Ohio Mental Health & Addiction Services

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Ohio Health Disparities Bulletin, No. 1
August 2013

Characteristics of Adolescent Marijuana Admissions in Ohio

State Fiscal Years 2008-2011

July 1, 2007-June 30, 2011

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Suggested citation:
Massatti, R., Potts, L., & Adhikari, S. (2013, August. ***Characteristics of Adolescent Marijuana Admissions in Ohio, SFYs 2008-2011.*** Columbus, OH: Ohio Department of Mental Health and Addiction Services.

Characteristics of Adolescent Marijuana Admissions in Ohio SFYs 2008-2011

Division of Quality, Planning and Research
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Background

Marijuana (aka: pot, weed, diesel, loud and kush) is a psychoactive drug that can have a psychological and physical effect upon individual users. It is not uncommon for marijuana users to believe that they need the drug to feel well. Users may eventually become tolerant to the chemical delta-9-tetrahydrocannabinol (THC) in marijuana, and begin to use larger and larger doses for the same desired results. Marijuana can cause serious health complications, and possibly result in shortening users' life spans through the development of respiratory ailments and lung cancer. Marijuana can also diminish quality of life through decreasing users' motivation and interest in life, which can lead to clinical depression.

Nationally, among adolescents who use illicit substances, marijuana is the most frequently used drug. The National Survey on Drug Use and Health (NSDUH) reported that 7.4 percent of all adolescents ages 12-17 used marijuana in 2010. From 2002 to 2010, adolescents who reported marijuana use were more often males (8.3 percent in 2010) rather than females (6.4 percent in 2010). The Substance Abuse and Mental Health Services Administration (SAMHSA) Drug Abuse Reporting Network explains that the rate of marijuana use among youth ages 12 to 17 appears to be increasing. Data gathered from hospital emergency departments throughout the nation indicates that marijuana-related emergency-room visits have increased more than 50 percent from 154.0 per 100,000 in 2004 to 240.2 per 100,000 in 2011.

In Ohio, data shows that marijuana is frequently used by adolescents. The Youth Risk Behavior Surveillance System (YRBSS) collects statewide data on adolescents in the ninth through the 12th grades. YRBSS data from 2010-2011 show that 23.6 percent of Ohio's youth had used marijuana in the past 30 days. Similar to the national data, more males (27.7%) than females (19.0%) had reported marijuana use. Early initiation of marijuana use (i.e., use before age 13) in Ohio has been above the national average since 2003 (9% vs. 8%). Adolescent males were more likely to have an earlier initiation than females (10% vs. 6% in 2011). Typically, marijuana use among Ohio high-school-age adolescents became more prevalent as grade level increased. In 2011, 17 percent of ninth graders, 24 percent of 10th graders, 22 percent of 11th graders and 31 percent of 12th graders used marijuana within the past 30 days.

While many national- and state-level statistics present an overview of marijuana use, there is much that still needs to be explored. The Ohio Department of Mental Health and Addiction Services (OhioMHAS) has the unique opportunity to analyze health disparities among marijuana users because of the treatment data it collects through the Ohio Behavioral Health (OHBH) dataset. The purpose of this bulletin is to examine trends among adolescents ages 12-17 who report marijuana use and determine whether any health disparities exist among different ages, races/ethnicities and sexes.

Please note: All references to years in this publication refer to state fiscal years.

1. Ohio Department of Alcohol and Drug Addiction Services. (2011). Marijuana: Get straight on the facts. [Brochure]. Columbus, OH: Author.
2. Substance Abuse and Mental Health Services Administration, Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-41, HHS Publication No. (SMA) 11-4658. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2011. Retrieved from http://www.samhsa.gov/data/NSDUH/2k10ResultsRev/NSDUHresultsRev2010.htm
3. Substance Abuse and Mental Health Administration Drug Abuse Reporting Network. (2013). National estimates of drug-related emergency department visits, 2004-2011 - All misuse and abuse. Retrieved from http://www.samhsa.gov/data/DAWN.aspx#DAWN 2011 ED Excel Files - National Tables
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Methods

The Ohio Health Disparities Bulletin (OHDB) is a new public health informatics effort from OhioMHAS, which analyzes Ohio's statewide treatment episode data to investigate behavioral health disparities among clients in the public behavioral health system. Analyses may range from age, gender, race/ethnicity disparities to drugs of choice, clients with mental health history and other areas of interest. The OHDB is patterned after SAMHSA's Treatment Episode Data Set (TEDS) reports, but it presents in-depth analyses on trends and disparities unique to Ohio. The OHDB also expands upon traditional TEDS reports by incorporating information exclusive to OhioMHAS' data system, and through reporting on statistically significant differences among client profiles when possible.

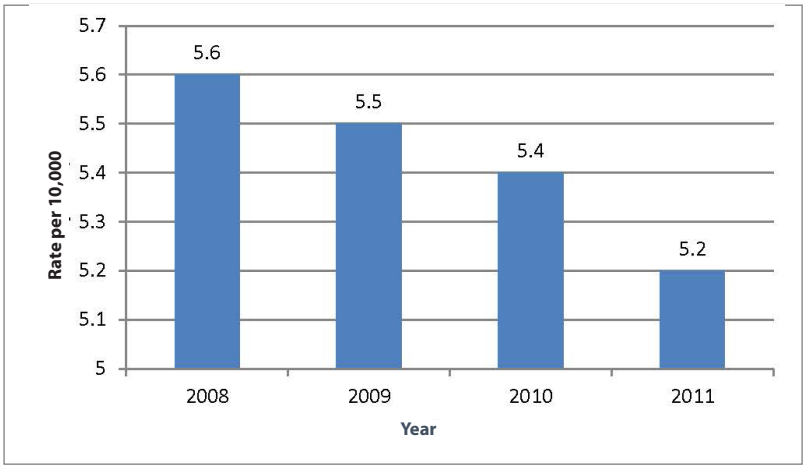
Data for the following study come from the OHBH dataset. OHBH data are collected at admission, transfer and discharge, and contain a variety of socio-demographic items and fields used to report federally mandated treatment outcomes. Using information from the OHBH dataset, this bulletin examines trends among youth ages 12 to 17 from state fiscal years 2008 to 2011. All youth who reported marijuana as a primary, secondary, tertiary or quaternary drug of choice during their admissions process were included in the analyses. OHBH data are continually updated because claims may be submitted over a long period. Data for this study were pulled from the OHBH dataset between Jan. 7, 2013 and Jan. 23, 2013.

