the highest rate of referral to residential treatment (6.6%). The compliance rate was highest in the Pathways region (92.9%).

DIVISION OF BEHAVIORAL HEALTH DUI PROGRAM REGIONS

There was similarity across regions, with a few notable exceptions. First, clients in the Central

region were, on average, younger (36.0) and slightly more likely to be female (27.1%) than those in the other regions. Second, clients in the Western Central region were most likely to report meeting DSM criteria for a substance use disorder overall (62.0%) and also had the highest percentage (22.6%) of clients meeting criteria for a severe substance use disorder compared to other regions. Next, the percentage of assessments for individuals who met DSM-5 criteria for an alcohol use disorder ranged from a low of 19.8% for the Eastern region to a high of 52.6% in the Western-Central region. Further, AUDIT scores in the Eastern region (4.02) were noticeably lower than in other regions, whereas the percentage of persons who scored 5 or higher on the DAST was highest in the Eastern region (43.0%). Lastly, the Eastern region also had the highest rate of drug-involved DUIs (51.6%), with most drug-involved clients in that region reporting being under the influence of marijuana (18.4%).

BACKGROUND

STUDY OVERVIEW

The Kentucky Revised Statute 189A.040 requires Kentucky licensed drivers convicted of Driving Under the Influence (DUI) to receive a substance use assessment by a state certified DUI assessor in a state licensed and certified DUI assessment program[1]. DUI Assessment programs are required [908 KAR 1:310 Section 6(1)(a)4] to enter assessment records via the web-based Kentucky DUI Assessment Instrument (KDAI) within three (3) business days of the assessment. The University of Kentucky Center on Drug and Alcohol Research (CDAR) serves as the repository for state DUI assessment records. The data are stored in a database from which this report was developed.

The purpose of the assessment is to determine the extent to which the person has an alcohol and/or drug problem and to make a referral to an appropriate level of care to address it. If treatment need is determined, a person can be referred to one or more of the following treatment modalities: outpatient, intensive outpatient, or residential treatment. Referral may also include an education intervention or an education intervention coupled with treatment. If a person finishes their education and/or treatment requirements consistent with his or her referral within a stipulated timeframe, the person is considered "compliant." However, if the person fails to meet the referral requirements, he/she is considered "non-compliant." In either case, once a person is designated as compliant or non-compliant, that assessment record is "completed." Assessment records previously submitted using KDAI are updated to include completion information once an individual is identified as compliant or non-compliant.

DATA DESCRIPTION

DUI assessment records provide demographic information about the person, information about their DUI offense, results of the assessment, and education/treatment information. Demographic information includes age, gender, race/ethnicity, and household income. In addition, source of payment (e.g., self-payment) for DUI services is recorded. DUI offense information includes current DUI information, DUI conviction history, and county of conviction. Records include three instruments:

- Alcohol Use Disorders Identification Test (AUDIT)[2] – The AUDIT was developed by the World Health Organization as a screening method for excessive drinking. The test consists of 10 questions scored from 0 to 4. A combined score of 8 or more is considered as positive (i.e., the individual is likely to have a drinking problem).

- Drug Abuse Screening Test (DAST)[3] – The DAST was developed to assess the extent of drug problems. The test consists of 28 true/false questions with a score of 1 or 0. A combined score of 5 or more is considered as positive (i.e., the individual is likely to have a drug problem).

- DSM-5[4] checklist for Substance Use Disorders. The Diagnostic and Statistical Manual, Fifth Edition (DSM-5) was developed by the American Psychiatric Association as the standard for psychiatric diagnoses. The DSM-5 specifies three categories of substance use disorders: mild, moderate and severe. Meeting 2-3 criteria for a single substance within a 12-month period

indicates a mild disorder; 4-5 criteria, a moderate disorder; and 6 criteria or more, a severe substance use disorder.

Information about the intervention referral is also noted in the assessment record. This includes the education and/or level(s) of treatment to which the person is referred, as well as the person's compliance with that referral.

SAMPLE

This report presents DUI assessment records for assessments conducted between January 1, 2018 and December 31, 2018 as well as trends detailing changes in assessment results over the past several years. In 2018, a total of 16,773 assessment records were entered by certified DUI assessors. It should be noted that the number of submitted assessment records in 2018 is not the same as the number of completed assessment records or the number of DUI convictions in 2018 because persons can be convicted, be assessed, and complete their intervention in separate years. Of the 16,773 assessments conducted in 2018, only 12,372 assessment records were also "completed" before December 31, 2018. Additionally, the number of assessment records is not equal to the number of unique individuals. A single person can have multiple DUI assessment records in a single calendar year either because of multiple DUI convictions or because they had to be reassessed due to non-compliance.

LIMITATIONS

There are several limitations to these data. First, there is the issue of incomplete, erroneous, and/or missing data. Although KDAI has successfully reduced the amount of missing data when compared to the previous DUI assessment record system, certain fields remain problematic. Blood

Alcohol Content (BAC) has the highest percentage of missing cases, which is largely due to individuals who were not tested, refused the test, or did not remember the BAC level. Other variables, such as race and household income, have a significant amount of missing cases because they are optional fields. Table 1 presents missing data, including fields that are optional (*).

Table 1: Missing Data (2018)

	Missing Assessments	Percentage of Cases
Age	3	0.02%
Race*	2,836	16.9%
Household Income*	4,956	29.5%
BAC	9,391	56.0%

A second limitation is that most of the data are self-reported, which can be limited by recall.

Lastly, an additional limitation is that these data represent a subset of a larger, unknown number of DUIs in Kentucky. For example, in 2017 there were 24,357 DUI arrests and 12,726 assessment records both created and closed. This difference emphasizes the dangers in comparing frequencies of arrests, convictions, and assessments as there are different requirements and timelines for compiling each of these types of records.

This report presents DUI assessment records submitted in 2018, which are independent of violation date and conviction date. Caution should be used in comparing these data to other data. For example, a subset of the unaccounted records includes out-of-state licensees who are arrested in Kentucky but are not required to receive an assessment in Kentucky. Assessments would also not be completed or submitted for persons who are incarcerated for an extensive period of time

following their DUI arrest. In addition, persons who are arrested for DUI may be convicted of a lesser charge. To demonstrate the differences that often exist across the frequency of arrests, convictions, and assessments and the dangers of comparing across data sources, Figure 1 presents the number of DUI arrests and convictions submitted to the Kentucky State Police (KSP), and completed DUI assessment records for 2008 through 2017. Arrest and conviction data from KSP were only available through 2017 at the time this report was developed.

Figure 1: DUI Arrests, DUI Convictions, and Completed Records, 2008 through 2017
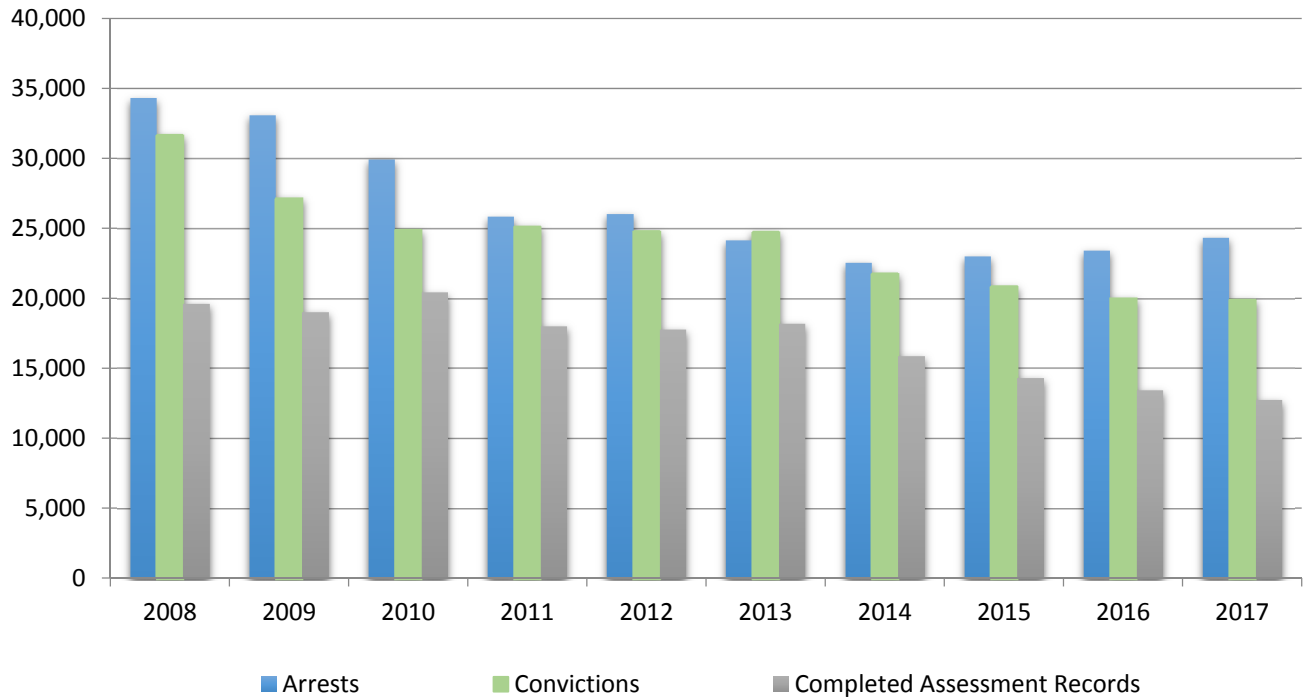
SECTION 1: INTRODUCTION

ASSESSMENTS

Between January 1, 2018 and December 31, 2018, licensed and certified DUI assessors submitted 16,773 assessment records to CDAR on behalf of the Kentucky Division of Behavioral Health. This represents a 2.5% decrease from the number of assessment records submitted in 2017. Figure 2 presents the number of DUI assessment records submitted to CDAR from 2009 to 2018. The average number of assessments received has been 19,287 per year. The increase in assessments in 2013 was related to the transition to a new DUI assessment system.

Figure 2: Number of Assessments 2008 to 2017
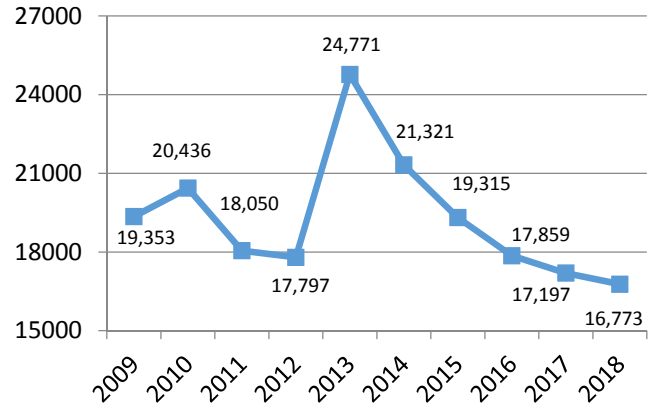
ARRESTS

The recent decrease in assessment records corresponds to a decrease in DUI arrests. As shown in Figure 3, the percentage of arrests in Kentucky that were for DUI has been steadily decreasing since 2008. In 2017, there were 24,357 arrests for DUI, which represented 4.8% of all arrests in Kentucky.

