

By the Numbers 3

Developing a Common Understanding for the Future of Behavioral Health Care

Analysis of Alcohol and Other Drug Treatment in Ohio







A nonprofit, non-partisan think tank, The Center for Community Solutions focuses on solutions to health, social, and economic issues. Community Solutions identifies community issues, analyzes and explains them, and proposes non-partisan recommendations to improve health, social, and economic conditions. Established in 1913, it is a United Way agency. For more information: www.CommunitySolutions.com.

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The Mental Health & Addiction Advocacy Coalition is comprised of over 105 member organizations statewide, including health and human service agencies, the faith based community, government and advocacy organizations, courts, major medical institutions, the corporate arena, and behavioral health agencies serving children and adults. The MHAC's mission is to foster education and awareness of mental health and addiction issues while advocating for public policies and strategies that support effective, well-funded services, systems and supports for those in need, resulting in stronger Ohio communities. MHAC supporters include: Eva L. & Joseph M. Bruening Foundation; The Cleveland Foundation; Community West Foundation; The George Gund Foundation; Interact for Health; The Mt. Sinai Health Care Foundation; Saint Luke's Foundation; and Woodruff Foundation.

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Acronyms

| | | | |
|--------|--|-----------|---|
| ACA | Patient Protection and Affordable Care Act | MHAC | Mental Health and Addiction Advocacy Coalition |
| ADAMH | Alcohol, Drug Addiction and Mental Health | MHAS | Ohio Department of Mental Health and Addiction Services |
| AOD | Alcohol and other drugs | MHPAEA | Mental Health Parity and Addiction Equity Act |
| CCS | The Center for Community Solutions | NIDA | National Institute on Drug Abuse |
| DEA | Drug Enforcement Administration | NIH | National Institutes of Health |
| EHB | Essential Health Benefits | NSDUH | National Survey on Drug Use and Health |
| ER | Emergency Room | ODADAS | Ohio Department of Alcohol and Drug Addiction Services |
| FDA | Food and Drug Administration | ODMH | Ohio Department of Mental Health |
| FPL | Federal Poverty Level | OHBH | Ohio Behavioral Health |
| FY | State Fiscal Year | SAMHSA | Substance Abuse and Mental Health Services Administration |
| GA | General Assembly | SAPT/SABG | Substance Abuse Prevention and Treatment block grant |
| HB | House Bill | TEDS | Treatment Episode Dataset |
| MACSIS | Multi-Agency Community Services Information System | | |
| MAT | Medication-Assisted Treatment | | |

Highlights

The scope and impact of substance use disorders:

- According to the National Survey on Drug Use and Health (NSDUH), 238,000 Ohioans abuse or are dependent on an illicit drug, and 629,000 Ohioans abuse or are dependent on alcohol, as of 2011-2012.
- Based on NSDUH data for 2011-2012, 216,000 adult Ohioans needed but did not receive treatment for illicit drug use. Additionally, 595,000 adult Ohioans needed but did not receive treatment for alcohol use. When compared to the number of adults who abuse or are dependent on drugs or alcohol, only a small percentage of people who need treatment are actually receiving it. Less than 10 percent of people who are abusing or dependent on illicit drugs are receiving treatment, and just over five percent of people abusing or dependent on alcohol are being treated.
- Drug overdose deaths in Ohio in 2013 were five times the number they were in 2000, increasing from 411 to 2,110.
- Substance use disorders (alcohol and drug abuse or dependence) impact many facets of society from family and social connections, to the criminal justice system, workforce, and the child welfare system, among others. Child welfare cases involving parents who use heroin, cocaine, or both rose from 15 percent to 25 percent of all cases statewide between 2009 and 2013. These children tend to stay in foster care longer, and their cases reopen more frequently compared to those with parents who do not have a substance use disorder.

Funding for treatment services by county alcohol, drug addiction, and mental health boards:

- County boards spent \$162 million on substance use treatment services in 2012. Treatment services accounted for 66 percent of total board spending.
- The three treatment services that received the greatest amounts of funding from boards were group counseling, intensive outpatient counseling, and individual counseling. These three services received 60 percent of all board treatment funds in 2012.
- At the county board level, not every level of care is utilized to treat every drug. The only near-universal level of care used to treat any given drug type across all biennia is non-intensive outpatient treatment. Day treatment, medical community residential, and acute, sub-acute, and ambulatory detoxification were each utilized by fewer than 20 out of the 50 county boards for any drug type in 2011-2012.

- The use of medication-assisted treatment (MAT) has become more widespread over time but as of 2012 was still not reaching some clients who need it. MAT is considered the standard of care for opioid-use disorder.¹ By 2011-2012, only four board areas were not treating any clients with MAT. The availability of MAT was uneven throughout the state, however, with 17 boards (out of 50) accounting for 95 percent of all instances of MAT in 2011-2012.
- Overall, nearly \$59 million was spent on community, prevention, and adjunctive services, and residential treatment in 2012. Of the total spent on these services, 48 percent, or just over \$28 million, went toward housing services, ranging from hospital and non-hospital residential treatment to room and board for people receiving some type of treatment service through the alcohol, drug addiction, and mental health (ADAMH) boards.

Client characteristics:

- In 2011 and 2012, nearly 160,000 people in Ohio received treatment for an addiction through the publicly-funded treatment system.² This number is unduplicated over two years.
- From 2007 to 2012, men consistently made up 63 percent of clients receiving treatment. Among both genders, people age 26 through 44 consistently made up 45 percent of all clients.
- The primary drug of choice for which clients were seeking treatment shifted from 2007 to 2012. The percentage of clients in treatment for marijuana, heroin, and other opiates increased steadily. Alcohol addiction and cocaine decreased, yet in 2011-2012 alcohol remained the most common reason to be in treatment.
- Alcohol was the most frequently treated substance in 34 board areas, and the second most frequent in 8 others. Eleven board areas had clients with opioids (heroin and other opiates) as the most frequently treated substances. These 11 boards were located in the southern or eastern parts of the state.
- Discharge data was incomplete and must be treated with caution. However, for all major drugs, fewer than half of all discharges resulted from successfully completing treatment in 2011. Alcohol and marijuana both had higher successful completion rates than the all-drug average. Only 22 percent of discharges of patients with heroin as the primary drug of choice were for successful completion of treatment. Heroin and other opiates also had the highest rate of people leaving against medical advice, at about 30 percent for both.