A variety of statistical tests are used throughout the document to indicate whether meaningful differences occur among variables (e.g., between treatment length and race/ethnicity). These statistical tests and some of their numerical results are not mentioned by name to make the document more reader friendly; however, more information is available from the authors upon request.

Results

Marijuana is the most frequently abused drug among Ohio's adolescents seeking treatment in the publically funded system. During state fiscal years 2008 and 2011, almost 21,000 adolescents (73% of all adolescents served) reported marijuana as a primary, secondary, tertiary or quaternary drug of choice. More than half of all admissions were associated with marijuana, and the percentage of adolescents reporting this substance as a drug of choice rose from 70 percent in 2008 to 77 percent in 2011. Figure 1 displays the treatment rate for Ohio adolescents reporting marijuana use from 2008 to 2011. The treatment rate for adolescents reporting marijuana use has decreased over time, going from 5.6 per 10,000 adolescents in 2008 to 5.2 per 10,000 adolescents in 2011.[5]

Figure 1: Treatment rate per 10,000 Ohio adolescents by year, 2008-2011



Source: Ohio Department of Alcohol and Drug Addiction Services (ODADAS) Behavioral Health Data

[5]Adults (18 and older) reporting marijuana as a drug of choice also experienced a decrease in admissions from 2009-2011.

Demographic Characteristics

Males were almost three times more likely than females (15,464 vs. 5,344) to report marijuana use between 2008 and 2011. The demographics changed slightly over time; the percentage of males increased from 72 percent in 2008 to 76 percent in 2011. Self-reported marijuana use by race/ethnicity remained relatively constant during the four-year period. Roughly two-thirds of adolescents (64%) were non-Hispanic White and nearly one-third (31%) were African-American, while other minorities were either other races (3%) or Hispanic (2%). When comparing race/ethnicity and sex, most adolescents reporting marijuana use were non-Hispanic White males and females. The percentage of non-Hispanic White females using marijuana remained roughly the same (71% in 2008 vs. 73% in 2011), as did the percentage of African-American females (24% in 2008 vs. 23% in 2011), other race females (3% in 2008 and 2011) and Hispanic females (2% in 2008 vs. 1% in 2011). Likewise, the percentage of non-Hispanic White males using marijuana remained roughly the same (62% in 2008 and 64% in 2011), as did the percentage of African-American males (33% in 2008 vs. 32% in 2011), other race males (3% in 2008 vs. 2% in 2011) and Hispanic males (2% in 2008 and in 2011). Statistically significant differences became apparent when comparing racial/ethnic groups. African-American females were less likely to identify marijuana as a drug of choice every year. In contrast, African-American males and non-Hispanic White females were more likely to identify as marijuana users every year. Non-Hispanic White males were only less likely to identify as marijuana users in 2010, and Hispanic females were only less likely to identify as marijuana users in 2011.

Age of First Use

On average, males and females reported they were 13 years old when they first used marijuana, with most adolescents (72%) reported beginning marijuana use between ages 12 and 15. Typically, the average age of first use is slightly younger among males than females, and this difference was statistically significant every year except 2008 (e.g., 13.2 years for males vs. 13.4 years for females in 2011). There were some racial/ethnic differences within the age of first use. Non-Hispanic Whites were significantly younger than African-Americans when they first tried marijuana in 2008 (13.3 years vs. 13.6 years) and 2010 (13.2 years vs. 13.4 years); other years showed no significant differences.

Age at Admission

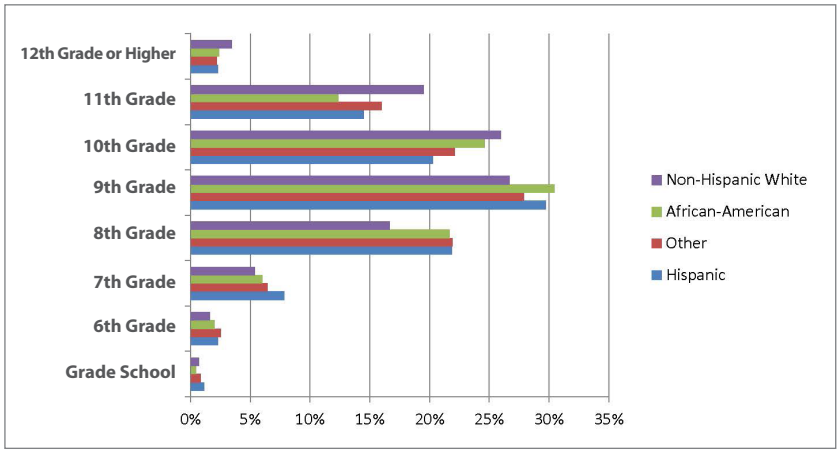
At time of admission, most adolescents (87%) reporting marijuana use were between the ages of 15 and 17 from 2008 to 2011. The average age of admission for males and females was roughly the same, being about 16 years of age every year. Females were significantly younger than males when they entered treatment in 2008 (i.e., 16.2 years for females vs. 16.4 years for males), but this difference did not hold true in other years. Hispanics and other races were significantly younger when they entered treatment compared to African-Americans and non-Hispanic Whites in 2009, but this statistical significance was not present in 2008 and 2011. Other races were also significantly younger when they entered treatment than all three groups in 2010.

Education Level at Time of Admission

Most students (88%) reported being in eighth through 11th grades at the time of admission during the reporting period. Figure 2 displays the time of admission by grade level and race/ethnicity. Between 2008 and 2011, some differences among the racial/ethnic groups became apparent. Non-Hispanic Whites were most likely to be admitted to treatment while in the ninth grade (27%), followed by 10th grade (26%) and 11th grade (20%). African-Americans were most likely to be admitted to treatment while in the ninth grade (30%), followed by 10th grade (25%) and 8th grade (22%). Other races were most likely to be admitted to treatment while in the ninth grade (28%), followed by

eighth grade (22%) and 10th grade (22%). Hispanics were most likely to be admitted to be treatment while in the ninth grade (30%), followed by eighth grade (22%) and 10th grade (20%).