Figure 3: Number of DUI Arrests and Percentage of Total Arrests 2008 to 2017
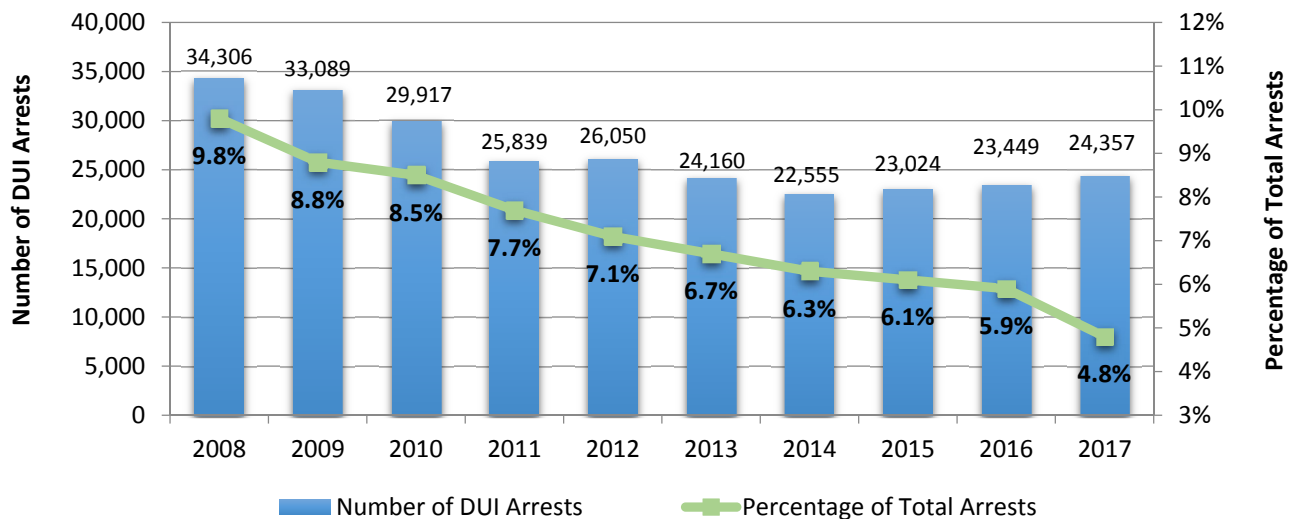
* Arrest data from Kentucky State Police were only available through 2017 at the time this report was developed.

CONVICTIONS

The majority of DUI assessment records submitted in 2018 were for individuals who reported only one lifetime DUI conviction (65.2%). Similarly, more than three-fourths of the assessment records in 2018 were for individuals convicted of a first offense DUI (76.2%) in the past 10 years. Figure 4 presents the frequencies for each DUI offense type (e.g., convicted of a first offense in the past 10 years) for assessments conducted in 2018. These percentages have remained relatively stable for the past ten years (see Appendix A, Figure A.1 on page 40).

Figure 4: DUI Assessments by Offense Type*

- 1st Offense   - 2nd Offense   - 3rd Offense
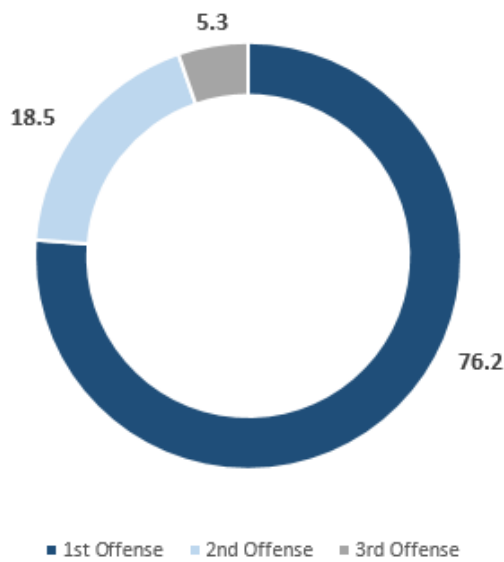
SECTION 2: DEMOGRAPHICS

GENDER

As illustrated in Figure 5, 12,336 (73.5%) of the 16,773 assessments submitted in 2018 were for males and 4,437 (26.5%) were for females.

Figure 5: DUI Assessments by Gender
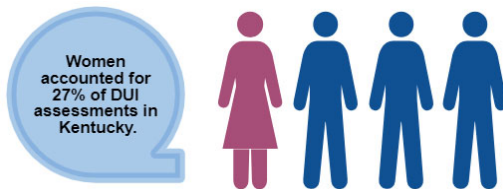
Over the past 10 years, the percentage of assessments that are for females has been steadily increasing – from 20.8% in 2009 to a high of 26.5% in 2018 (see Figure 6).

Figure 6: Percentage of Assessments for Female DUI Offenders between 2009 and 2018
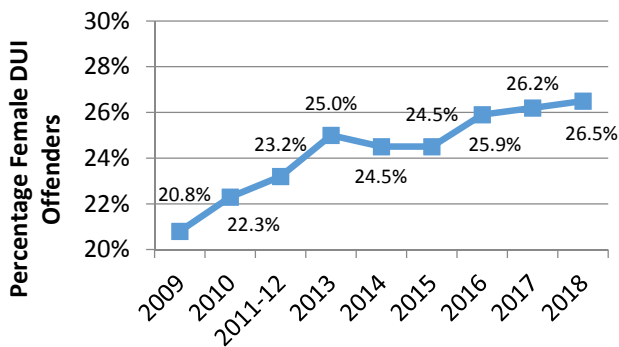
RACE/ETHNICITY

In 2018, 13,937 assessments contained client race information (race/ethnicity is an optional field in KDAI). Of those assessments, the majority were for White DUI clients (84.8%), while 1,434 assessments (10.3%) were submitted for African Americans and 686 (4.9%) for Hispanics or those of another racial/ethnic background.

AGE

The average age of DUI clients was 36.7. The majority of assessments were for clients between the age of 21 and 39 at the time of conviction (56.8%), while 5.2% were for clients between 60 and 83 years old. There were 992 assessments (5.9%) submitted for DUI clients who were between 16 and 20 years old, which has decreased overall since 2009 (see Figure 7).

Figure 7: Percentage of Assessments for Underage DUI Offenders between 2009 and 2018
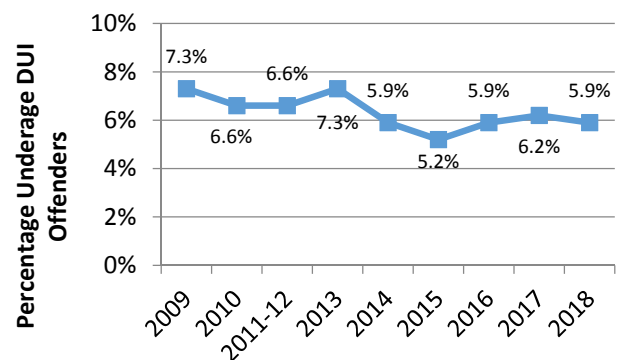
As indicated, 5.9% of offenders in 2018 were underage, which varied by gender. Figure 8 shows that, compared to females (4.8%), males (6.3%) were more likely to be underage.

Figure 8: Underage Assessments by Gender
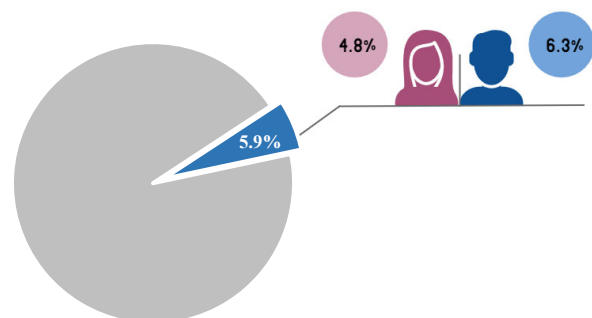
INCOME

Table 2 presents the number of DUI assessments by yearly household income range. The majority of assessments were conducted for individuals who had a yearly household income level less than $20,000 (59.3%), while only 7.5% had a household income of $50,000 or more.

Table 2: Assessments by Yearly Household Income[*]

Household Income	Number of Assessments
Affidavit of Indigence	16
$0 to 9,999	3,948
$10,000 to 19,999	3,047
$20,000 to 29,999	2,004
$30,000 to 39,999	1,268
$40,000 to 49,999	649
$50,000 to 59,999	400
$60,000 to 69,999	166
$70,000 to 79,999	81
$80,000 to 89,999	49
$90,000 to 99,999	41
$100,000 or higher	148

* Missing Data = 4,956 Assessments

SECTION 3: SUBSTANCES INVOLVED IN DUI ARREST

*Substances involved in DUI arrest are self-reported.

The majority of assessments submitted in 2018 were for DUI arrests that involved only alcohol (66.7%), while one-third (33.3%) of assessments were drug-involved DUI arrests - either drug-only DUIs or DUIs that involved both drugs and alcohol. This represents an increase in drug-involved DUIs from previous years, with only 22.2% of DUIs involving drugs in 2013 and, more recently, 32.0% in 2017. Of the DUIs that involved drugs in 2018, the most commonly-involved drug was marijuana, which was involved in 42.1% of drug-involved DUIs (14.1% of DUIs overall). Opiates were the second most commonly involved drug (28.4% of drug-involved DUIs; 9.5% of DUIs overall), followed by "other drugs" (18.1% of drug-involved DUIs; 6.1% of DUIs overall), amphetamines (16.5% of drug-involved DUIs; 5.5% of DUIs overall), and lastly, sedatives (14.6% of drug-involved DUIs; 4.9% of DUIs overall). Figure 9 presents the number of DUI assessments by the substance(s) involved.

Figure 9: DUI Assessments by Substance(s) Involved
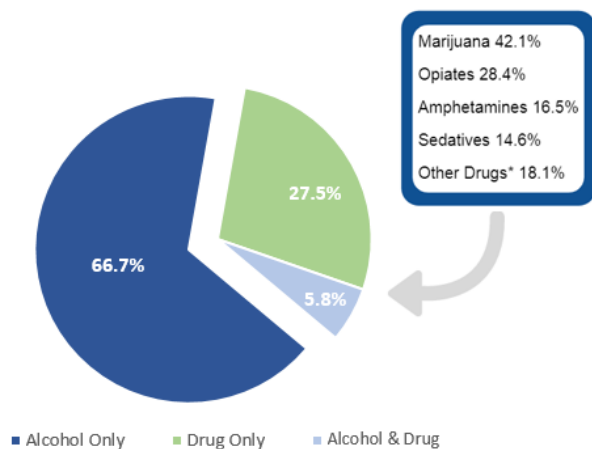
* "Other drugs" includes cocaine, inhalants, hallucinogens, PCP, and an "other drug" category.

SUBSTANCES INVOLVED BY GENDER

Both male (69.3%) and female (59.4%) DUI clients were most often involved in an alcohol-only DUI. Female clients, however, were more likely (40.6%) to have a drug-involved DUI than male clients (30.7%). The prevalence of drug-involved DUIs among female offenders has been increasing since 2014 (see Figure 10). Of those drug-involved DUIs in 2018, the frequency of DUIs that involved both alcohol and drugs were similar across males and females (5.4% vs. 6.1%).

Figure 10: Percentage of Assessments for Drug-involved Female DUI Offenders between 2014 and 2018
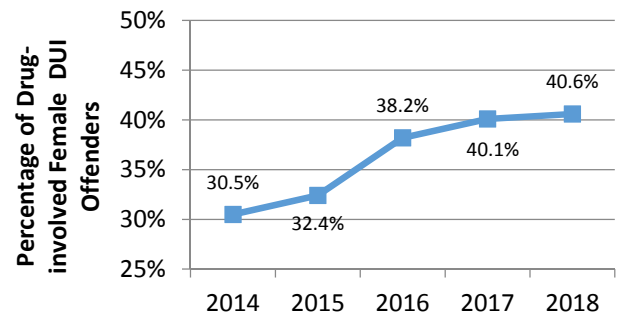
SUBSTANCES INVOLVED BY RACE/ETHNICITY*

*Race/Ethnicity is an optional field in KDAI.

In 2018, White DUI clients were the most likely to report that their current DUI involved drugs (37.6%) – compared to African American DUI offenders (23.0%), Hispanic DUI offenders (9.2%), and those DUI offenders of any other racial or ethnic background (23.7%). African American DUI offenders were more likely to have driven under the influence of both alcohol and

drugs (6.8%). Hispanic DUI clients were the most likely to be involved in alcohol-only DUIs (90.8%), followed by African American DUI offenders (77.0%), DUI offenders of any other racial/ethnic background (76.3%), and then White DUI offenders (62.4%).