Hospitalizations and Emergency Room Visits:

- Ohioans with alcohol or drug-related diagnoses visited emergency rooms (ER) or were admitted to inpatient hospital treatment more than 250,000 times in 2012. Of these visits, 53,000 had a primary diagnosis that was alcohol- or other drug-related. Cuyahoga, Hamilton, and Wayne counties had the highest per capita combined ER use and hospital admissions for alcohol- or other drug-related diagnoses.

Future Directions in Research:

- The Patient Protection and Affordable Care Act (ACA) is making significant changes in how people access and pay for treatment services, for both physical and behavioral health. ADAMH boards have historically spent, and many continue to spend, the majority of their funding on treatment services. As health care coverage through the ACA expands, boards will begin shifting to cover more services not traditionally covered by health insurance, including recovery supports such as housing, employment, and other services.
 - It is vital for all stakeholders involved in the treatment and recovery process to work together to improve data related to services and outcomes. Provider compliance with data protocols was uneven before Medicaid elevation, and the Ohio Department of Mental Health and Addiction Services (MHAS) is now working to combine data on Medicaid and non-Medicaid funding into one database.
 - Discharge data collected through MHAS protocols is incomplete, and there are no accepted standards for success rates of various types of treatment. Future research should establish benchmarks for this kind of information.
 - As noted throughout the report, the various data sources have different levels of completeness. Because these databases collect different types of data (claims, outcomes, treatment utilization, etc.), it is important that every client be represented in all databases. Providers, boards, and the state should work together to ensure accurate reporting of all clients in all databases so the data can be easily compared.
 - Because the data in this report only represents clients in the publicly-funded system and excludes the self-pay and private insurance clients receiving treatment, it does not represent the total treatment system in Ohio.
- Linking data from hospitals on visits and admissions related to substance use can be a helpful barometer of the need for substance use treatment in a community. Tracking this data along with overdose trends can provide some baseline trends. With an effective treatment system, both overdoses and hospital visits related to substance use should go down.
 - Due to the impact that substance use has on employment and the continued conversation about growing Ohio's economy, it is important that Ohio have specific data on substance use and jobs. In addition to the nationally derived data included in this report, some additional data of interest could include: the number of individuals failing pre-employment screenings and the type of drug; number of Employee Assistance Programs referrals to drug treatment; the number of dismissals from employment due to drug use; and the number of on-the-job accidents related to drug use.

Purpose

Over the last several years, The Center for Community Solutions (CCS) and the Mental Health & Addiction Advocacy Coalition (MHAC) have partnered to provide data to policymakers and advocates to improve Ohio's delivery of mental health and addiction services. The first two reports published in the *By the Numbers* series focused on behavioral health treatment across Ohio's systems and mental health supportive services. This third report is intended to provide an overview of Ohio's addiction services and a snapshot of their utilization. The first four sections of this report provide background on addiction and its impact on the greater community. The fifth section contains data collected by the Ohio Department of Mental Health and Addiction Services (MHAS) on the utilization of addiction services and the demographics of those individuals utilizing the services funded by public sources. The last section also includes data from hospital admissions and emergency room (ER) visits related to substance use.

The opiate crisis in Ohio has shed light on the lack of community resources available to support and treat individuals with substance use disorders. While the majority of the conversations have focused on opiate use and treatment, there are thousands of Ohioans who need services for the use of other substances. This report provides data to policymakers and advocates to help invest wisely in Ohio's addiction treatment and supportive services needed by all people living with a substance use disorder.

This look at the addiction treatment system contains both trend and point-in-time analyses. The most recent data in this report is from 2012, before the Affordable Care Act made expanded health coverage available through Medicaid and the Health Insurance Marketplace. These forms of coverage became available in Ohio starting in January, 2014. In 2012, a substantial number of Ohioans remained uninsured, and the addiction treatment system did not have adequate resources to provide care for them. The data in this report should be viewed as a baseline against which to measure improvements in system capacity, and not as a reflection of the current, rapidly changing environment.

Impact of the Affordable Care Act Coverage Expansions

The Patient Protection and Affordable Care Act (ACA) was signed into law in March, 2010. Provisions of the law expand access to health coverage, reform health care delivery systems, and mandate that most everyone have health insurance coverage. In order for everyone to have health coverage, the ACA includes an expansion of the Medicaid program to cover all uninsured individuals ages 19 to 64 up to 138 percent of the federal poverty level (FPL) and establishes insurance exchanges (either federal or a state can set up its own) otherwise known as the Health Insurance Marketplace. A 2012 Supreme Court decision on a case challenging the constitutionality of the ACA ruled the law constitutional, but it also made Medicaid expansion optional for the states.³ Ohio chose to expand Medicaid with coverage starting in January, 2014. While anyone can enroll in coverage through the Marketplace, only uninsured individuals and families with incomes between 100 percent and 400 percent of the FPL are eligible for tax subsidies from the federal government to help pay for the cost of insurance. The major provisions of the law went into effect at the beginning of 2014.

The ACA plays an important role ensuring that people with substance use disorders have coverage for services. The law requires all plans in the Marketplace, all individual and small-group non-grandfathered insurance plans,⁴ and Medicaid to cover a minimum set of services, known as the Essential Health Benefits (EHBs). These benefits include services to treat mental health and substance use disorders as well as physical health disorders. Preventive services are also covered, including screenings for alcohol misuse and depression. To define the EHBs, each state selected a benchmark plan (known as the Alternative Benefit Plan in Medicaid) to determine the services and quantity of services (if applicable) that must be covered by every plan.