Figure 2: Time of admission by grade level and race/ethnicity — pooled data from SFYs 2008-2011



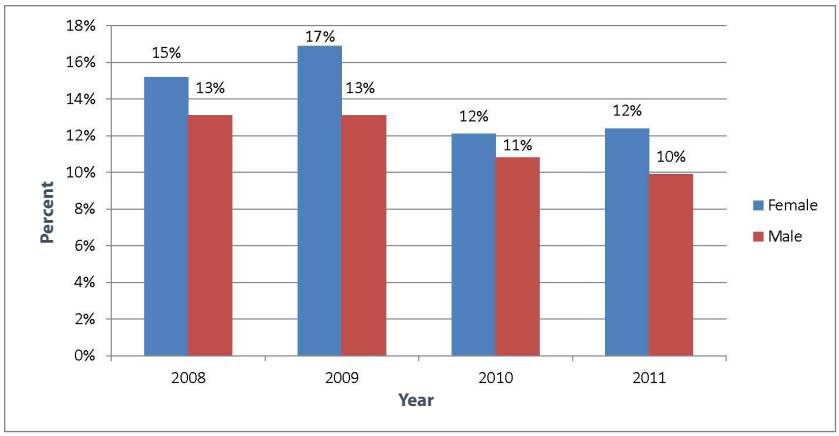
Source: ODADAS Behavioral Health Data

While there were no differences in education level between the sexes, there were some statistically significant differences among the racial/ethnic groups. From 2008 to 2010, non-Hispanic Whites were less likely to be in middle school and more likely to be in 11th grade at time of admission. The opposite was true for African-Americans; they were more likely to be in middle school. Other races and Hispanics were more likely to be admitted in middle school in 2009 and 2010. There were no statistically significant differences among racial/ethnic groups in 2011.

Age of Marijuana Initiation

Among adolescents entering treatment between 2008 and 2011, only a minority (12%) initiated marijuana use within the past 12 months. Figure 3 shows that females were more likely than males to use marijuana within the past 12 months, but this difference was only statistically significant in 2009 and 2011. Few differences became apparent when comparing use in the past 12 months by racial/ethnic group; African-Americans were significantly less likely to use marijuana in the past 12 months during 2009. The average length of time between age of first use and treatment was consistent over time. On average, adolescents used marijuana three years prior to treatment in 2008 and 3.2 years in 2011.

Figure 3: First-time marijuana use among adolescents by sex



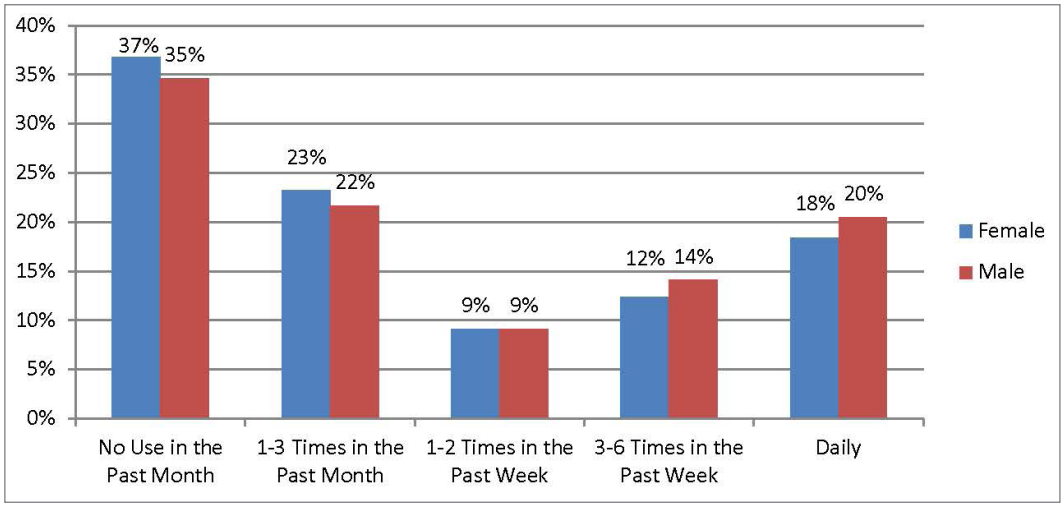
Source: ODADAS Behavioral Health Data

Patterns of Use

Among adolescents reporting use of marijuana, 97 percent reported smoking the drug and three percent reported orally consuming the drug. There were no significant differences in consumption patterns among the different sexes or racial/ethnic groups except in 2009 when females were significantly more likely to report oral consumption of marijuana.

A majority of adolescents reporting marijuana use (65%) said they took the drug within the past month (Figure 4). Of the adolescents reporting recent use, 34 percent used marijuana one to three times in the past month, 31 percent used marijuana daily, 21 percent used marijuana three to six times in the past week and 14 percent used marijuana one or two times in the past week. Typically there were no differences in the frequency of marijuana use among males and females. The only year when there was a statistically significant difference was 2008; females were more likely to report either not using the drug in the past month or using it one to three times in the past month, and they were less likely to report using it three to six times in the past week. Some statistically significant differences among racial/ethnic groups became apparent. Every year, non-Hispanic Whites were more likely to report no marijuana use in the past six months, and they were less likely to use it daily. In contrast, African-Americans were always more likely to either use the drug three to six times in the past week or use it daily. Other races were only more likely to have used marijuana one to three times in the past month during 2010.