SUBSTANCES INVOLVED BY AGE

In 2018, there was a relationship between the DUI client's age at conviction and the type of substance(s) involved in the current DUI. Older persons were more likely to be involved in an alcohol-only DUI compared to younger DUI clients. Specifically, more than 80% of DUI clients age 60 or older have an alcohol-only DUI. On the other hand, clients between the ages of 16 and 39 were more likely (36.7%) to have a drug-involved DUI, with underage (< 21 years old) DUI clients being the most likely to have a drug-involved offense (57.5%).

SUBSTANCES INVOLVED BY OFFENSE TYPE

DUI clients convicted of a first offense DUI were more likely to have a drug-only DUI (29.3%), while DUI clients with a third offense DUI or higher were more likely to have an alcohol-only DUI (75.7%). Individuals with a second offense DUI were slightly more likely to have a DUI that involved both alcohol and drugs (5.9%) – compared to 5.8% of those with a first offense DUI and 4.2% of those with a third offense DUI or higher.

BIOLOGICAL TESTING FOR THE PRESENCE OF ALCOHOL AND DRUGS

Nearly three-fourths (72.5%) of DUI clients self-reported their current DUI involved alcohol. A majority of DUI clients also reported that they were tested for alcohol during their current DUI

arrest (54.2%). Most of those who had their alcohol level measured (n=9,085) reported receiving a breath analysis (85.8%).

While 9,085 clients were tested for alcohol, only 7,338 (43.7% of the total assessments) were able to provide their blood alcohol content (BAC) from their current DUI arrest. The majority of those 7,338 clients had a BAC that was between .08 (the legal limit) and .16 (58.5%). Approximately 7.5% had a BAC that was at least 3 times the legal limit (.24 or higher).

On the other hand, 33.3% of clients self-reported being under the influence of drugs at the time of their current offense, and only 21.0% reported being drug tested as part of their current DUI. Of the 3,530 who were drug tested, nearly all had their blood tested (98.4%).

Urine was the least frequently used test method for both alcohol and drug use.

SECTION 4: SCREENING

AUDIT

The Alcohol Use Disorders Identification Test (AUDIT) is designed to identify problem drinking. This screening instrument consists of 10 questions, each scored from 0 to 4. The final score is computed as the sum of the 10 individual question scores. A final score of 8 or more suggests a likely drinking problem. Of the 16,773 submitted assessments, 4,493 (26.8%) had a positive AUDIT score. The average AUDIT score was 5.77. Appendix B (page 41) contains the frequency of each response option and the average scores for each of the AUDIT questions.

DAST

The Drug Abuse Screening Test (DAST) assesses drug use problems. This screening instrument consists of 28 true/false questions scored as 1 or 0. A summed score of 5 or more identifies a person with a potential drug problem. Nearly 1 of every 3 assessments had a positive DAST score (30.1%). The average DAST score was 4.21. Appendix C (page 44) contains the frequency of "yes" responses and the average scores for each of the DAST questions.

Please note that screening instruments do not dictate a level of care. Screening instruments, in combination with a face-to-face clinical interview, assist DUI assessors in determining the appropriate level of care for DUI clients.

AUDIT/DAST BY GENDER

As shown in Table 3, male DUI clients had a higher average score than females, with 28.5% of male clients having a positive AUDIT score (see Appendix B for AUDIT questions by gender).

Females, on the other hand, had a higher average DAST score than males (see Appendix C for DAST questions by gender). More than one-third (34.8%) of female DUI clients had a positive DAST score.

Table 3: Screening Instruments by Gender

	Males	Females
Positive AUDIT	28.5%	22.1%
Average AUDIT Score	6.03	5.06
Positive DAST	28.3%	34.8%
Average DAST Score	3.97	4.88

Over the past 5 years, AUDIT scores for male DUI offenders in Kentucky have been steadily decreasing (see Figure 11), while the average DAST score for male DUI offenders has increased by more than a point.

Figure 11: Screening Instruments for Males between 2014 and 2018
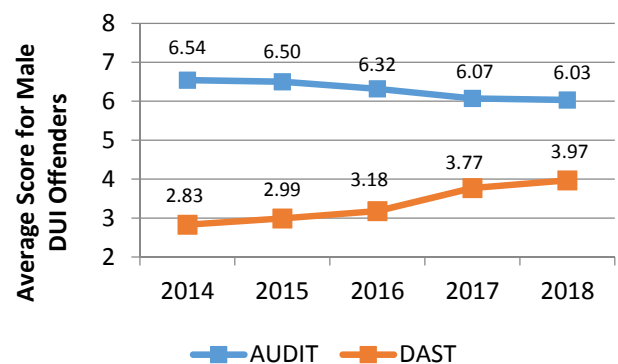
AUDIT/DAST BY RACE/ETHNICITY

*Race/Ethnicity is an optional field in KDAI.

Hispanic DUI clients had the highest average AUDIT score (7.07) yet the lowest average DAST

score (1.21). White DUI clients had the highest average DAST score (4.65) while those DUI offenders of any other racial or ethnic background had the lowest average AUDIT score (4.79).

AUDIT/DAST BY AGE

AUDIT scores increase overall with the age of DUI clients, while DAST scores are lower for older clients. More specifically, individuals between the ages of 70 and 83 had the highest average AUDIT score (6.64) and the lowest DAST scores (0.37). Underage (< 21 years old) DUI clients had the lowest average AUDIT score (4.21) and clients between the ages of 30 and 39 have the highest DAST scores (5.42).

AUDIT/DAST BY SUBSTANCE(S) INVOLVED

As expected, AUDIT scores are highest for DUI clients with alcohol-involved DUIs – 7.22 for individuals with a DUI that involved only alcohol and 7.01 for those with a DUI that involved both alcohol and drugs. DAST scores, however, were significantly higher for those clients who had drug-involved DUIs – 9.58 for those with drug-only DUIs and 7.78 clients who had a DUI involving both alcohol and drugs.

AUDIT/DAST BY DUI OFFENSE TYPE

Clients with a history of DUI convictions scored higher on both the AUDIT and the DAST. Specifically, clients convicted of a third or higher DUI offense had the highest average score on the AUDIT (8.93) while those convicted of a second DUI offense had the highest average DAST score (4.73). Conversely, assessments for DUI clients convicted of a first DUI offense had the lowest average scores, with an average score of 5.12 on the AUDIT and 4.05 on the DAST.

DSM-5 SUBSTANCE USE DISORDERS

According to the DSM-5, individuals who meet two or more DSM criteria for a given substance within a 12-month period have a substance use disorder. Meeting 2-3 criteria within a 12-month period indicates a mild disorder; 4-5 criteria, a moderate disorder; and 6 criteria or more, a severe substance use disorder. In 2018, 53.2% of DUI clients who were assessed met criteria for a substance use disorder. Most met criteria for an alcohol use disorder (36.7%) compared to only 22.5% for a drug use disorder. As presented in Figure 12, the prevalence of alcohol use disorders among assessed DUI clients has decreased overall since 2014 while the rate of drug use disorders has increased. For a list of the DSM criteria and the frequency that each of the criteria were identified as "present" in 2018, refer to Appendix D (page 48).

Figure 12: DSM-5 Substance Use Disorders between 2014 and 2018
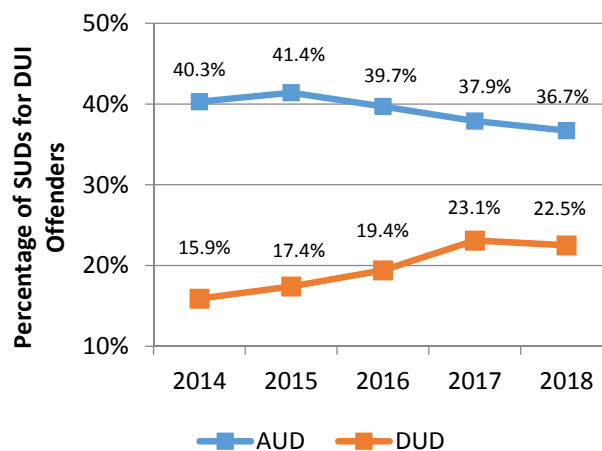
When focusing on substance use disorder information across individual substances, as mentioned, DUI clients were more likely to meet criteria for an alcohol use disorder than any non-alcohol drug. However, as shown in Figure 13,

out of the 3,767 assessments submitted for clients who met criteria for a drug use disorder, marijuana use disorders were the most common, followed by opiate use disorders. Individuals with an opiate use disorder were more likely to meet criteria for a severe substance use disorder (27.0%) compared to individuals with other drug use disorders, while those who met criteria for a marijuana use disorder were more likely to meet criteria for a mild substance use disorder (19.7%).

Figure 13: DSM-5 Drug Use Disorders
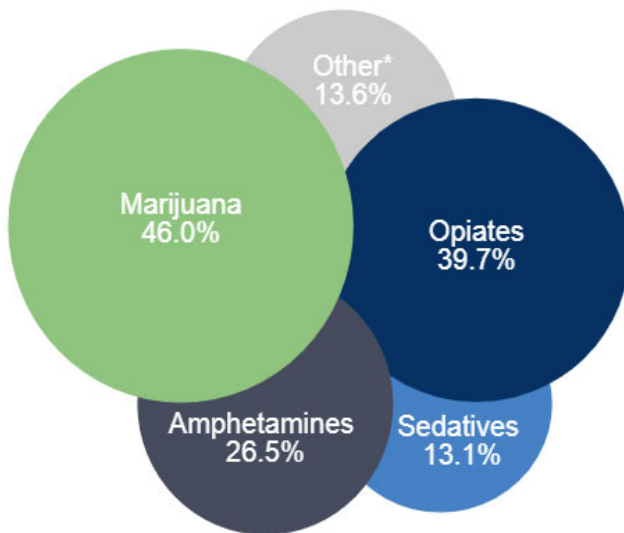
*"Other drugs" includes cocaine, inhalants, hallucinogens, PCP, and an "other drug" category.

DSM-5 SUBSTANCE USE DISORDERS BY GENDER

In 2018, males were slightly more likely to meet criteria for a substance use disorder (53.4%) compared to females (52.5%). Females convicted of DUI had a higher rate of drug use disorders (26.9%) compared to males convicted of DUI (20.9%). However, assessment records for males had a higher rate of alcohol use disorders (38.5% vs. 31.7%). Males and females met criteria for

both a drug and alcohol use disorder at similar rates (6.0% vs. 6.1%).

Table 4 presents the percentage of assessment records for DUI clients with substance use disorders by severity separated by gender. Assessments for females convicted of DUI had a higher rate of severe substance use disorders (21.7%) than assessments for males (18.8%), while assessments for males had a higher rate of both mild and moderate substance use disorders.

Table 4: DSM-5 Substance Use Disorder Severity by Gender

	Males	Females	Total
No Disorder	5,751 (46.6%)	2,106 (47.5%)	7,857 (46.8%)
Mild	2,885 (23.4%)	930 (21.0%)	3,815 (22.8%)
Moderate	1,379 (11.2%)	438 (9.8%)	1,817 (10.8%)
Severe	2,321 (18.8%)	963 (21.7%)	3,284 (19.6%)

DSM-5 SUBSTANCE USE DISORDERS BY OFFENSE TYPE

As shown in Figure 14 on the following page, the percentage of assessments for DUI clients reporting DSM criteria for an alcohol use disorder increases with subsequent DUI convictions. Nearly one-third (31.9%) of assessments for first DUI offenders indicate an alcohol use disorder while 59.8% of those with a 3rd or higher DUI offense have an alcohol use disorder. On the other hand, the percentage of assessments for DUI clients reporting a drug use disorder remains fairly stable across offense categories.