TABLE 1: Ten Essential Health Benefits Under the Affordable Care Act

| | |
|----|---|
| 1 | Ambulatory patient services (outpatient services) |
| 2 | Emergency services |
| 3 | Hospitalization |
| 4 | Maternity and newborn services |
| 5 | Mental health and substance use disorder services |
| 6 | Prescription drugs |
| 7 | Rehabilitative and habilitative services and devices |
| 8 | Lab services |
| 9 | Preventive and wellness services and chronic disease management |
| 10 | Pediatric services, including vision and dental |

Source: *Essential Health Benefits*, healthcare.gov

Along with the coverage provisions in the ACA that require insurance plans to cover behavioral health services, the Mental Health Parity and Addiction Equity Act (MHPAEA) of 2008 requires that health insurance plans cover mental health and substance use disorder services at the same level as physical health care services. While this law does not guarantee sufficient availability of providers or services, it does ensure that individuals will not pay more for services that are covered by health insurance plans. Between the ACA and the MHPAEA, significant efforts have been made to elevate coverage for behavioral health disorders to the same level as physical health disorders.

The Changing Landscape of Health Insurance Coverage

The expansion of Medicaid and federal subsidies through the Marketplace will continue to impact access to treatment for substance use disorders. As of March, 2015, over 528,000 Ohioans enrolled in Medicaid as a result of the extension of the program. Of the total number of individuals who enrolled under Medicaid expansion during the first half of 2014, 80 percent had a claim (any claim, not specific to behavioral health) for some type of health service, showing pent-up demand amongst the previously uninsured low-income population. As of February, 2015, over 234,000 Ohioans selected a health insurance plan in the Marketplace and the majority will receive subsidies to help pay for insurance.⁵

Medicaid and private insurance both cover, to different degrees, treatment for alcohol and drug addiction (see Appendix I for a list of Medicaid services). Based on data presented in testimony during 2016-2017 state budget legislative hearings for the first six months of calendar year 2014, 42 percent of adults newly eligible for Medicaid through expansion had received a behavioral health service,⁶ a prescription for a mental health and addiction diagnosis, or had a primary diagnosis of a behavioral health disorder.⁷

Given the major changes in how Ohioans are able to access health insurance, the picture of the addiction treatment system will shift as well. Many more individuals will be able to access addiction treatment than before, simply because they have a payer for those services. Coverage eliminates a barrier to care by reducing or eliminating the cost of a service from the individual's perspective. From a systems perspective, there will be a shift in what services the alcohol, drug addiction, and mental health (ADAMH) boards are funding in the community. ADAMH boards support the primary behavioral health safety net for the uninsured. As people obtain insurance, boards will pay for fewer clinical services and more recovery support services that are usually not covered by Medicaid or private insurance. This will be a major change for the system and it will take time. Ultimately, not everyone will be able to access insurance coverage, so the ADAMH boards will continue to fund the safety net for these individuals.

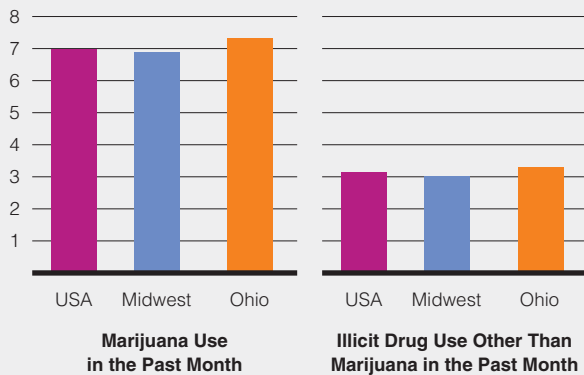
Yet another major change that occurred after 2012 is the merger of the Ohio Department of Mental Health (ODMH) and the Department of Alcohol and Drug Addiction Services (ODADAS) into MHAS. By and large, the functions performed and funding levels remain the same, but tracking spending from two single agencies into a merged agency proves to be difficult. For this reason, this report looks at spending levels in 2011 and 2012, when the agencies were separate and before Medicaid spending on behavioral health services was counted in the Department of Medicaid budget (known as "elevation," explained in full in the report).

Setting the Stage: Magnitude of Alcohol and Substance Use Disorders in Ohio and the Nation

To understand the scope of substance use disorders, it is important to know how many people are using and are dependent on these substances.⁸ The National Survey on Drug Use and Health (NSDUH), conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), “collects data through face-to-face interviews with a representative sample of the population at the respondent’s place of residence,” including households, civilians living on military bases, and noninstitutional group settings.⁹ NSDUH asks a series of detailed questions about frequency and level of use of tobacco, alcohol, and illicit and prescription drugs to determine use, abuse, or dependence of the respondents. If a respondent has used substances within the last year, more questions follow asking how this use has impacted his or her life.

According to data collected through the 2011-2012 NSDUH, 301,000 adult Ohioans (or 3.5 percent of adults age 18 and over) have used an illicit drug¹⁰ other than marijuana in the past month, and 639,000 adults (or 7.4 percent) have used marijuana in the same time frame.¹¹

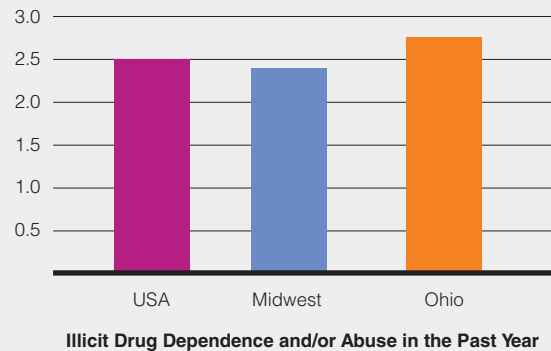
FIGURE 1: Percentage of Adults (age 18+) Who Have Used Illicit Drugs in the Past Month, 2011-2012



Source: 2011-2012 NSDUH
The Midwest region includes 12 states: Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, and Wisconsin.