Figure 4: Frequency of marijuana use by sex — pooled data from SFY 2008-2011



Source: ODADAS Behavioral Health Data

Entrance into Treatment

Between 2008 and 2011, most adolescents (93%) reporting marijuana use were admitted by the criminal justice system (63%), social welfare system (12%), by individual referrals including self-, family- and friend-referral (11%) or by the school system (7%). Every year there were statistically significant differences in admission referral source. Females were always more likely than males to be referred by mental health providers and the social welfare system; whereas, males were always more likely to be referred by the criminal justice system. From 2008 to 2011, non-Hispanic Whites were more likely to be admitted based upon individual and school referrals, and they were less likely to be admitted from the social welfare system. In contrast, African-Americans were more likely to be admitted from the social welfare system and less likely

to be admitted from the school system. Three out of four years, other races were more likely to be admitted from the social welfare system. Hispanics were more likely to be admitted from the social welfare system only in 2010.

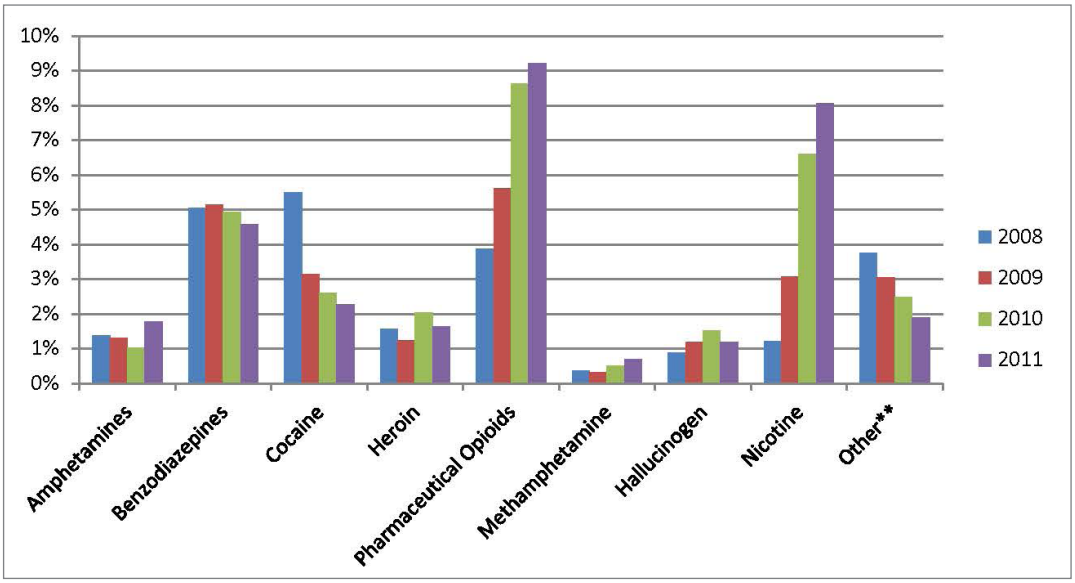
Level of Care

The most frequent level of care offered to adolescents was non-intensive outpatient services (76%), followed by intensive outpatient services (9%), non-medical community residential services (8%) and pre-treatment services (7%). At times, there were statistically significant differences in the level of care. In 2008 and 2009 females were more likely than males to use non-medical community residential services. Three out of four years females also were less likely to use intensive outpatient services. From 2009 to 2011, non-Hispanic Whites were less likely to use intensive outpatient services, and African-Americans were more likely to use these services. Hispanics were only more likely to use intensive outpatient services from 2010 to 2011. African-Americans were also more likely to use non-medical community residential services and less likely to use non-intensive outpatient services from 2010 to 2011. No significant differences were found for other races.

Polysubstance Abuse

Between 2008 and 2011, most adolescents (58%) reported using marijuana in combination with one (48%) or two (10%) other drugs, but a sizeable percentage (42%) only used marijuana. The number of adolescents using other substances with marijuana fell slightly from 60 percent in 2008 to 56 percent in 2011. Alcohol was the most frequently used drug with marijuana. Of adolescents reporting polysubstance use, 76 percent used alcohol in 2008, but this percentage decreased to 69 percent in 2011. Other substances were infrequently used with marijuana although there was some variation over time (Figure 5). Concurrent cocaine use and other drug use decreased while concurrent pharmaceutical opioid use increased from 2008 to 2011. Nicotine use appears to have increased the most from one percent in 2008 to eight percent in 2011, but these results may be a reporting artifact due to the addition of the nicotine variable around SFY 2009, and greater awareness in the field about the dangers of nicotine abuse and dependence.

Figure 5: Other non-alcohol substances used with marijuana*



Source: ODADAS Behavioral Health Data

*Alcohol is not shown because the percentage is so large (>69%) that all other percentages are dwarfed.
**Other refers to inhalants, phencyclidine (PCP), other stimulants, over-the-counter medications, and other medications.

There were statistically significant differences in polysubstance abuse between the sexes and among racial/ethnic groups. Between 2008 and 2011 females were more likely to use two or more drugs concurrently and less likely to use marijuana alone, while males were more likely to use marijuana alone and less likely to use two or more drugs concurrently. Every year, non-Hispanic Whites were more likely to use two or more drugs concurrently and less likely to use marijuana alone, while African-Americans were always more likely to use marijuana alone and less likely to use two or more drugs concurrently. No significant differences were found for other races.

Mental Health History

Almost one-third (31%) of adolescents who used marijuana self-reported having a mental health history. Females were significantly more likely to report having a mental health history from 2009 to 2011. Between 2008 and 2011, females had 1.3 times the odds of having a mental health history as males. The odds of females reporting a mental health history grew slightly every year. In 2008, females had 1.2 times the odds of having a mental health history as males, and by 2011, females had 1.5 times the odds of having a mental health history as males. Occasionally, some racial/ethnic groups were more likely to identify a mental health history than others. In 2008, non-Hispanic Whites were more likely to identify a mental health history than African-Americans. The odds of non-Hispanic Whites identifying a mental health history decreased slightly every year. In 2008, non-Hispanic Whites had 1.4 times the odds of identifying a mental health history as African-Americans, and by 2011, non-Hispanic Whites were equally likely to identify a mental health history as African-Americans. No significant differences were found for Hispanics or other races.