Figure 14: DSM-5 Substance Use Disorders by Offense Type
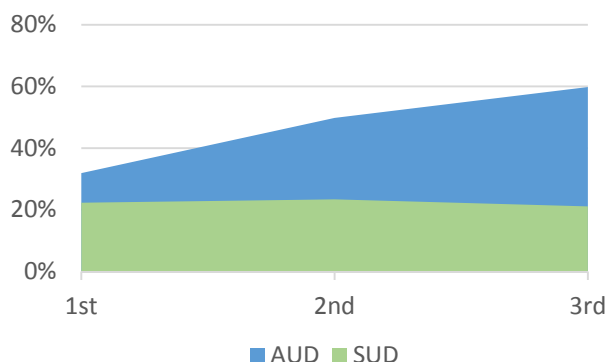
The percentage of assessments for DUI clients who met criteria for a moderate or severe substance use disorder increases as clients are convicted of subsequent offenses. Specifically, 16.2% of DUI clients with a first offense DUI met criteria for a severe substance use disorder compared to 35.6% of clients convicted of a third or higher DUI offense. Similarly, 9.5% of DUI clients with a first offense DUI met criteria for a moderate substance use disorder while 16.9% of clients convicted of at least a third offense DUI met criteria for a moderate substance use disorder. Clients with a first offense DUI who met DSM-5 criteria for a substance use disorder were most likely to meet criteria for a mild disorder (23.1%) compared to those convicted of a second offense (22.4%) or a third offense or higher (19.2%).

DSM-5 SUBSTANCE USE DISORDERS BY SUBSTANCE(S) INVOLVED

Clients whose current DUI involved both alcohol and drugs were more likely to meet criteria for a substance use disorder (62.3%) compared to those with alcohol-only (50.6%) or drug-only DUIs (57.3%). Clients whose current DUI involved only drugs were more likely to meet criteria (56.0%) for a drug use disorder while those involved in alcohol-only DUIs were more likely to meet criteria for an alcohol use disorder (48.4%). The prevalence of alcohol use disorders among clients whose current DUI involved both alcohol and drugs was less than the prevalence of drug use disorders (42.6% vs. 46.0%).

Individuals whose current DUI involved only drugs were more likely to meet criteria for a severe substance use disorder (29.7%) compared to those whose current DUI involved both alcohol and drugs (28.0%) and only alcohol (14.7%). Clients whose current DUI involved only alcohol were more likely to meet criteria for a mild substance use disorder (25.3%) than either individuals whose current DUI involved both alcohol and drugs (21.1%) and only drugs (16.9%).

SECTION 5: TREATMENT REFERRALS

This section presents the assessors' education and treatment intervention referrals. In 2018, a majority of submitted assessments were for DUI clients recommended for outpatient treatment as their highest level of care (53.9%) – followed by education referrals (42.0%), residential referrals (2.5%), and IOP referrals (1.6%). Figure 15 presents the percentage of assessments that resulted in a referral for education or outpatient as the highest level of care from 2009 to 2018. As shown, the percentage of education versus outpatient referrals has varied over the years, with an increase in the number of outpatient referrals since 2013. The percentage of assessments with an IOP or residential referral has remained relatively stable over the past ten years, with a slight overall increase since 2014 (see Appendix A, Figure A.2 on page 40).

Figure 15: Education and Outpatient Referrals 2009 to 2018[*]
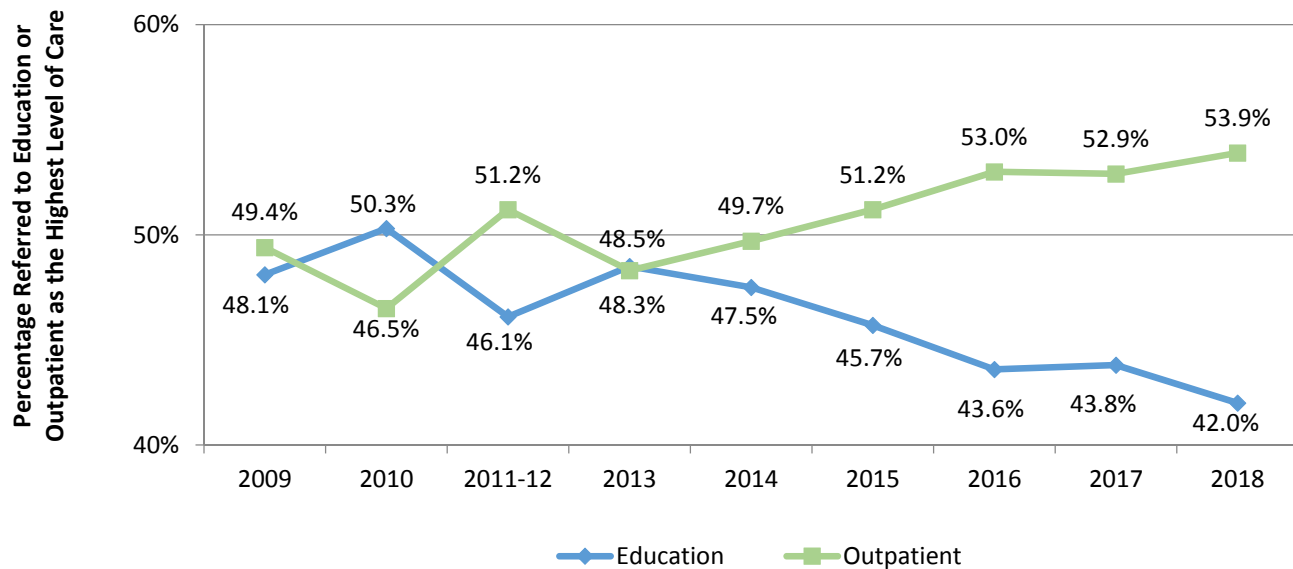
* Only the highest level of care recommended is provided. For example, if an individual was recommended for education and outpatient, only the outpatient recommendation is presented.

Table 5 presents the number of referrals to each level of care, including multiple referrals. This represents the total number of referrals to a specific intervention regardless of how many other levels of care were recommended. More than 95% of recommended referrals were for outpatient and/or education. It is interesting to note that approximately 6.1% of assessments had a referral to multiple levels of care, with 29.4% of those with a residential referral having a recommendation for an additional level of care.

Table 5: Total Referrals[*]

Education	7,901
Outpatient	9,180
Intensive Outpatient	294
Residential	419

*Some assessments are counted twice because some individuals are referred to more than one level of care.

LEVEL OF CARE BY GENDER

Both male (54.7%) and female (51.5%) DUI clients were most often referred to an outpatient intervention as their highest level of care. However, a higher percentage of female DUI clients (44.0%) were referred to education as their highest level of care compared to males (41.3%). Intensive outpatient and residential treatment referral rates were comparable for males (4.0%) and females (4.5%).

LEVEL OF CARE BY RACE/ETHNICITY

*Race/Ethnicity is an optional field in KDAI.

**Participants who could not be classified as White, African American, or Hispanic were categorized as "other."

Compared to other racial/ethnic groups, White DUI clients were slightly more often referred to outpatient treatment (52.8%) while DUI clients of "other" racial/ethnic backgrounds were the least likely to be referred to outpatient treatment (46.9%). However, DUI clients of "other" racial/ethnic backgrounds were more likely to be referred to an education intervention (50.4%) compared to White (42.8%), African American (48.3%), and Hispanic (49.1%) DUI clients. Further, those individuals of "other" racial/ethnic backgrounds were the only group more likely to be referred to education than to outpatient treatment. White clients were more often referred to intensive outpatient and residential treatment (4.4%) than other racial/ethnic groups.

LEVEL OF CARE BY AGE

Underage (< 21 years old) DUI clients were more likely to be referred to an education intervention (54.9%) as their highest level of care compared to older offenders. Compared to other age groups, persons who were between the ages of 30 and 39 were more likely to be referred to outpatient

treatment (58.4%) as their highest level of care, and, in addition, had the highest rate of referrals to intensive outpatient or residential treatment (5.4%). Individuals between the ages of 70 and 83 were the least likely to be referred to intensive outpatient or residential treatment (1.8%) as their highest level of care.

LEVEL OF CARE BY OFFENSE TYPE

In 2018, clients convicted of a first offense DUI were more likely to be referred to an education intervention (53.6%) as their highest level of care compared to those convicted of a second offense (4.8%) or a third or higher offense (4.4%). Those convicted of a second offense or a third or higher offense were most likely to be referred to outpatient treatment as their highest level of care (90.1% and 89.3%, respectively).

LEVEL OF CARE BY SUBSTANCE(S) INVOLVED

On the following page, Figure 16 presents the highest level of care recommended by the type of substance(s) involved in the current DUI offense. DUI clients across all categories were most likely to be referred to outpatient treatment as their highest level of care. Clients with an alcohol-only DUI were referred to education (44.7%) as their highest level of care more often than clients with a drug-involved DUI (36.6%). On the other hand, clients whose DUI involved only drugs were referred to IOP or residential treatment more often (6.7%) than clients with an alcohol-involved DUI (3.2%). Lastly, clients with a DUI that involved both drugs and alcohol were more likely (61.1%) to be referred to outpatient treatment than those who reported their current DUI involved only alcohol (52.5%) or drugs (55.7%).

Figure 16: Highest Level of Care by Substances Involved in DUI Arrest

LEVEL OF CARE BY DSM-5 SUBSTANCE USE DISORDERS

Figure 17 presents the highest level of care by DSM-5 substance use disorders. Persons who met criteria for both an alcohol use and drug use disorder in the past 12 months were more likely than other DUI offenders to have received a treatment recommendation (84.4%), followed by those meeting criteria for only a drug use disorder (76.0%). Persons who did not meet criteria for a substance use disorder were most likely to be referred to education (68.7%).

Figure 17: Highest Level of Care by DSM-5 Substance Use Disorders

Highest level of care recommended is also related to DSM-5 substance use disorder severity. Nine out of every ten individuals (90.0%) who met criteria for a severe substance use disorder were referred to some type of treatment; 11.1% were specifically referred to either intensive outpatient or residential treatment. Individuals meeting criteria for a mild substance use disorder were more likely to be referred to education (45.0%) compared to those with more severe substance use disorders.

SECTION 6: COMPLIANCE

Of the 16,773 assessment records, 12,372 records (73.8%) were completed before December 31, 2018. As described in the Background (page 9), this means that the client either met or did not meet the requirements of the intervention to which they were referred and, as a result, was deemed by the DUI assessor as compliant or non-compliant. Figure 18 presents assessments by compliance for those records that were completed during 2018. Overall, more than four out of every five (83.4%) DUI assessments were for clients compliant with their assigned intervention.

Figure 18: Compliant vs. Non-Compliant
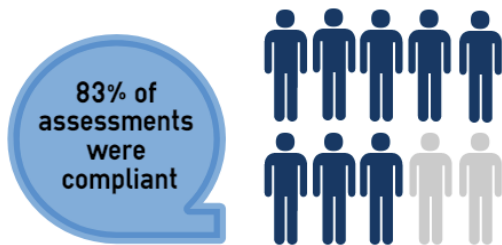
There are 4 reasons a DUI client can be deemed non-compliant with their assigned intervention. Table 6 lists the reasons DUI clients can be deemed non-compliant and the corresponding percentages for calendar year 2018.

Table 6: Main Reason for Non-Compliance

Failure to achieve treatment plan goals	3.0%
Failure to comply with rules of conduct	1.1%
Failure to comply with attendance requirements	91.1%
Failure to pay fees	4.8%

Compliance rates have not varied widely over the past 10 years, ranging from a low of 81.3% in 2010 to a high of 85.3% in 2013 (see Appendix A, Figure A.3 on page 40).

COMPLIANCE BY GENDER

Compliance rates were comparable across gender. Female clients were only slightly less likely to comply with their assigned intervention (83.1%) compared to male clients (83.5%).

COMPLIANCE BY RACE/ETHNICITY

More than four of every five DUI clients who were White (83.9%), Hispanic (89.5%), or of another racial/ethnic background (88.3%) were compliant with their recommended interventions. African American DUI clients were the least likely to comply (74.0%).

COMPLIANCE BY AGE

In 2018, an increase in a DUI client's age corresponded to an increased likelihood of complying with one's recommended intervention. As shown in Figure 19, younger clients tend to be less compliant with only 84.5% of underage (< 21 years old) offenders complying with the recommended intervention while more than 92% of clients ages 60 and older comply with their recommended intervention.