The data above refers to overall frequency of use without regard to severity. A smaller number of Ohio adults, about 238,000 (2.7 percent) were dependent on or abused an illicit drug.

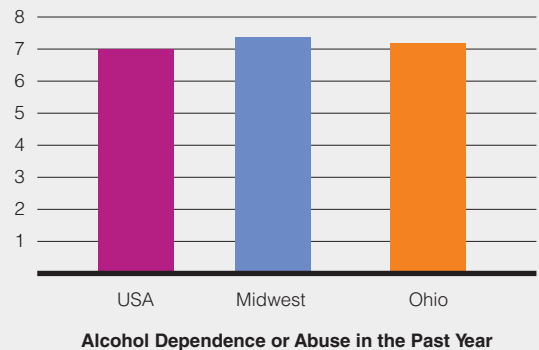
FIGURE 2: Percentage of Adults (age 18+) Dependent and/or Abusing Illicit Drugs in the Past Year, 2011-2012



Source: 2011-2012 NSDUH

The scope of alcohol abuse¹² and dependence is also serious. In 2011-2012, 629,000 adult Ohioans (7.2 percent) were dependent on or abusing alcohol.

FIGURE 3: Percentage of Adults (age 18+) Dependent or Abusing Alcohol in the Past Year, 2011-2012



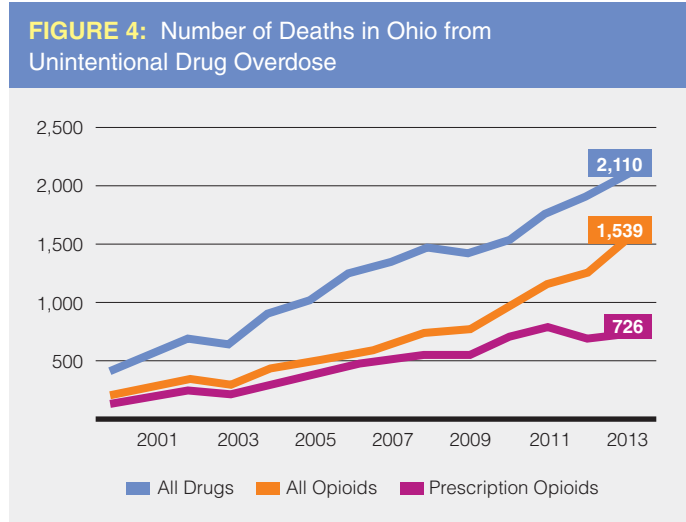
Source: 2011-2012 NSDUH

Survey data indicates that only a small percentage of the individuals who are dependent or abusing drugs or alcohol are receiving treatment. Many others need treatment but do not receive it. Based on NSDUH data, 216,000 adult Ohioans needed but did not receive treatment for illicit drug use in the past year. Additionally, 595,000 adult Ohioans needed but did not receive treatment for alcohol use. When compared to the number of adults who abuse or are dependent on drugs or alcohol, only a small percentage of people who need treatment are actually receiving it.

According to NSDUH data for 2011-2012, less than 10 percent of people who are abusing or dependent on illicit drugs are receiving treatment, and just over five percent of people abusing or dependent on alcohol are being treated.

Statewide and regional data on the unmet need for treatment is reported in Table 2. The NSDUH survey sub-state regions (the groupings of the counties) are based on recommendations from the state and are reported through the NSDUH survey process. NSDUH sub-state data is reported on a three-year average and the estimate of people needing but not receiving treatment is calculated using the NSDUH percentages and U.S. Census data. For this reason, the estimates below do not match the NSDUH figures for 2011-2012 of people needing but not receiving treatment.

Drug and alcohol use impacts society in many ways. One of the most tragic impacts is the growing number of deaths from drug overdose, especially from heroin and other opiates. Drug overdose deaths in Ohio have increased more than four times over 2000 levels (Figure 4). Heroin and other opiates, including prescription drugs, were involved in nearly three quarters of all overdose deaths in 2013.¹³ Alcohol use can also have tragic effects. One of the most visible impacts is through drunk driving. In 2012, there were 12,545 alcohol-related traffic accidents in Ohio, or about 34 per day.¹⁴ These crashes resulted in 5,321 injuries and 431 deaths.



Source: Ohio Department of Health, Office of Vital Statistics. The All Drugs category includes alcohol, cocaine, methadone, benzodiazepines, barbiturates and others in addition to heroin and other opiates. Multiple drugs are often involved in a single drug overdose death.

TABLE 2: Estimated Number of People Needing but not Receiving Treatment for Alcohol and Illicit Drug Use, 2010-2012, Three-Year Average, by NSDUH Survey Region