A minority (3%) of adolescents reporting marijuana use said they experienced suicidal ideation. Females were significantly more likely to experience suicidal ideation in three out of four years. Between 2008 and 2011, females had 2.3 times the odds of experiencing suicidal ideation as males. The odds of females reporting a suicidal ideation when compared to males increased over time, growing from 2.0 in 2008 to 4.3 in 2011. Some racial/ethnic groups experienced significantly more or less suicidal ideation than others. From 2008 to 2009, non-Hispanic Whites were more likely to experience suicidal ideation and African-Americans were less likely to experience suicidal ideation. The odds of non-Hispanic Whites reporting suicidal ideation fell every year. In 2008, non-Hispanic Whites had 3.2 times the odds of experiencing suicidal ideation as African-Americans, and by 2011, non-Hispanic Whites had 1.2 times the odds of experiencing suicidal ideation as African-Americans. No significant differences were found for Hispanics or other races.

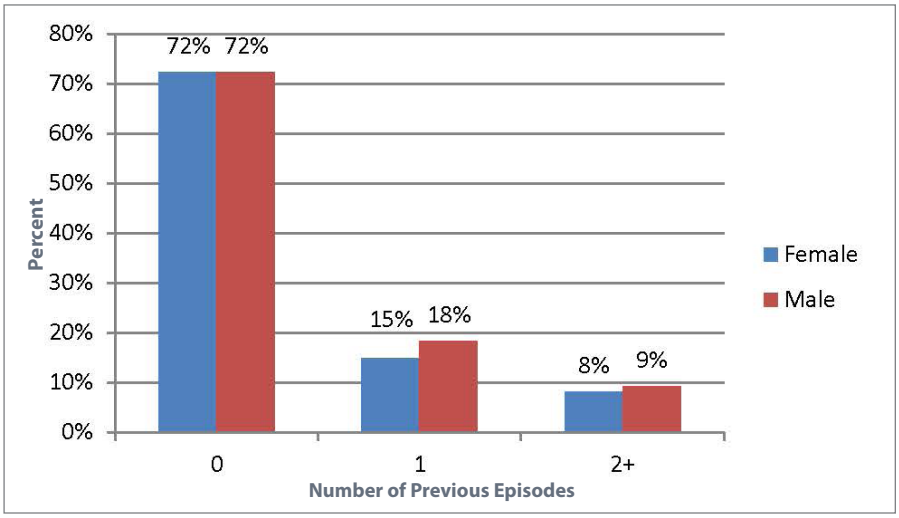
Exposure to Violence

A minority of adolescents reporting marijuana use also reported experience with violence. Seven percent of those aged 12-17 years reported either being domestic violence victims or witnesses. When asked about specific forms of abuse, seven percent identified they were victims of physical abuse and six percent identified they were victims of sexual abuse. Females were 2.1 times more likely to be victims of physical abuse than males, and the odds consistently increased over time from 1.7 in 2008 to 2.5 in 2011. Every year, non-Hispanic Whites were more likely to be physical abuse victims, and African-Americans were less likely to be physical abuse victims. Females were 7.9 times more likely to be victims of sexual abuse than males, with a relatively stable trend during this time. At times, there were statistically significant differences between sexual abuse and racial/ethnic groups. African-Americans were less likely to report being victims of sexual abuse in 2010 and 2011. Other races were only more likely to report being victims of sexual abuse in 2009.

Previous Episodes of Treatment

Most adolescents entering treatment (73%) had no previous episodes of treatment during SFYs 2008 and 2011. Only a minority of adolescents said they had been in treatment one other time (17%) or two or more times (10%). The number of adolescents reporting previous episodes remained relatively stable over time. The largest change occurred between adolescents reporting one previous episode; the number increased from 713 in 2008 to 951 in 2011 (33%), while other categories slightly decreased. Males and females reported similar histories of prior treatment (Figure 6). From SFYs 2008 to 2011, males and females were equally likely to report no previous episodes. Males were slightly more likely to report previous episodes; 18 percent of males reported one previous episode compared to 15 percent of females. Only two years showed statistically significant differences among males and females; females were less likely to have one previous episode in 2009 and 2010.

Figure 6: Previous episodes of treatment by sex — pooled data from SFYs 2008-2011



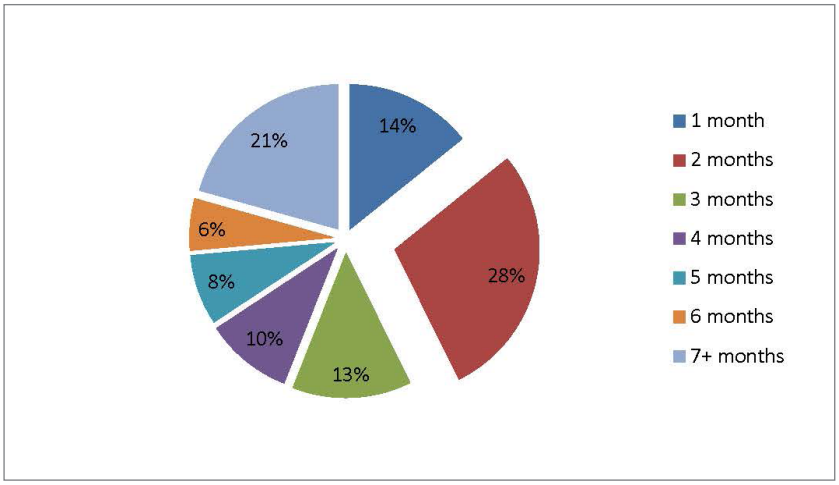
Source: ODADAS Behavioral Health Data

No consistent differences were found when comparing racial/ethnic groups to previous episodes of treatment. In 2008, other races were significantly more likely to report two or more episodes, and African-Americans were significantly less likely to report one previous episode and two or more previous episodes. In 2011, African-Americans were significantly more likely to report one previous episode, and Hispanics were significantly less likely to report one previous episode. There were no differences among racial/ethnic groups between SFYs 2009 and 2010.