Figure 19: Compliance by Age
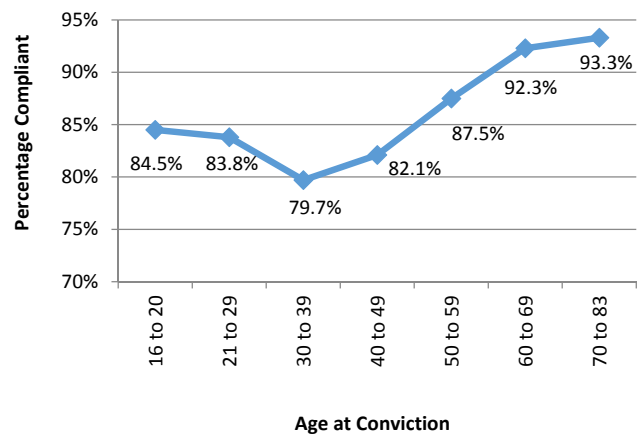
COMPLIANCE BY OFFENSE TYPE

The likelihood of compliance decreased with each subsequent conviction. Specifically, individuals convicted of a third offense DUI or higher were the least likely to comply with their assigned intervention (44.1%), while DUI clients convicted of a first offense DUI were the most likely to be compliant (87.8%).

COMPLIANCE BY SUBSTANCE(S) INVOLVED

DUI clients who reported driving under the influence of only drugs with their current DUI were less likely to comply with their education and/or treatment recommendations (79.7%) compared to clients involved in alcohol-only DUIs (85.1%) and those whose current DUI involved both alcohol and drugs (81.2%).

COMPLIANCE BY DSM-5 SUBSTANCE USE DISORDERS

DUI clients who met two or more substance use disorder criteria in the past 12 months were less likely to be compliant with their assigned intervention than those with no substance use disorder (78.9% vs. 87.9%). Individuals who met two or more DSM criteria for both a drug and alcohol use disorder were the least likely to be compliant (72.9%), followed by individuals who met criteria for only a drug use disorder (76.1%) and those meeting criteria for only an alcohol use disorder (81.7%).

Figure 20 presents compliance by DSM-5 substance use disorder severity. As shown, the likelihood of compliance decreased as substance use severity increased.

Figure 20: Compliance by DSM-5 Substance Use Disorder Severity
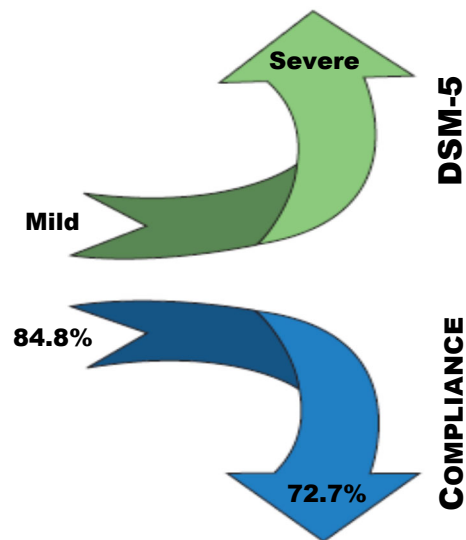
COMPLIANCE BY HIGHEST LEVEL OF CARE RECOMMENDED

Individuals referred for residential treatment showed the highest percentages of compliance (95.1%), while persons referred for education were only slightly less likely to be compliant (92.1%) than those referred for residential treatment. Persons referred to outpatient treatment were the least likely to be compliant with their intervention (73.4%).

SECTION 7: COMMUNITY MENTAL HEALTH CENTER REGIONS

Kentucky has 14 Community Mental Health Centers (CMHC) that provide publicly-funded services to individuals experiencing mental health or substance use problems. Of those 14 CMHCs, 11 are licensed and certified DUI programs. Table 7 presents the number of programs and assessment records submitted by these centers (publicly-funded) and privately-owned assessment programs. CMHCs submitted an average of 249 assessments per program in 2018, while private programs submitted an average of 112 assessments per program. There were 23 privately-owned programs that submitted fewer than 10 assessments.

Table 7: CMHC and Privately-owned Program Assessments

	CMHC	Private	Total
Assessments Submitted	2,738	14,035	16,773
Number of Programs	11	125	136
Average Assessments per Program	248.9	112.3	123.3

In this section, DUI assessment information is presented for the CMHC regions, including all certified DUI programs (public and private) within that geographic region, not just the CMHC serving the region. Figure 21 presents a map of Kentucky's CMHC regions, each of which are comprised of multiple counties.

Figure 21: Community Mental Health Center Regional Map

CMHC DEMOGRAPHIC DIFFERENCES

Very few demographic differences were found across CMHC regions. The average age of DUI clients across Kentucky was 36.7 but the average age across CMHC regions ranged from a low of 35.9 years old

in the Bluegrass region to a high of 38.1 in the Cumberland River region. While approximately two-thirds of the clients in the Communicare and North Key regions were under the age of 40 (65.3%), only 56.6% of clients in the Cumberland River region were under the age of 40. The percentage of male DUI clients was also similar across regions, ranging from a low of 71.0% in the Four Rivers and Pennyroyal regions to a high of 77.3% in the River Valley region. For a more detailed breakdown of the demographics across CMHC regions, refer to Table E.1 in Appendix E (page 50).

CMHC REGIONS AND CONVICTION HISTORY

The average number of lifetime DUI convictions for Kentucky clients was 1.57. Clients in the Four Rivers and Pathways regions had the highest average number of lifetime DUI convictions (1.80). First offenders were a majority in all regions, with Adanta having the highest percentage of assessments for first-time offenders (73.1%). Mountain had the highest percentage of assessments for DUI clients with a second conviction (27.2%) and Pathways the highest percentage of assessments for clients with three or more lifetime DUI convictions (19.9%).

Similar to lifetime DUI convictions, individuals convicted of a first DUI offense for their current DUI were a majority in all regions. Kentucky River had the highest percentage of assessments for first DUI offenses (83.1%). Comprehend had the highest percentage of assessments for second DUI offenses (23.3%) and River Valley had the highest percentage for third or higher DUI convictions (9.3%).

See Tables E.2 and E.3 in Appendix E (page 51) for additional details about the number of lifetime DUI convictions and current DUI conviction type across CMHC regions.

CMHC REGIONS AND SUBSTANCE(S) INVOLVED

The types of substances involved in DUIs varied widely across CMHC regions. Compared to other regions, DUIs that involved only alcohol were most common in the North Key region (82.3%). Alcohol-only DUIs were the least common in the Cumberland River region (31.4%) but that region had the highest prevalence of drug-only DUIs (63.5%). Clients in the Comprehend region were more likely than individuals from any other region to have a DUI that involved both alcohol and drugs (10.3%). For a breakdown of the types of substances involved in clients' current DUI, see Table E.4 in Appendix E (page 52).

While alcohol was involved more often than any specific type of drug, marijuana was the most commonly involved drug across the state. In 2018, more than 1 in every 10 DUIs involved marijuana (14.1%). As shown in Figure 20 on the following page, marijuana was the most commonly reported drug involved for DUI clients in ten of the CMHC regions. In the Mountain, Kentucky River, and Cumberland River regions, opiates were more likely to be involved than any other specific type of drugs. "Other drugs" were most common in the Comprehend region.

For a more detailed breakdown of drug involvement in each of the 14 CMHC regions, refer to Figures 22 through 26 on the following page. These maps show the prevalence of involvement for marijuana, opiates, sedatives, and amphetamines by CMHC region.

Figure 22: CMHC Regional Map with Most Commonly Involved Drug
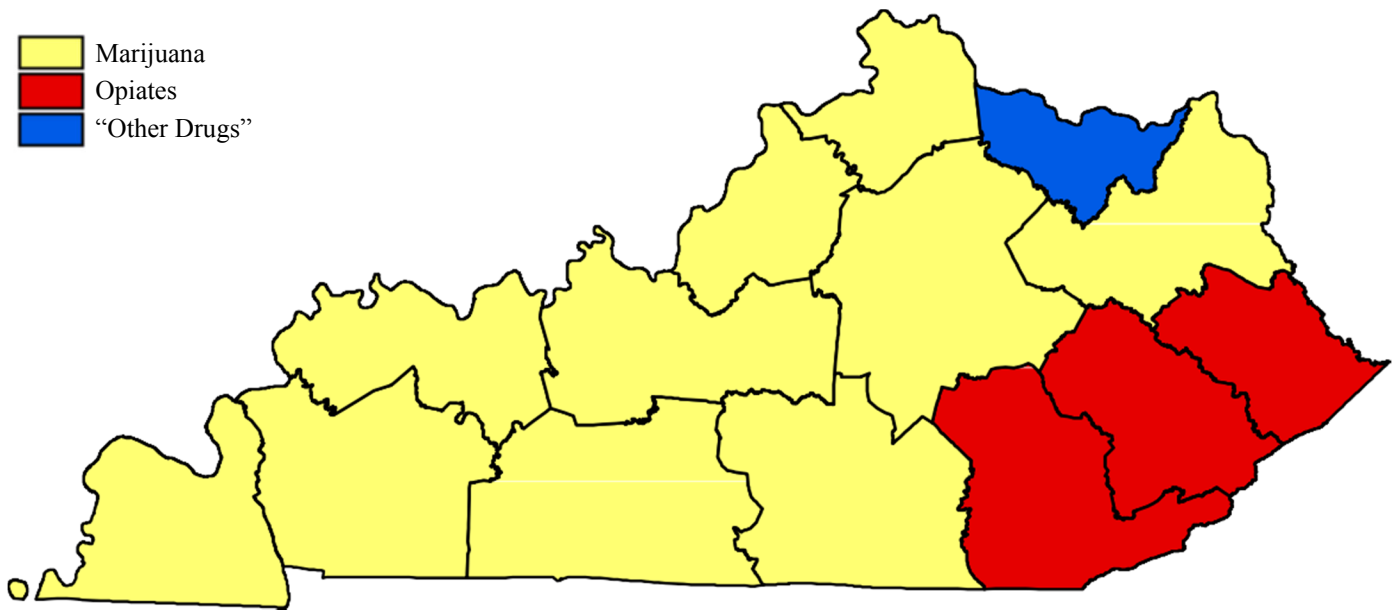
* "Other drugs" includes cocaine, inhalants, hallucinogens, PCP, and an "other drug" category.

Figure 23: Marijuana Involvement by CMHC Region
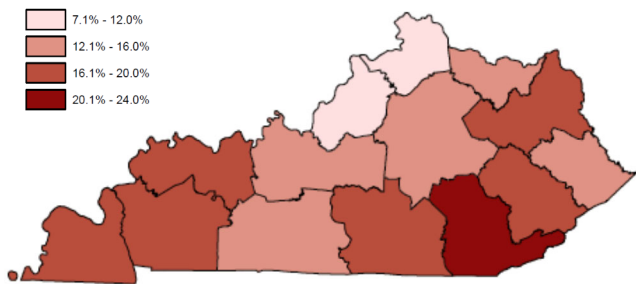
Figure 25: Sedative Involvement by CMHC Region
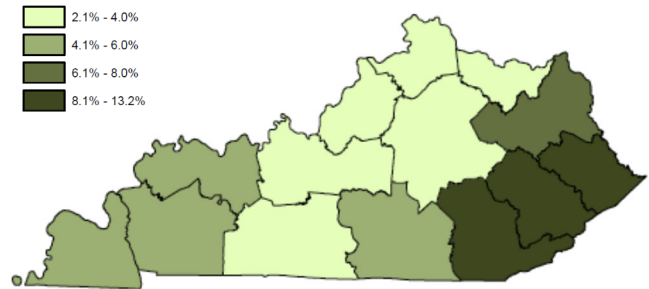
Figure 24: Opiate Involvement by CMHC Region
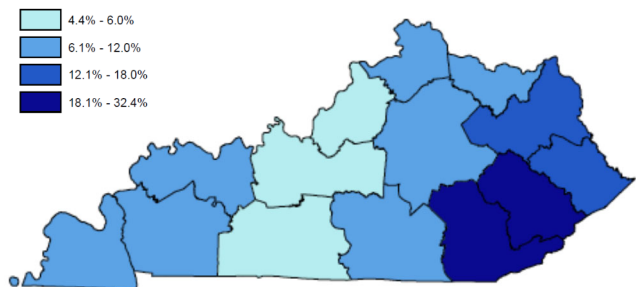
Figure 26: Amphetamine Involvement by CMHC Region
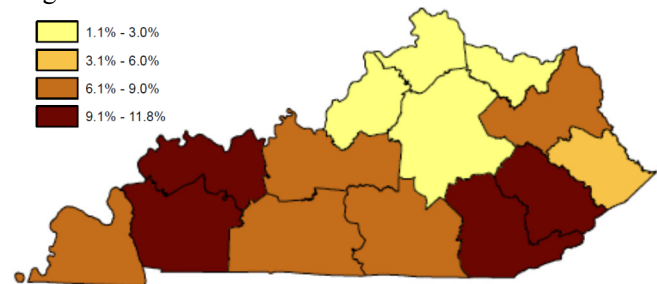
CMHC REGIONS AND SCREENING INSTRUMENTS

Table 8 presents the percentage of assessments with positive scores for the AUDIT and DAST and the percentage of assessments for clients who met DSM-5 substance use disorder criteria by CMHC region. The River Valley region had the highest percentage of positive AUDIT scores (34.0%) with an average AUDIT score of 6.29. Mountain had the fewest (10.8%) positive AUDIT scores with an average score of 3.05. The Kentucky River region had the highest percentage of positive DAST scores (60.9%), with an average DAST score of 8.60. Centerstone Kentucky had the fewest (20.0%) with an average score of 2.99. Table E.5 in Appendix E (page 52) provides the average AUDIT and DAST score for each of the CMHC regions.