| | Needing But Not Receiving Treatment for Alcohol Use in the Past Year | | Needing But Not Receiving Treatment for Illicit Drug Use in the Past Year | |
|--|--|------------|---|-----------|
| | Percent | Estimate | Percent | Estimate |
| Nationwide | 6.4% | 20,036,482 | 2.4% | 7,572,108 |
| Midwest Region | 6.6% | 4,451,681 | 2.3% | 1,537,609 |
| Statewide - Ohio | 6.5% | 638,442 | 2.6% | 253,023 |
| Adams, Fayette, Gallia, Highland, Jackson, Lawrence, Meigs, Pickaway, Pike, Ross, Scioto | 5.8% | 24,211 | 2.4% | 9,918 |
| Allen, Auglaize, Champaign, Darke, Hardin, Logan, Miami, Preble, Shelby | 5.6% | 24,203 | 2.3% | 9,889 |
| Ashland, Holmes, Medina, Wayne | 6.2% | 19,792 | 2.2% | 6,919 |
| Ashtabula, Trumbull | 6.3% | 16,547 | 2.2% | 5,745 |
| Athens, Coshocton, Guernsey, Hocking, Morgan, Muskingum, Noble, Perry, Vinton | 7.0% | 20,103 | 2.7% | 7,632 |
| Belmont, Carroll, Columbiana, Harrison, Jefferson, Monroe, Tuscarawas, Washington | 5.6% | 22,203 | 2.2% | 8,707 |
| Brown, Clermont, Clinton, Warren | 5.3% | 22,158 | 2.1% | 8,729 |
| Butler | 6.8% | 21,144 | 2.6% | 8,010 |
| Clark, Greene, Madison | 6.7% | 19,880 | 2.6% | 7,757 |
| Crawford, Delaware, Huron, Marion, Morrow, Richland, Union | 6.1% | 28,482 | 2.2% | 10,276 |
| Cuyahoga, Lorain | 6.8% | 91,410 | 2.6% | 34,900 |
| Defiance, Fulton, Hancock, Henry, Mercer, Paulding, Putnam, Van Wert, Williams | 5.7% | 16,690 | 2.1% | 6,000 |
| Erie, Ottawa, Sandusky, Seneca, Wood, Wyandot | 6.3% | 20,731 | 2.2% | 7,352 |
| Fairfield, Knox, Licking | 5.6% | 17,876 | 2.2% | 7,068 |
| Franklin | 8.4% | 83,724 | 3.7% | 36,611 |
| Geauga, Lake, Portage | 6.8% | 28,687 | 2.5% | 9,479 |
| Hamilton | 5.9% | 39,859 | 3.0% | 20,302 |
| Lucas | 7.3% | 26,968 | 2.8% | 10,395 |
| Mahoning, Stark | 6.0% | 31,615 | 2.2% | 11,764 |
| Montgomery | 6.1% | 27,507 | 3.2% | 14,413 |
| Summit | 7.5% | 34,899 | 2.5% | 11,741 |

Source: 2010-2012 NSDUH, U.S. Census Bureau

Addiction: A Chronic Disease

The American Society of Addiction Medicine and the National Institute of Drug Abuse (NIDA), a division of the National Institutes of Health (NIH), have defined addiction as a “chronic, relapsing brain disorder that is characterized by compulsive drug seeking and use, despite harmful consequences.”¹⁵ It is categorized as a brain disease because drug abuse causes long-lasting changes to the structure and function of the brain.¹⁶ Addiction’s changes to the brain cause behaviors that manifest in social, moral, criminal, and behavioral issues.¹⁷ These symptoms make addiction not only a medical issue but also a social issue. Addiction is prevalent in individuals with mental illnesses, which often makes diagnosis, treatment, recovery, and social supports more complex. Nationally, about 3.2 percent of adults had co-occurring mental illness and substance use disorder.¹⁸ A smaller subset, about 1.0 percent of adults, had severe mental illness and a substance use disorder.

Scientists have studied the brain for decades without truly understanding all of its components, functions, and structure. Recent advancements in neurosciences and technology allow for detailed brain scans that provide scientists, doctors, and addiction experts a better understanding of brain diseases, including Alzheimer’s disease, Parkinson’s disease, mental illnesses, and substance use disorders. Brain scans have allowed experts to debunk the most common myths and reasons given for not classifying substance use disorders as a disease. The two main arguments as to why addiction is not a disease are: 1) drug usage is a choice and 2) addiction does not fit within the Disease Model of Illness.

The concept that drug usage is a choice is partially true. While the initial usage of a drug may be a choice, the preexisting biological, environmental, and genetic factors for each person influence the brain’s reaction to the introduction of drugs. For some people, after the initial choice of drug use, the body begins to need drugs to feel normal or survive. In other words, an initial choice to use drugs turns into an addiction. The brain’s response to drugs will be discussed further under the “The Disease Process” section. Scientists know, based on brain scans, that for these individuals the brain begins to alter in areas that are critical to judgment, decision-making, learning and memory, and behavioral control.¹⁹ The brain’s changes help explain the compulsion to continue usage and other destructive behaviors. This initial behavioral choice sets off a chain reaction in the body that is partially predetermined by inherited risk factors. The process is not unlike that of other chronic diseases.

The Disease Model of Illness is what standard medical professionals use to determine if an ailment is a disease. There are three components to the Model.²⁰ The first is a specific physical defect within the body. This has been the most troubling aspect of the Model for substance use disorders. Until recently, technology did not allow scientists and doctors to pinpoint the physical defect in the limbic system, the portion of the brain that perceives and interprets pleasure, which results in substance use disorders. The second component is a causal explanation of the symptoms. Until the defect within the limbic system was identified, there was no causal explanation for the craving of drugs and other behaviors. However, as described below, changes to the brain result in impaired judgment and a survival instinct resulting in continued cravings and use of drugs. The third component is the ability to test for the disease. Addiction can be diagnosed through brain scans once it has taken hold. However, there is not a test for predisposition, which is also true of other diseases which only have identified risk factors.

With new knowledge about how the brain works and reacts to the introduction of foreign substances, including drugs, it has become clear to the medical community that substance use disorder is a disease. The use of drugs may also be a coping mechanism or self-medication for many individuals with chronic conditions, including mental health disorders. However, once usage meets the definition of a substance use disorder, it becomes a co-occurring disorder and should be treated as such.

The Disease Process

Scans have shown that major components of the brain are impacted by continued use of drugs. Not everyone that uses drugs will become addicted to them. The substance use continuum spans the spectrum between abstinence through what is commonly known as substance abuse, dependence, or addiction. In 2013, the professional addiction community changed its terminology to better reflect the science being conducted regarding addiction. There was also consensus within the professional addiction community that the terms abuse and dependence were misunderstood by the general public. The clinical definitions of abuse and dependence were combined under one term, substance use disorder, with different levels of severity.