Treatment Outcomes

Most adolescents (65%) spent between one and four months in treatment (Figure 7). The average length of time adolescents remained in treatment stayed roughly the same, with providers reporting adolescents remained in treatment an average of 4.3 months in 2008 and an average of 4.4 months in 2011. While there were no significant differences between sexes, there were significant occasional differences among racial/ethnic groups. Non-Hispanic Whites stayed in treatment longer than African-Americans in 2008 (5.0 months vs. 4.2 months) and 2009 (5.2 months vs. 3.9 months); other years showed no significant differences among the racial/ethnic groups.

Figure 7: Number of months in treatment

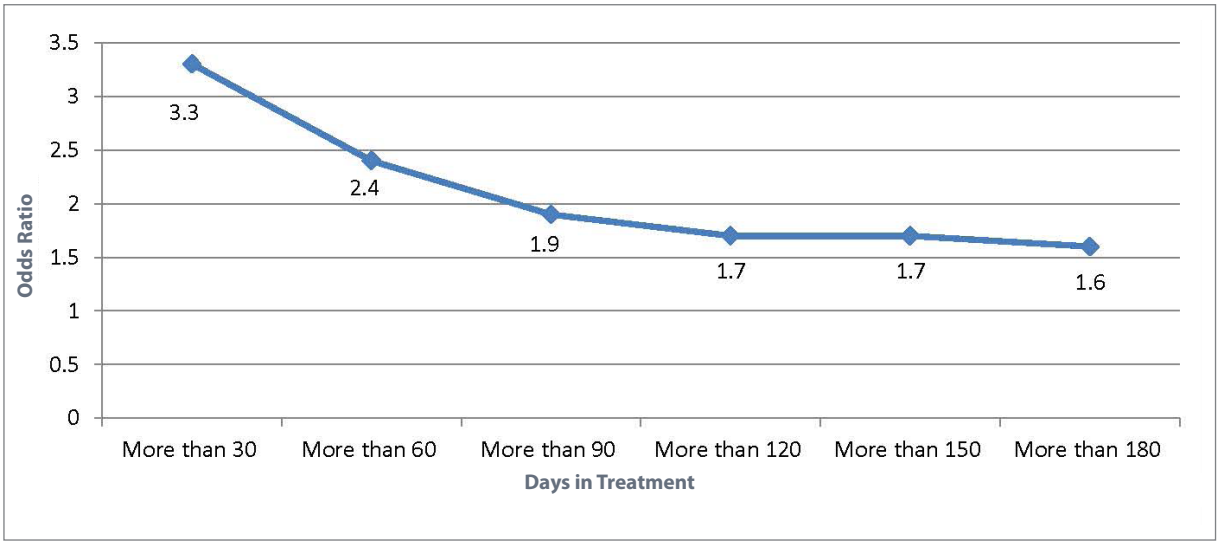


Source: ODADAS Behavioral Health Data

During SFYs 2008 and 2011, a majority of clinicians (68%) reported that the adolescent's disposition at discharge was either positive (37%) or negative (31%). A smaller percentage of clinicians reported adolescent's disposition at discharge was either neutral (14%) or referral (18%). Adolescents who remained in treatment longer were more likely to have positive outcomes. Only 23 percent of adolescents remaining in treatment fewer than 60 days had a positive disposition at discharge; whereas, 44 percent of adolescents remaining in treatment more than 60 days had a positive disposition at discharge.

Figure 8 compares the odds of a positive discharge compared to a negative discharge, given the length of treatment. During SFYs 2008 and 2011, youth who spent more than 30 days in treatment were 3.3 times more likely to have a positive disposition at discharge compared to those who spent fewer than 30 days in treatment. These odds decreased over time, but greater length in treatment was always associated with greater odds of a positive discharge when compared to a negative discharge.

Figure 8: Odds of a positive disposition at discharge compared to negative disposition at discharge, given length of treatment — pooled data from SFY 2008-2011

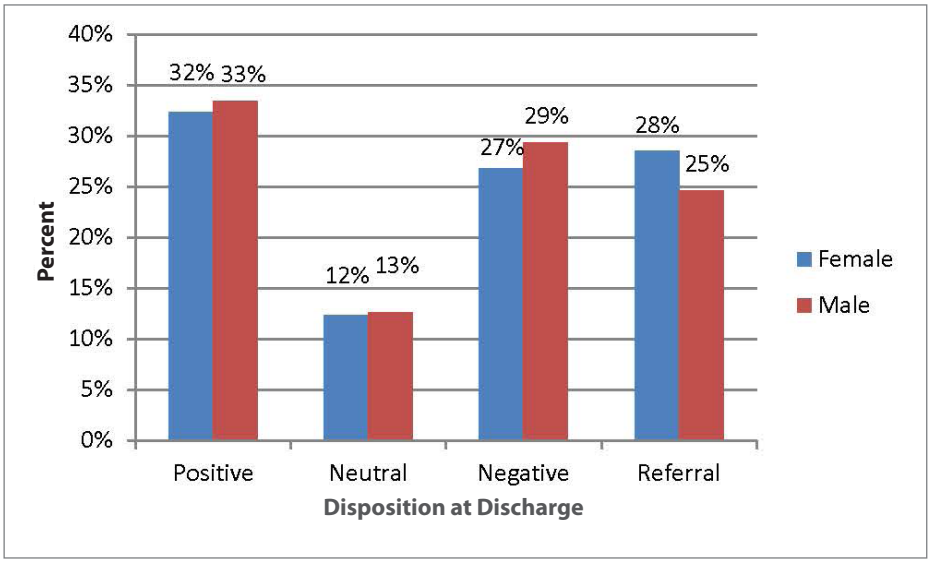


Source: ODADAS Behavioral Health Data

Significant differences became apparent when stratifying (classifying) the general categories of disposition at discharge. Every year adolescents who remained in treatment more than 60 days were significantly more likely to successfully complete or graduate from a treatment program, and three out of four years, adolescents were less likely to be referred to another program or service with unsatisfactory progress. In contrast, adolescents in treatment fewer than 60 days were significantly less likely to successfully complete or graduate from a treatment program, and they were significantly more likely to be referred to another program or service with satisfactory progress between 2008 and 2011. Three out of four years, adolescents in treatment fewer than 60 days were also more likely to leave treatment without satisfactory progress.