Table 8: CMHC Screening Instruments

	AUDIT % Positive	DAST % Positive	DSM-5 Substance Use Disorder
Four Rivers	30.3%	28.1%	52.9%
Pennyroyal	20.3%	26.9%	46.6%
River Valley	*34.0%*	30.1%	68.4%
Lifeskills	27.3%	31.4%	61.8%
Communicare	26.4%	31.6%	52.4%
Centerstone Kentucky	32.3%	*20.0%*	62.0%
North Key	30.4%	20.6%	63.1%
Comprehend	18.8%	33.2%	54.7%
Pathways	20.6%	40.3%	42.9%
Mountain	*10.8%*	38.9%	*32.8%*
Kentucky River	17.8%	*60.9%*	*72.6%*
Cumberland River	16.4%	51.2%	48.4%
Adanta	21.6%	36.3%	39.5%
Bluegrass	29.9%	27.4%	44.9%
All Regions	**26.8%**	**30.1%**	**53.2%**

Looking at the DSM, clients in the River Valley regions were more likely to meet DSM-5 criteria for a substance use disorder (72.6%) compared to those from other CMHC regions. Those from the Mountain region were the least likely to meet criteria for a substance use disorder (32.8%). The Comprehend region had the highest percentage of clients meeting criteria for a severe substance use disorder (28.7%) while clients in the North Key region were more likely to meet criteria for a mild substance use disorder (38.2%) compared to other regions.

CMHC REGIONS AND LEVEL OF CARE

Level of care refers to assessors' education and treatment intervention referrals – specifically, the highest level assigned for each assessment is provided (i.e., when more than one level of care was assigned, only the highest level is presented here). Although outpatient treatment was the highest level of care recommended for more than half (53.9%) of Kentucky DUI clients in 2018, it was more likely to be recommended for clients in the Kentucky River region (75.6%) than in any other CMHC region. Education was more likely referred as the highest level of care in the Cumberland River region (57.7%) compared to any other region. The Kentucky River region also had the highest rate of referrals to residential treatment (6.6%). Lastly, referrals to intensive outpatient treatment were most common in the Comprehend region (11.7%). Additional referral information for CMHC regions can be found in Table E.6 in Appendix E (page 53).

CMHC REGIONS AND COMPLIANCE

Compliance refers to the percentage of assessments that were considered compliant upon completion. Out of the 12,372 assessments completed in 2018, assessors deemed 83.4%

compliant with their recommended intervention. The Pathways region had the highest rate of compliance with more than 9 out of 10 (92.9%) completed assessments being compliant. However, in the Communicare region, only 73.7% of the assessment records were deemed compliant. Compliance rates for each of the CMHC regions can be found in Table E.6 in Appendix E (page 53).

SECTION 8: DIVISION OF BEHAVIORAL HEALTH DUI PROGRAM REGIONS

Kentucky is divided into four DUI regions and each region has an assigned DUI regional coordinator who serves as a representative of the Division of Behavioral Health (DBH). DUI regional coordinators are responsible for monitoring and providing support to licensed and certified DUI assessment programs within their assigned region. Figure 27 presents a map of Kentucky's DBH regions.

In 2018, the Western region had more assessments than the other three regions (31.9%; 5,359 assessments) while the Western Central region had the fewest assessments (15.8%; 2,653 assessments). For the number of assessments submitted in 2018 for each of the four DBH regions, see Table F.1 in Appendix F (page 54).

Figure 27: DBH Regional Map

DBH DEMOGRAPHIC DIFFERENCES

Demographically, the DBH regions were largely similar. In each region, approximately three-quarters of the clients who were assessed were male; ranging from a low of 72.9% in the Central region to a high of 74.4% in the Western region. Clients in the Central region were also the youngest, with an average age of 36.0. Conversely, clients in the Western Central region had the highest average age at 37.6 years old. The most notable difference between the regions were clients' race/ethnicity. The Eastern region had the highest percentage of White clients (96.3%), followed by the Central region where 83.5% of clients were White. Clients in the Western Central region were the least likely to be White (72.4%). Table F.1 in Appendix F (page 54) provides a more thorough breakdown of the demographic

characteristics of DUI clients for each of the 4 DBH regions.

DBH REGIONS AND CONVICTION HISTORY

The average number of lifetime DUI convictions varied slightly across DBH regions. With the highest percentage of offenders with two or more lifetime DUIs (38.6%), the Western region had the highest average number of lifetime DUI convictions compared to the other three regions (1.66 convictions). Clients in the Western Central region were more likely to report that their current DUI was their first DUI conviction in their lifetime (69.3%). However, clients in the Eastern region were the most likely to be convicted of a first DUI offense (78.5%). Tables F.2 and F.3 in Appendix F (page 54) contain additional details about the number of lifetime DUI convictions and current DUI conviction type across DBH regions.

DBH REGIONS AND SUBSTANCES INVOLVED

Overall, alcohol was the most commonly-involved substance in each of the regions. However, alcohol-involved DUIs were most common in the Western Central region (86.1%), whereas the Eastern region had the highest percentage of assessments for individuals with a drug-involved DUI (51.6%). Assessments submitted in the Central and Western regions were more likely to result from a DUI that involved both alcohol and drugs compared to the other three regions (6.3%). Refer to Appendix F, Table F.4 (page 54) for the complete breakdown of the type of substance(s) involved in clients' current DUI by DBH region.

Table 9 presents the distribution of specific non-alcohol drugs involved in DUIs by DBH region. The Eastern region had the highest percentage of

assessments for individuals with DUIs involving drugs across most drug categories, with marijuana being the most commonly involved non-alcohol drug in the Eastern region at 18.4%. The Western region had a higher rate of amphetamine use (8.9%) compared to the other regions.

Table 9: Specific Drugs Involved in DUI by DBH Region

	Central	Eastern	Western	Western Central
Marijuana	10.5%	18.4%	16.6%	8.6%
Opiates	9.0%	18.1%	6.0%	4.4%
Amphetamines	2.1%	6.9%	8.9%	2.7%
Sedatives	3.2%	8.8%	4.6%	2.6%
"Other Drugs"[*]	4.3%	12.0%	4.9%	2.5%

* "Other drugs" includes cocaine, inhalants, hallucinogens, PCP, and an "other drug" category.

DBH REGIONS AND AUDIT/DAST

The Western Central region had the highest percentage of DUI clients with a positive AUDIT score (32.3%), with an average score of 6.90 on assessments submitted in 2018 (see Table 10). Individuals assessed in the Eastern region were the least likely to have a positive AUDIT score (18.1%) but were more likely to have a positive DAST score (43.0%) compared to clients in the other three regions. As shown in Table 10, the average DAST score for those in the Eastern region was 5.97.

Table 10: AUDIT/DAST Scores by DBH Region

	Central	Eastern	Western	Western Central
AUDIT Average	6.54	4.02	5.86	6.90
DAST Average	3.65	5.97	3.98	2.99

DBH REGIONS AND DSM-5 SUBSTANCE USE DISORDERS

Across the DBH regions, clients in the Western Central region were the most likely to meet at least two DSM criteria for a substance use disorder (62.0%) while clients in the Eastern region were the least likely (45.2%). As shown in Table 11, assessments for clients in the Western Central region had the highest percentage of severe substance use disorders (22.6%). Mild substance use disorders were most prevalent in the Western region (26.7%).

Table 11: DBH Regions and Substance Use Disorder Severity

	Central	Eastern	Western	Western Central
No Disorder	49.1%	54.8%	43.3%	38.0%
Mild	24.9%	15.5%	26.7%	22.1%
Moderate	8.8%	9.0%	10.7%	17.3%
Severe	17.2%	20.7%	19.3%	22.6%

Types of substance use disorders also varied by DBH region. As shown in Figure 28, the Western Central region had the highest percentage of assessments for individuals meeting criteria for an alcohol use disorder (52.6%); 45.1% met criteria for only an alcohol use disorder and 7.5% met criteria for an alcohol and drug use disorder. Individuals in the Western Central region met an average of 2.7 alcohol use disorder criteria.

Figure 28: Alcohol Use Disorders by DBH Regions
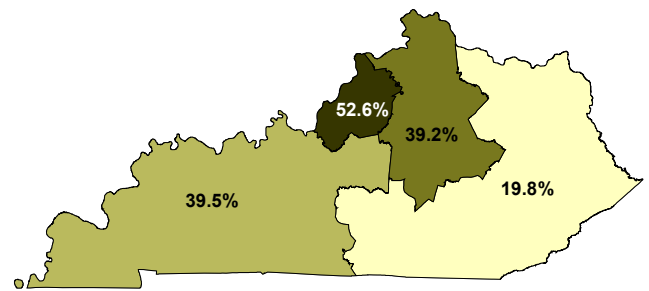
The Eastern region had the highest percentage of assessments for individuals meeting criteria for a drug use disorder (29.5%), as indicated in Figure 29. More specifically, 25.5% met criteria for only a drug use disorder and 4.1% met criteria for a drug and alcohol use disorder. On average, clients in the Eastern region met 1.9 drug use disorder criteria.

Figure 29: Drug Use Disorders by DBH Regions
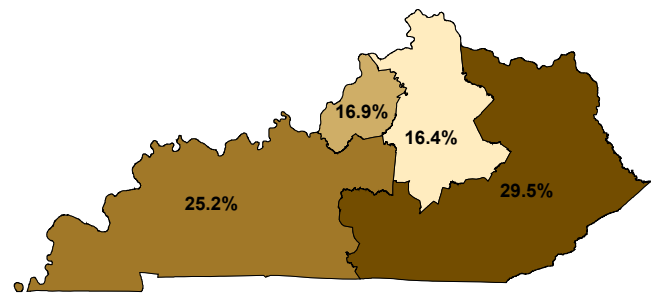
Lastly, compared to the other three DBH regions, clients in the Western region were more likely to meet substance use disorder criteria for both alcohol and drugs (7.9%).

DBH REGIONS AND LEVEL OF CARE

Outpatient treatment was the highest level of care recommended in each of the DBH regions; however, outpatient treatment was recommended as the highest level of care most often in the Western region compared to the other regions (58.6%). The Central region had the highest percentage of assessments for DUI clients

recommended for education (45.2%). Referrals to intensive outpatient treatment as the highest level of care were most common in the Central region (2.2%). Lastly, the Eastern region had the highest percentage of referrals to residential treatment

(3.3%) compared to the other regions. To see the complete distribution of the highest level of care recommended by DBH region, refer to Table F.5 in Appendix F (page 55).