The four resulting levels of the substance use continuum include 1) abstinence; 2) non-problem use; 3) at risk use; and 4) substance use disorders including the commonly used terms abuse, dependence, and addiction. Some individuals will never progress through the levels of the continuum;

other individuals will progress through the levels at varying paces. The majority of Americans are in the abstinence or non-problem use categories. A small percentage of individuals have crossed the line to at-risk use, which means that these individuals can experience personal consequences as a result of their substance use. An even smaller percentage of individuals have crossed the line into the substance use disorder category. These individuals often experience loss of control, preoccupation and compulsivity of use, and a physical dependence on drugs.²¹

An individual decides to try drugs for the first time either because a doctor prescribes the medication to help the individual feel better or because of personal choice. Personal choice can be driven by many factors including the desire to feel good, to perform better in school or at work, or to conform to peer pressure, among other reasons. After first use, an individual's risk factors determine whether he or she progresses beyond "non-problem use." The risk factors vary for each individual. However, 40 percent to 60 percent of the risk factors are genetic.²² The specific genes affecting substance use disorders are still under investigation. One biological risk factor is the age of first use. Due to the under-developed nature of the adolescent brain, it is more susceptible to the impact of drugs.²³ Environmental factors, such as family or peer usage and abuse, also affect an individual's risk for substance use disorders.

When drugs are introduced to the brain, they target the brain's pleasure and reward system (limbic system) by flooding the brain with dopamine. This reaction overstimulates the brain and causes euphoric effects.²⁴ These euphoric effects create an extreme pleasurable response. Human instinct includes repeating behaviors that are linked to pleasure.²⁵

Over time, for an individual who is predisposed to substance use disorders, drugs become more pleasurable than natural rewards like eating, sleeping, sex, and socializing because the effects are almost immediate and last longer.²⁶ Just like any other stimulation, the body adjusts to the introduction of drugs. Extreme pleasure becomes the norm and natural pleasures are reduced. This change reinforces the need for drugs by building a tolerance and a need for additional drugs.²⁷ It also explains why a person with a substance use disorder feels less desire to participate in normal daily activities.

Continued drug use also impacts the areas of the brain responsible for impulse control, judgment, immediate survival, long-term planning, or anticipation of consequences. Addictive behaviors ultimately supplant healthy behaviors thereby creating the negative social symptoms of substance use disorders. The distortions in thinking, feeling, and perception associated with the changes in the brain drive individuals with substance use disorders to behave in ways people around them do not understand. For example, these behaviors can include stealing or panhandling to raise money to buy drugs; placing drug usage

above socializing with family and friends; being tardy or missing work; or going to work under the influence of drugs.

While prevention of initial drug use is one possible method to preventing substance use disorders, many drugs of abuse have valid medicinal purposes and cannot be avoided for all individuals. Understanding that substance use disorders are diseases is the best way to ensure individuals receive treatment for their disease rather than punishment.

Aspects of Successful Treatment and Support

Like other chronic diseases, substance use disorders are treatable, but treatment is difficult and life-long. Due to the alterations in the brain, self-control, decision-making, and long-term planning are seriously impaired in an individual with a substance use disorder. Treatment must not only include behavioral choice changes but also medical intervention.²⁸ Treatment should be tailored to individuals and their special needs. Treatment does not always progress as expected. This can happen for many reasons, including personal choice to not comply with the treatment program (such as using drugs) or the body's inability to respond to treatment (such as continuing to experience cravings despite therapy and medication). Research has shown that individuals with a substance use disorder experience difficulties in treatment at the same rate as individuals with other chronic conditions.²⁹ This does not mean that treatment has failed; rather, it means that the treatment program needs to be evaluated.

As with any chronic disease, some stages of the treatment plan can be fluid. Stages of treatment of substance use disorders include detoxification, assessment, long-term treatment, and crisis intervention. Detoxification is a clinical first response. Clinical assessment of an individual happens at the beginning of long-term care and as needed during the treatment process. Crisis intervention is also a clinical intervention that occurs as needed with a client in crisis. Long-term treatment is based on the assessment and on-going revisions based on clinical, personal, and other indicators of recovery.

There are three categories of long-term treatment services and supports required by most individuals with a substance use disorder. These treatment services and supports are both clinical and non-clinical in order to support the entire person. The first category is behavioral therapies that modify attitudes and behaviors related to drug use. These services include individual and group therapy, family therapy, peer-to-peer services, disease education, and self-help or support groups. These therapies provide life skills to handle stressful circumstances and environmental factors that can trigger cravings. The second method of therapy is medication to help with treating withdrawal, staying in treatment, and preventing relapse. Medications help the brain slowly adapt to the absence of the drug and stave off cravings.³⁰ This category also includes clinical support to

ensure fidelity to the medication regimen. The final category is supportive services that involve rebuilding the support system an individual with a substance use disorder needs and supporting the individual during their treatment. These services are both clinical and non-clinical. The individual needs to rebuild how he or she interacts with family, co-workers, the community, and others. The treatment process should include services that provide pleasure through these other avenues to help regain normalcy. During treatment, many individuals will need supports necessary to create a stable living environment and help them meet their daily needs. Support services can include:

- Transportation to and from treatment, recovery support activities, and employment;
- Employment services and job training;

- Case management and individual services coordination, providing linkages with social and legal services;
- Housing assistance and services;
- Child care;
- Life skills training;
- Spiritual and faith-based support;
- Education; and
- Parent education and child development.³¹

Levels of Care and Treatment Services

The Department of Mental Health and Addiction Services categorizes addiction treatment services into Levels of Care. These Levels of Care describe the type, intensity, and location of the addiction treatment services being provided. The table below describes the Levels of Care in Ohio.