Clinicians reported similar discharge statuses in males and females from 2008 to 2011 (Figure 9). Both sexes were almost equally likely to have positive and neutral dispositions at discharge. Generally, females were slightly more likely to have a negative disposition at discharge and males were slightly more likely to be referred to other services, but these differences were not statistically significant.

Figure 9: Disposition at discharge by sex — pooled data from SFY 2008-2011

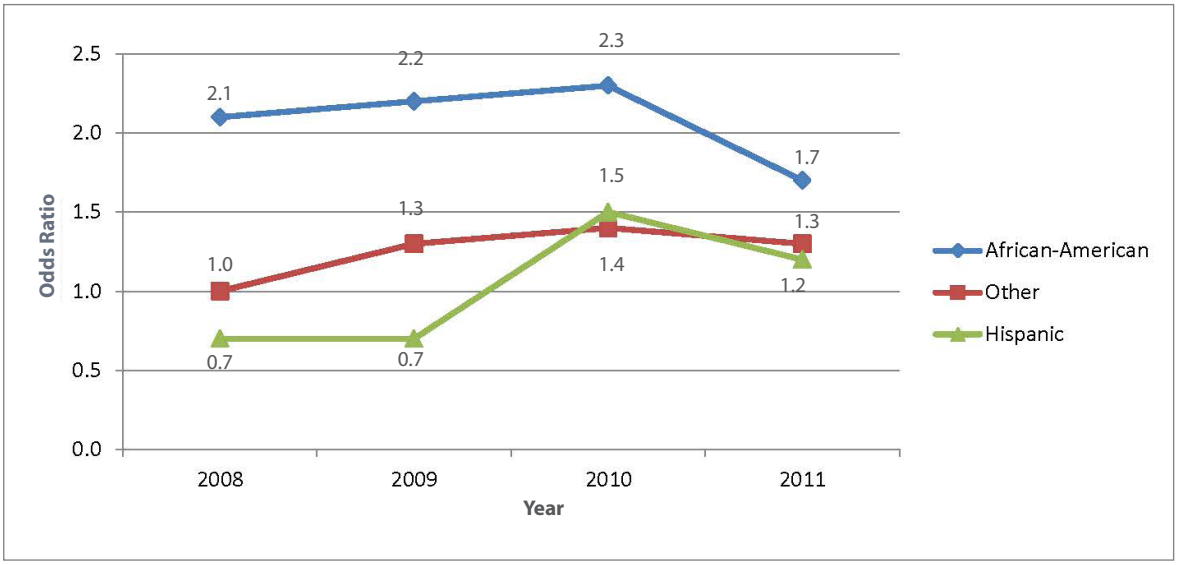


Source: ODADAS Behavioral Health Data

Only a few statistically significant differences were visible when stratifying (classifying) the general categories of disposition at discharge. From 2009 to 2011, females were significantly less likely to leave treatment with the disposition of incarceration while in treatment or recovery. Males were more likely to be incarcerated while in treatment or recovery in 2009, and females were more likely to be referred to another program or service with satisfactory progress in 2011.

Some statistically significant differences became apparent when comparing positive disposition at discharge to racial/ethnic groups. Figure 10 shows the odds of a successful treatment outcome for adolescent non-Hispanic Whites compared to other races/ethnicities. Between 2008 and 2011 non-Hispanic Whites were typically more likely to have a positive disposition at discharge compared to other racial/ethnic groups. For example, non-Hispanic Whites had 2.1 greater odds of a positive discharge than African-Americans in 2008. The odds decreased in 2011, but the difference was still statistically significant. Non-Hispanic Whites were also more likely than other races to have a positive disposition at discharges, but none of these odds ratios was statistically significant. In 2008 and 2009, Hispanics were more likely than non-Hispanic Whites to have a positive disposition at discharges, but none of these odds ratios was statistically significant.

Figure 10: Odds of a successful treatment outcome for adolescent non-Hispanic Whites compared to other races/ethnicities, SFY 2008–2011



Source: ODADAS Behavioral Health Data

Significant differences among racial/ethnic groups became apparent when stratifying (classifying) the general categories of disposition at discharge. Every year, African-Americans were significantly more likely to be referred to other programs with satisfactory progress and non-Hispanic Whites were significantly less likely to be referred to other programs with satisfactory progress. Between 2009 and 2011, African-Americans were significantly more likely to be involuntarily discharged due to non-participation or a rule violation, while non-Hispanic Whites were significantly less likely to experience that disposition at discharge.

Limitations

This study has several limitations. Results from this study only reflect marijuana use among adolescents treated in the public alcohol and drug treatment system and may not be generalizable to the general population of adolescents in Ohio. Many children are treated in the private health system, but similar data on health disparities is not tracked for that group. Also, more than half of the adolescents in this study are referred from the criminal justice system, leading to results that may not be similar to youth in the private health system because of the unique behaviors and/or demographics for the criminal justice population. Finally, most of the adolescents served in this public system are on Medicaid, and any health disparities found amongst adolescents on Medicaid may not be the same as health disparities in the general population.

This study may also be limited due to several potential forms of bias. Sample bias is possible in the data because service providers and community boards may not have contributed information to the OHBH dataset. Were the missing data from these areas combined with other statewide data, then the findings may have been different. Social desirability bias may also have impacted the findings if adolescents told the clinicians what they wanted to hear. Research has shown that adolescents, in particular, are prone to this type of bias, so results may have some degree of error. Generally, it is

more likely that the results underestimate some of the trends in marijuana use because adolescents may not accurately self-report their drug history.

Findings/Recommendations

The following sections highlight the major findings of the study and propose recommendations based upon these findings.