DBH REGIONS AND COMPLIANCE

As mentioned in earlier sections, the majority of clients assessed in 2018 were compliant with their recommended intervention (83.4%). Across DBH regions, compliance rates were the highest in the Eastern region (87.5%). Compliance rates were the lowest in the Western region, with 79.8% of assessments being for individuals found to be compliant with their recommended intervention. Compliance rates can also be found in Table F.5 in Appendix F (page 55).

.

REFERENCES

1. Kentucky Revised Statutes (2010). Alcohol or substance abuse treatment and education programs -- Sentencing offenders to programs -- Regulation of programs -- Appeals of decisions regarding licensure of education and treatment facilities and programs (Chapter 189A.040).

2. Babor TF, De La Fuente JR, Saunders JB, et al. (1992). *The Alcohol Use Disorders Identification Test*, World Health Organization, Department of Mental Health and Substance Dependence, New York.

3. Skinner HA (1982). The Drug Abuse Screening Test, *Addictive Behaviors*, Vol. 7, 363-371.

4. American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition. Washington, DC.

5. Kentucky State Police (2018). *Crime in Kentucky: Commonwealth of Kentucky 2017 Crime Report*. Published by the Kentucky State Police, Frankfort, KY. Retrieved from: http://ksponline.org/Documents_2018/2017CrimeInKentucky_Updated.pdf.

APPENDICES

APPENDIX A: DUI TRENDS – 2008 TO 2017

Figure A.1. Percentage of Assessments for Persons Convicted of a Second DUI Offense or Higher between 2009 and 2018
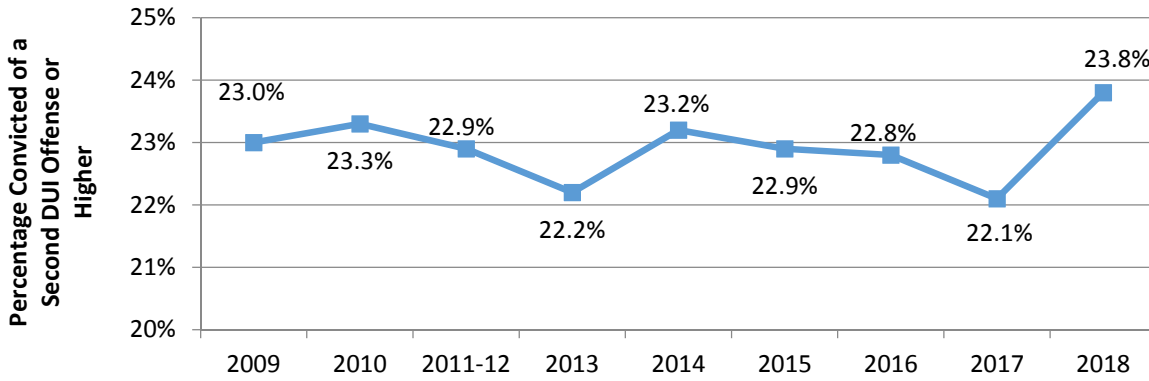
Figure A.2. Intensive Outpatient and Residential Treatment Referrals between 2009 and 2018
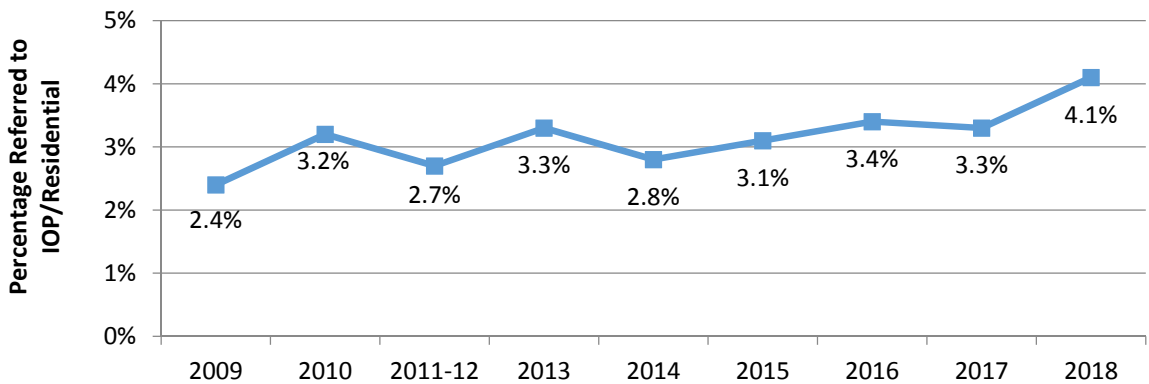
Figure A.3. Compliance Rates between 2009 and 2018
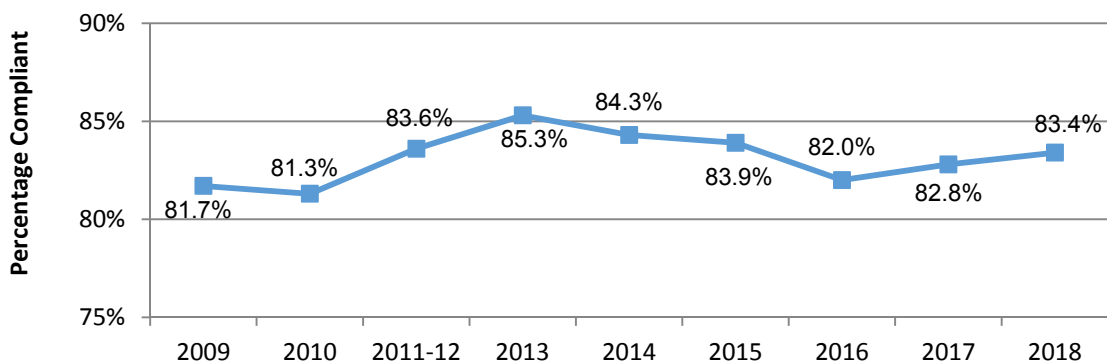
APPENDIX B: AUDIT RESPONSES AND AVERAGE SCORES BY GENDER

1. How often do you have a drink containing alcohol?

	Males	Females	Total
(0) Never	24.7%	31.2%	26.4%
(1) Monthly or less	26.1%	28.5%	26.7%
(2) 2 to 4 times a month	24.2%	21.8%	23.6%
(3) 2 to 3 times a week	16.8%	12.7%	15.7%
(4) 4 or more times a week	8.2%	5.8%	7.6%

Average Score	1.58	1.33	1.51

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

	Males	Females	Total
(0) 1 or 2	42.0%	54.6%	45.4%
(1) 3 or 4	27.9%	26.2%	27.4%
(2) 5 or 6	16.9%	11.7%	15.5%
(3) 7, 8, or 9	6.5%	4.0%	5.9%
(4) 10 or more	6.7%	3.5%	5.8%

Average Score	1.08	0.75	0.99

3. How often do you have six or more drinks on one occasion?

	Males	Females	Total
(0) Never	43.3%	56.5%	46.8%
(1) Less than monthly	30.5%	27.2%	29.6%
(2) Monthly	12.7%	7.9%	11.5%
(3) Weekly	9.9%	5.9%	8.8%
(4) Daily or almost daily	3.6%	2.5%	3.3%

Average Score	1.00	0.71	0.92

4. How often during the last year have you found that you were not able to stop drinking once you had started?

	Males	Females	Total
(0) Never	82.1%	83.3%	82.5%
(1) Less than monthly	9.5%	9.2%	9.4%
(2) Monthly	3.3%	3.0%	3.2%
(3) Weekly	2.8%	2.5%	2.7%
(4) Daily or almost daily	2.3%	2.0%	2.2%

Average Score	0.34	0.31	0.33

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

	Males	Females	Total
(0) Never	83.8%	84.6%	84.0%
(1) Less than monthly	11.2%	10.3%	11.0%
(2) Monthly	2.7%	2.5%	2.6%
(3) Weekly	1.4%	1.7%	1.5%
(4) Daily or almost daily	0.9%	0.9%	0.9%

Average Score	0.24	0.24	0.24

6. How often during the last year have you needed an alcoholic drink first thing in the morning to get yourself going after a night of heavy drinking?

	Males	Females	Total
(0) Never	92.6%	93.8%	92.9%
(1) Less than monthly	3.8%	3.3%	3.7%
(2) Monthly	1.2%	0.8%	1.1%
(3) Weekly	1.0%	0.8%	1.0%
(4) Daily or almost daily	1.4%	1.3%	1.3%

Average Score	0.15	0.13	0.14

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

	Males	Females	Total
(0) Never	74.9%	73.6%	74.5%
(1) Less than monthly	16.5%	18.2%	17.0%
(2) Monthly	4.1%	3.1%	3.8%
(3) Weekly	2.2%	2.1%	2.2%
(4) Daily or almost daily	2.3%	3.0%	2.5%

Average Score	0.40	0.43	0.41

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

	Males	Females	Total
(0) Never	81.3%	79.6%	80.8%
(1) Less than monthly	13.7%	15.2%	14.2%
(2) Monthly	2.7%	2.7%	2.7%
(3) Weekly	1.5%	1.7%	1.5%
(4) Daily or almost daily	0.8%	0.8%	0.8%

Average Score	0.27	0.29	0.27

9. Have you or someone else been injured as a result of your drinking?

	Males	Females	Total
(0) No	90.6%	90.5%	90.6%
(2) Yes, but not in the last year	6.0%	5.1%	5.8%
(4) Yes, during the last year	3.4%	4.4%	3.6%

Average Score	0.26	0.28	0.26

10. Has a relative, friend, doctor, or another health professional expressed concern about your drinking or suggested you cut down?

	Males	Females	Total
(0) No	76.9%	81.2%	78.1%
(2) Yes, but not in the last year	10.2%	7.8%	9.5%
(4) Yes, during the last year	12.9%	11.0%	12.4%

Average Score	0.72	0.60	0.69

APPENDIX C: DAST RESPONSES BY GENDER

Percentages represent those who answered "yes" to each specific question except for questions 4, 5, and 7 which are reverse scored.

1. Have you used drugs other than those required for medical reasons?

Males	Females	Total
40.0%	44.4%	58.8%

2. Have you abused prescription drugs?

Males	Females	Total
16.1%	22.4%	17.8%

3. Do you abuse more than one drug at a time?

Males	Females	Total
11.2%	15.5%	12.3%

4. Can you get through the week without using drugs (other than those required for medical reasons)?

Males	Females	Total
4.6%	5.9%	4.9%

Percentage of persons who responded "no"

5. Are you always able to stop using drugs when you want to?

Males	Females	Total
9.9%	13.8%	10.9%

Percentage of persons who responded "no"

6. Do you abuse drugs on a continuous basis?

Males	Females	Total
8.5%	10.3%	89.0%

7. Do you try to limit your drug use to certain situations?

Males	Females	Total
16.6%	17.9%	16.9%

Percentage of persons who responded "no"