TABLE 3: Descriptions of Level of Care for Addiction

| | | |
|--------------------|---|--|
| Level 0.5 | Pre-Treatment | Services to individuals at risk of developing substance abuse-related problems but may or may not meet the diagnostic criteria for substance use disorders. Services within this level may be provided to family members and significant others (with or without the client present). |
| Level I-A | Non-Intensive Outpatient Treatment | Regularly scheduled ongoing or intermittent therapeutic sessions of low intensity (less than 8 hours/week). |
| Level I-B | Intensive Outpatient Treatment | Structured individual and group activities for a minimum of 8 hours/week and three days a week. |
| Level I-C | Day Treatment | Integrated and structured therapeutic activities consisting of organized and ongoing treatment services (adults 25 hours/four days a week and adolescents 15 hours/five days a week) in a professionally supervised program. |
| Level II-A | Non-Medical Community Residential Treatment | A 24-hour rehabilitation facility, without 24-hour-per-day medical/nursing monitoring, where a planned program of professionally directed evaluation, care and treatment for the restoration of functioning for persons with alcohol and other drug problems and/or addictions. |
| Level II-B | Medical Community Residential Treatment | A 24-hour rehabilitation facility, with 24-hour-a-day medical/nursing monitoring, where a planned program of professionally directed evaluation, care and treatment for the restoration of functioning for persons with alcohol and other drug problems and/or addiction occurs. |
| Level III-A | Ambulatory Detoxification | Services to individuals with mild to moderate symptoms of withdrawal, supervised by a physician. Residential, halfway house or outpatient certification is required. |
| Level III-B | Sub-Acute Detoxification | Detoxification services provided with 24-hour medical monitoring. Services are of brief duration and linkage to other formal and informal services shall be made. |
| Level III-C | Acute Detoxification | Services delivered based on treatment protocols of detoxification in a hospital setting and are delivered by medical and nursing professionals who provide 24-hour medically-directed assessment and withdrawal management. Acute hospital detoxification services are indicated for individuals whose intoxication/withdrawal signs and symptoms are sufficiently severe to require primary medical and nursing care services and medical management. |

Source: Data Entry Field Specifications for Integrated OHBH Forms. MHAS. December 2012.

The services or therapeutic activities provided in each Level of Care are based on the clinical assessment of the individual in need of treatment. In Ohio, the fee-for-service (non-managed care) portion of the Medicaid package for behavioral health services reimburses for 11 treatment services (See Appendix I).

Frequent Drugs of Abuse

The majority of abused drugs are controlled by the federal government. The federal Drug Enforcement Administration (DEA) categorizes controlled substances into five schedules. The placement into the schedules is based on the substance's medical use, potential for abuse, and safety or dependence liability.³² Although the term "potential for abuse" is not defined in law, drugs that do not have potential for abuse cannot be controlled. The following are the descriptions of the controlled substances schedules:³³

Schedule I: High potential for abuse. No accepted medical use in treatment. Lack of accepted safety for use under medical supervision. Examples include: heroin, GHB, LSD, marijuana, and methaqualone.

Schedule II: High potential for abuse. Accepted medical use in treatment or has accepted medical use with severe restrictions. Abuse may lead to severe psychological or physical dependence. Examples include: morphine, PCP, cocaine, methadone, hydrocodone, fentanyl, and methamphetamine.

Schedule III: Less potential for abuse. Accepted medical use in treatment. Abuse may lead to moderate or low physical dependence or high psychological dependence. Examples include: Codeine and hydrocodone products with aspirin or Tylenol.

Schedule IV: Low potential for abuse. Accepted medical use in treatment. Abuse may lead to limited physical dependence or psychological dependence. Examples include: alprazolam, clonazepam, and diazepam.

Schedule V: Low potential for abuse. Accepted medical use in treatment. Abuse may lead to even less physical dependence or psychological dependence. Examples include: cough medicines with codeine.

There are seven major categories of substances that are abused in the United States that coincide with the data collected by MHAS. They include alcohol; narcotics and opioids; stimulants; depressants, barbiturates, and benzodiazepines; hallucinogens; marijuana; and inhalants. They have differing effects on the body including relieving pain, speeding up body functions, inducing sleep, relaxing muscles, reducing/combatting anxiety, and altering moods and perceptions. Many of these effects on the body have valid medical purposes and can be prescribed. Due to the legality and medicinal purposes of many of these drugs, they range in the controlled substances schedule. Narcotics, opioids, stimulants, depressants, barbiturates, and benzodiazepines all range from Schedule I to Schedule V. Only the hallucinogens category has all drugs classified as Schedule I. Marijuana is also classified as Schedule I; however, there is a synthetic version of it called Marinol that is categorized as Schedule III and prescribed regularly. Inhalants and alcohol are legally available for intended uses and are excluded from the Schedule classification. Appendix II describes the categories of drugs and examples of the drugs included in each category. It also provides the federal control status of the drug category.

Effects of Substance Use Disorders on Other Systems

Criminal Justice System

The law enforcement system has also been affected by drug use. In state fiscal year (FY) 2014, drug-related felonies were the most common prison offenses at 5,278, making up over a quarter of all prison commitments in that year.³⁴ Drug use can also be associated with other crimes, such as theft and burglary. The judicial system has responded by further expanding the use of drug courts, which are specialized docket courts designed to work with non-violent criminal offenders with substance use disorders. Drug courts provide access for the offenders to receive treatment while holding them accountable for their treatment and recovery in the community. Hamilton County created the first specialized docket drug court in the state in 1995, and the model has been emulated in many counties across the state. In March 2015, there were 92 drug and family dependency courts across the state either certified or in the process of being certified by the Ohio Supreme Court.³⁵ The FY 2014-2015 operating budget appropriated \$5 million for a pilot program to better coordinate treatment for offenders participating in drug courts and MHAS. The FY 2016-2017 budget includes an extension of this program.