Major Findings

- Marijuana is the most frequently abused drug among Ohio's adolescents seeking treatment in the publicly funded system. Between state fiscal years 2008 and 2011, almost 21,000 adolescents (73% of all adolescents served) reported marijuana use.
- The percentage of adolescents reporting marijuana as a drug of choice increased from 70 percent in 2008 to 77 percent in 2011.
- The treatment rate for adolescents reporting marijuana use has decreased over time, from 5.6 per 10,000 adolescents in 2008 to 5.2 per 10,000 adolescents in 2011.
- African-Americans used marijuana with greater frequency than non-Hispanic Whites.
- Females were always more likely than males to be referred by mental health providers and the social welfare system; whereas, males were always more likely to be referred by the criminal justice system.
- The average length of time between age of first use and treatment was consistently about three years.
- The most frequent level of care offered to adolescents was non-intensive outpatient services (76%), followed by intensive outpatient services (9%), non-medical community residential services (8%), and pre-treatment services (7%).
- Alcohol was the most frequently used drug with marijuana.
- Among adolescents who abused two or more drugs, concurrent cocaine use and other drug use decreased over time, while concurrent pharmaceutical opioid use increased from 2008 to 2011.
- Almost one-third (31%) of adolescents who used marijuana self-reported having a mental health history, with females more likely to report a mental health history.
- Most adolescents entering treatment (73%) had no previous episodes of treatment.
- On average, adolescents remained in treatment four months for marijuana use. Some years showed that non-Hispanic Whites remained in treatment longer than African-Americans.
- Between 2008 and 2011, youth who spent more than 30 days in treatment were 3.3 times more likely to have a positive disposition at discharge compared to those who spent fewer than 30 days in treatment. These odds decreased over time, but greater length in treatment was always associated with greater odds of a positive discharge when compared to a negative discharge.
- Most years, non-Hispanic Whites were more likely to have a positive disposition at discharge compared to most other racial/ethnic groups; however, this difference was only statistically significant when comparing non-Hispanic Whites to African-Americans.
- African-Americans were significantly more likely to be involuntarily discharged due to non-participation or a rule violation, while non-Hispanic Whites were significantly less likely to experience that disposition at discharge.

Implications for Healthcare and Substance Use Treatment

- Prevention activities should be targeted toward youth about the dangers of substance use, especially because they may not understand the consequences of alcohol and drug use. Educators may want to focus on marijuana, prescription opioids and tobacco because of the growth in their use over time.
- Parents of adolescents should be educated on the ways to properly dispose of unused medication because adolescents often obtain these medications from family and friends.
- Because length of time in treatment is associated with success in treatment, providers should be introduced to programs that assist in techniques of treatment retention, such as NIATx.
- Screening for mental health issues should be performed for all adolescents involved in addiction treatment because of the large percentage that have a self-identified mental health history. While a minority of adolescents report suicidal ideation, this screening should also include a focus on whether the adolescent is suicidal.
- Clinicians should also screen adolescents to see whether they are current or former victims of physical and sexual abuse. Adolescents may come into treatment with trauma issues and may need to be referred for additional services to cope with these issues.
- Further research is necessary to discover why non-Hispanic Whites perform better in treatment than other racial/ethnic groups. Research could be conducted with clients and clinicians to determine what factors may be modified at the policy or program levels.
- Further research is necessary to examine why African-Americans are more likely to be involuntarily discharged due to non-participation or a rule violation. A recent national study found that African-Americans who use alcohol and drugs were less likely to successfully complete treatment than non-Hispanic Whites, and it suggested that unemployment and housing instability were part of the reason. Other studies have suggested that cultural sensitivity and training could be used to encourage better outcomes. Researchers can build on these findings to discover the causes of the disparity and develop solutions to help racial minorities successfully complete treatment.

Acknowledgements

Special thanks to the following individuals for their review of earlier report drafts: Tammy Collins, Brad DeCamp, Stacey Frohnapfel-Hasson, Nicholas Martt, Joyce Starr and Sanford Starr. Design by: Shirley Bowen

Glossary

Disposition at discharge — A variable related to the clinical assessment of client outcomes when the case is closed. A discharge status is generally grouped into four categories: positive discharge, neutral discharge, negative discharge or referral discharge.

Drug of choice — A client's preferred dug of choice. A client may identify up to four drugs of choice, which fall into the following categories: primary, secondary, tertiary or quaternary.

Health disparity — gaps in the quality of health and health care across gender, racial/ethnic, sexual orientation and socio-economic groups. These gaps may affect how frequently a disease affects a group, how many people get sick or how often the disease causes death.

Level of care — The intensity of care being provided by a health care facility. In Ohio's treatment system, there are 10 possible levels of care: pre-treatment, non-intensive outpatient, intensive outpatient, day treatment, non-medical community residential treatment, medical community residential treatment, ambulatory detoxification, sub-acute detoxification, acute detoxification or acute hospital detoxification.

Mental health history — A variable in OHBH in which clients self-identify whether they have a mental health history. The interpretation of this variable may vary by client or by provider.

Negative discharge — A client who left treatment on his/her own against staff advice without satisfactory progress, was removed from treatment due to nonparticipation, was removed from treatment due to violation of rules, or was incarcerated due to a new criminal offense while in treatment or recovery.

Neutral discharge — A client who left treatment on his/her own against staff advice with satisfactory progress, was incarcerated due to an old warrant or charge before entering treatment, transferred to another facility for health reasons, moved away, needed other services not available at the treatment facility or died.

Ohio Behavioral Health (OHBH) Dataset — Data that are collected at admission, transfer and discharge and contains a variety of socio-demographic items and fields used to report federally mandated treatment outcomes.

Odds ratio — A statistical test that compares the odds of an event in one group to the odds of an event in another group. Odds ratios greater than one indicate a group is at greater risk for an event, and odds less than one indicate a group is at less risk for an event. An odds ratio of 1.0 means that both groups are at equal risk for an event. Odds ratios mentioned in this report do not control for other variables with the exception of the analysis of treatment outcomes in Figure 10.

Polysubstance abuse — Concurrent abuse of two or more drugs.

Positive discharge — A client who left treatment and achieved all of his/her treatment goals.

Referral discharge — A client who is referred out to another agency or program, which may be a mental health or alcohol and drug treatment provider.

Reporting artifact — A potential bias in the analysis due to the structure of the data or completeness of the data.

Statistical significance — A concept that indicates mathematically meaningful differences among variables.

Treatment rate — The number of unique adolescents, ages 12-17, entering treatment divided by the total number of Ohio adolescents, ages 12-17. The rate is presented in units per 10,000 adolescents.