8. Have you had "blackouts" or "flashbacks" as a result of drug use?

Males	Females	Total
8.2%	13.0%	9.5%

9. Do you ever feel bad about your drug abuse?

Males	Females	Total
20.8%	27.6%	22.6%

10. Does your spouse (or parents) ever complain about your involvement with drugs?

Males	Females	Total
15.7%	17.4%	16.1%

11. Do your friends or relatives know or suspect you abuse drugs?

Males	Females	Total
20.5%	23.1%	21.2%

12. Has drug abuse ever created problems between you and your spouse?

Males	Females	Total
12.9%	17.2%	14.0%

13. Has any family member ever sought help for problems related to your drug use?

Males	Females	Total
7.2%	8.7%	7.6%

14. Have you ever lost friends because of your use of drugs?

Males	Females	Total
12.8%	16.1%	13.7%

15. Have you ever neglected your family or missed work because of your use of drugs?

Males	Females	Total
13.7%	18.4%	14.9%

16. Have you ever been in trouble at work because of drug abuse?

Males	Females	Total
7.8%	8.5%	8.0%

17. Have you ever lost a job because of drug abuse?

Males	Females	Total
8.4%	9.1%	8.6%

18. Have you gotten into fights when under the influence of drugs?

Males	Females	Total
9.3%	11.2%	9.8%

19. Have you ever been arrested because of unusual behavior while under the influence of drugs?

Males	Females	Total
16.2%	18.8%	16.9%

20. Have you ever been arrested for driving while under the influence of drugs?

Males	Females	Total
28.8%	34.8%	30.4%

21. Have you engaged in illegal activities to obtain drugs?

Males	Females	Total
17.5%	19.3%	18.0%

22. Have you ever been arrested for possession of illegal drugs?

Males	Females	Total
21.9%	21.8%	21.8%

23. Have you ever experienced withdrawal symptoms as a result of heavy drug intake?

Males	Females	Total
13.6%	19.4%	15.1%

24. Have you had medical problems as a result of your drug use?

Males	Females	Total
5.0%	7.1%	5.5%

25. Have you ever gone to anyone for help for a drug problem?

Males	Females	Total
14.9%	20.7%	16.4%

26. Have you ever been in the hospital for medical problems related to your drug use?

Males	Females	Total
4.8%	6.8%	5.3%

27. Have you ever been involved in a treatment program specifically related to drug use?

Males	Females	Total
16.4%	24.4%	17.6%

28. Have you been treated as an outpatient for problems related to drug abuse?

Males	Females	Total
13.6%	18.1%	14.8%

APPENDIX D: DSM-5 SUBSTANCE USE DISORDER CRITERIA BY GENDER

(1) The substance is often taken in larger amounts or over a longer period than was intended

Males	Females	Total
38.8%	39.9%	39.1%

(2) There is a persistent desire or unsuccessful efforts to cut down or control substance use

Males	Females	Total
22.8%	25.3%	23.5%

(3) A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects

Males	Females	Total
17.2%	20.8%	18.2%

(4) Craving, or a strong desire or urge to use the substance

Males	Females	Total
25.6%	28.0%	26.2%

(5) Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home

Males	Females	Total
16.2%	19.4%	17.0%

(6) Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance

Males	Females	Total
21.3%	23.9%	22.0%

(7) Important social, occupational, or recreational activities are given up or reduced because of substance use

Males	Females	Total
15.4%	18.0%	16.1%

(8) Recurrent substance use in situations in which it is physically hazardous

Males	Females	Total
53.0%	51.1%	52.5%

(9) Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance

Males	Females	Total
17.7%	21.3%	18.7%

(10) Tolerance, as defined by either of the following:

    (a) a need for markedly increased amounts of the substance to achieve Intoxication or desired effect

    (b) markedly diminished effect with continued use of the same amount of the substance

Males	Females	Total
39.4%	37.8%	39.0%

(11) Withdrawal, as manifested by either of the following:

    (a) the characteristic withdrawal syndrome for the substance

    (b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms

Males	Females	Total
15.1%	18.7%	16.0%

APPENDIX E: CMHC REGIONAL DATA TABLES

Table E.1. CMHC Demographic Differences*

	Average Age	% Under 40 yr	% Male
Region 1 - Four Rivers	36.8	62.8%	*71.0%*
Region 2 - Pennyroyal	36.6	61.2%	*71.0%*
Region 3 - River Valley	36.7	63.4%	*77.3%*
Region 4 - Lifeskills	36.4	61.6%	75.3%
Region 5 - Communicare	36.2	*65.3%*	76.6%
Region 6 - Centerstone Kentucky	37.6	64.4%	73.0%
Region 7 - North Key	36.2	*65.3%*	71.3%
Region 8 - Comprehend	37.3	61.4%	72.6%
Region 10 - Pathways	36.3	64.6%	76.3%
Region 11 - Mountain	37.9	59.9%	73.8%
Region 12 - Kentucky River	37.5	59.9%	73.6%
Region 13 - Cumberland River	*38.1*	*56.6%*	72.0%
Region 14 - Adanta	36.6	62.7%	73.2%
Region 15 - Bluegrass	*35.9*	64.9%	73.4%
All Regions	**36.7**	**62.4%**	**73.5%**

* Missing Data: Age = 3

Table E.2. CMHC Lifetime DUI Convictions

	Average	0-1	2	3+
Region 1 - Four Rivers	*1.80*	*57.8%*	24.5%	17.7%
Region 2 - Pennyroyal	1.60	61.3%	23.7%	15.0%
Region 3 - River Valley	1.65	63.5%	20.5%	16.0%
Region 4 - Lifeskills	1.58	64.8%	23.2%	12.0%
Region 5 - Communicare	1.70	58.6%	24.9%	16.5%
Region 6 - Centerstone Kentucky	1.48	69.3%	20.2%	10.5%
Region 7 - North Key	*1.42*	70.4%	21.8%	*7.8%*
Region 8 - Comprehend	1.61	62.3%	25.1%	12.6%
Region 10 - Pathways	*1.80*	61.1%	19.0%	*19.9%*
Region 11 - Mountain	1.58	61.5%	*27.2%*	11.3%
Region 12 - Kentucky River	1.68	59.9%	25.4%	14.7%
Region 13 - Cumberland River	1.67	60.6%	23.9%	15.5%
Region 14 - Adanta	1.43	*73.1%*	*18.1%*	8.8%
Region 15 - Bluegrass	1.52	66.8%	22.2%	11.0%
All Regions	**1.57**	**65.2%**	**22.2%**	**12.6%**

Table E.3. CMHC DUI Offense Type

	1st	2nd	3rd or higher
Region 1 - Four Rivers	75.2%	20.1%	4.7%
Region 2 - Pennyroyal	71.8%	20.8%	7.4%
Region 3 - River Valley	73.0%	17.7%	*9.3%*
Region 4 - Lifeskills	76.2%	19.4%	4.4%
Region 5 - Communicare	*70.3%*	22.4%	7.2%
Region 6 - Centerstone Kentucky	77.0%	16.5%	6.5%
Region 7 - North Key	79.5%	16.5%	4.0%
Region 8 - Comprehend	72.2%	*23.3%*	4.5%
Region 10 - Pathways	79.1%	17.8%	*3.1%*
Region 11 - Mountain	75.2%	21.0%	3.8%
Region 12 - Kentucky River	*83.1%*	*12.5%*	4.4%
Region 13 - Cumberland River	77.3%	17.3%	5.4%
Region 14 - Adanta	79.1%	17.1 %	3.8%
Region 15 - Bluegrass	75.7%	19.9%	4.4%
All Regions	**76.2%**	**18.5%**	**5.3%**

Table E.4. CMHC Regions and Substances Involved in DUI Offense

	Alcohol Only	Drug Only	Alcohol + Drug
Region 1 - Four Rivers	64.3%	26.6%	9.1%
Region 2 - Pennyroyal	60.3%	33.4%	6.3%
Region 3 - River Valley	64.1%	29.5%	6.4%
Region 4 - Lifeskills	70.7%	23.6%	5.7%
Region 5 - Communicare	67.9%	27.8%	4.3%
Region 6 - Centerstone Kentucky	81.9%	13.9%	4.2%
Region 7 - North Key	*82.3%*	*12.7%*	5.0%
Region 8 - Comprehend	65.0%	24.7%	*10.3%*
Region 10 - Pathways	57.4%	36.3%	6.3%
Region 11 - Mountain	48.9%	47.2%	*3.9%*
Region 12 - Kentucky River	37.4%	56.7%	5.9%
Region 13 – Cumberland River	*31.4%*	*63.5%*	5.1%
Region 14 – Adanta	54.0%	41.2%	4.8%
Region 15 – Bluegrass	69.7%	23.3%	7.0%
All Regions	**66.6%**	**27.6%**	**5.8%**

Table E.5. CMHC Regions and AUDIT/DAST Scores

	AUDIT Average	DAST Average
Region 1 - Four Rivers	6.09	3.29
Region 2 - Pennyroyal	4.47	3.42
Region 3 - River Valley	6.29	3.82
Region 4 - Lifeskills	5.95	4.51
Region 5 - Communicare	6.25	4.39
Region 6 - Centerstone Kentucky	*6.90*	*2.99*
Region 7 - North Key	6.67	3.02
Region 8 - Comprehend	4.74	4.39
Region 10 - Pathways	4.68	6.17
Region 11 - Mountain	*3.05*	5.34
Region 12 - Kentucky River	3.81	*8.60*
Region 13 - Cumberland River	3.31	6.41
Region 14 - Adanta	4.48	5.10
Region 15 - Bluegrass	6.44	4.06
All Regions	**5.77**	**4.21**

Table E.6. CMHC Regions and Level of Care*

	Education	Outpatient	IOP	Residential	Compliance**
Region 1 - Four Rivers	38.4%	58.6%	1.1%	1.9%	82.4%
Region 2 - Pennyroyal	52.1%	47.4%	*0.0%*	0.5%	78.1%
Region 3 - River Valley	40.2%	51.8%	2.9%	5.1%	81.1%
Region 4 - Lifeskills	25.5%	71.6%	0.5%	2.4%	83.0%
Region 5 - Communicare	41.7%	53.6%	1.8%	2.9%	*73.7%*
Region 6 - Centerstone Kentucky	44.0%	53.5%	1.6%	0.9%	83.4%
Region 7 - North Key	41.3%	54.8%	1.6%	2.3%	85.7%
Region 8 - Comprehend	27.8%	60.1%	*11.7%*	*0.4%*	77.7%
Region 10 - Pathways	39.6%	52.0%	2.5%	5.9%	*92.9%*
Region 11 - Mountain	51.4%	44.8%	*0.0%*	3.8%	83.8%
Region 12 - Kentucky River	*14.9%*	*75.6%*	2.9%	*6.6%*	80.5%
Region 13 - Cumberland River	*57.8%*	*38.3%*	0.9%	3.0%	84.3%
Region 14 - Adanta	40.4%	58.6%	0.1%	0.9%	91.6%
Region 15 - Bluegrass	47.5%	46.8%	2.5%	3.2%	83.0%
All Regions	**42.0%**	**53.9%**	**1.6%**	**2.5%**	**83.4%**

**Of the 16,773 assessments submitted during 2018, only 12,372 were also completed during 2018.

APPENDIX F: DBH DUI PROGRAM REGIONAL DATA TABLES

Table F.1. DBH Demographic Differences*

	Central	Eastern	Western	Western Central
Assessments	4,712	4,049	5,359	2,653
% Male	72.9%	73.5%	74.4%	73.0%
% White*	83.5%	96.3%	82.4%	72.4%
Average Age**	35.96	37.19	36.58	37.57

* Missing Data = 2,836 Assessments
** Missing Data = 3 Assessments

Table F.2. DBH Lifetime DUI Convictions

	Central	Eastern	Western	Western Central
0-1	68.1%	64.3%	61.4%	69.3%
2	22.1%	22.0%	23.5%	20.2%
3+	9.8%	13.7%	15.1%	10.5%
Average	1.48	1.62	1.66	1.48

Table F.3. DBH DUI Offense Type

	Central	Eastern	Western	Western Central
1st	76.9%	78.5%	73.6%	77.0%
2nd	18.8%	17.4%	20.2%	16.5%
3rd or higher	4.3%	4.1%	6.2%	6.5%

Table F.4. Substances Involved in DUI Offense by DBH DUI Program Region

	Central	Eastern	Western	Western Central
Alcohol Only	74.2%	48.4%	66.2%	81.9%
Drug Only	19.5%	46.1%	27.5%	13.9%
Alcohol + Drug	6.3%	5.5%	6.3%	4.2%

Table F.5: Level of Care and Compliance by DBH DUI Program Region

	Central	Eastern	Western	Western Central
Highest Level of Care				
Education	45.2%	42.3%	37.9%	44.0%
Outpatient	49.7%	52.8%	58.6%	53.5%
IOP	2.2%	1.6%	1.2%	1.6%
Residential	2.9%	3.3%	2.3%	0.9%
Compliance*	83.8%	87.5%	79.8%	83.4%

* Of the 16,773 assessments submitted during 2018, only 12,372 were also completed during 2017.