The Ohio Department of Rehabilitation and Correction provided addiction treatment services to 4,500 inmates in FY 2014. Alcohol and drug screening is completed for all inmates as part of their mental health screening process. The screenings found that nearly 30,000 inmates in 2014 had a considerable or moderate need for recovery services. Inmates can volunteer to receive treatment while incarcerated, but resources have limited treatment to 4,500 inmates.³⁶ Those who receive services have a much lower recidivism rate than those who do not.³⁷ More than \$5 million was spent on addiction services for inmates in FY 2013, the last year before the line items for mental health and recovery services were consolidated into general medical services category by House Bill 59 of the 130th General Assembly (GA).

Child Welfare System

The Substance Abuse and Mental Health Services Administration estimates that nationally 11.9 percent of children live with at least one parent with a substance use disorder.³⁸ Using this estimate, around 320,000 Ohio children under the age of 18 live with at least one parent with a substance use disorder. These households make up between 60 and 80 percent of substantiated child abuse and neglect cases.³⁹ In 2011, that translated to between 60,000 and 80,000 reports of abuse and neglect in Ohio involving a parental substance use disorder. Opiate cases are especially difficult and are a growing problem. In Ohio's child welfare system, the added cost of placing children into foster care due to a parent's heroin or opiate use is at least \$45 million annually.⁴⁰ Child welfare cases involving parents who use heroin, cocaine, or both rose from 15 to 25 percent of all cases statewide between 2009 and 2013. These children tend to stay in foster care longer, and their cases reopen more frequently compared to cases with parents who do not have a substance use disorder. The median length these cases stay open is 180 days, three times the median length of cases not involving heroin or cocaine.⁴¹

Workforce

The impact of substance use on the economy, employers, and employees is significant, proven by the national numbers below. However, Ohio does not collect data on these topics. While using nationally derived data can provide estimated numbers for Ohio, this is only true if Ohio follows the national trends.

Nationwide in 2013, 68.9 percent of total illicit drug users were employed either full or part time. It is estimated that 450,000 illicit drug users in Ohio are employed.⁴² The total cost to the national economy of illicit drugs is over \$193 billion, as a combination of preventable healthcare costs, crime, and lost productivity.⁴³ Alcohol use costs the economy another \$235 billion.⁴⁴ Employees who abuse alcohol or other drugs spend more time on non-work related activities at work, take long lunch breaks, leave early, or sleep on the job. These employees are three and half times more likely to be involved in a workplace accident than employees who do not abuse alcohol or other drugs.⁴⁵ These costs could be mitigated with more availability of and access to effective treatments.

Overview of the Addiction System in Ohio

The administration of the addiction treatment system in Ohio has three levels. The first level is MHAS, funded by federal and state sources, and is the state agency responsible for managing Ohio's addiction system. MHAS provides statewide leadership on programs, policy, and quality of care and oversees the ADAMH boards in implementing state and federal laws. MHAS is also responsible for the distribution of funding from federal and state governments to local ADAMH boards, which are the second level of the system. The local boards are established and governed by state law and are responsible for local planning and management of services. Local boards do not provide treatment or care services; however, they distribute federal, state, and local (if available) funding to providers in their respective communities. Local providers, including treatment, supportive, and consumer-operated services, deliver the care to individuals in need as the third level. A subset of providers operates solely for private insurance or self-pay clients. This report focuses on data collected as a requirement for federal and state funding and therefore excludes clients utilizing solely private insurance or self-payment options.

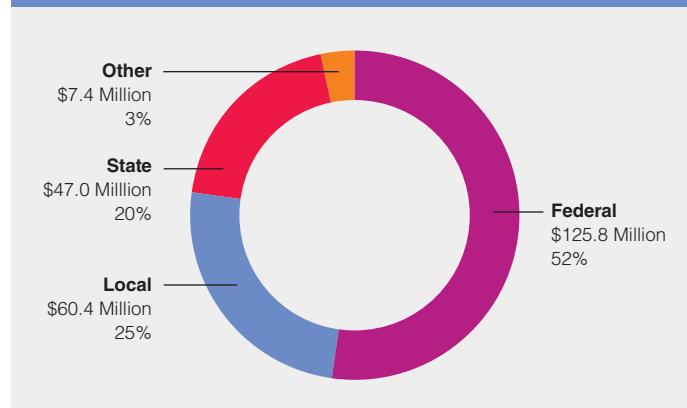
Ohio's 53 ADAMH boards pay for treatment and supportive services for individuals living with mental health or substance use disorders. The availability of non-Medicaid reimbursable treatment services and supportive services, in particular, varies according to the level of resources. During the time period covered by this report, Lorain, Butler, and Mahoning Counties maintained separate boards of Mental Health and Alcohol and Drug Addiction Services. Mahoning County completed the merger of its Mental Health Board and Alcohol and Drug Treatment Board into the Mahoning County Mental Health and Recovery Board in February 2015.⁴⁶ Butler County is also in the process of merging its two boards into a combined board.

Ohio's community mental health and addiction services system includes both Medicaid and non-Medicaid services. The local boards that directly oversee prevention and treatment in the community were established in 1968 through Ohio House Bill 648, and known for years as "648" boards. Before 1989, alcohol and drug addiction treatment was loosely coordinated at the county level by existing "648 boards" and 12 County Councils on Alcoholism. At the state level services were housed within two systems—the Bureau of Drug Abuse and the Bureau of Alcohol Abuse and Alcoholism Recovery. In 1989, the Ohio legislature passed Amended Substitute House Bill (HB) 317, the Alcohol and Drug Addiction Services Act, which created ODADAS, and added the responsibility for prevention and treatment of alcohol and drug abuse to the local boards.⁴⁷

State Funding and Policy Changes

State funding for community mental health and substance use treatment and related services was significantly reduced in FY 2010. The funding picture has shifted in recent years. Figure 5 below shows the breakout of funding for FY 2011. This figure includes both state and federal Medicaid funding.⁴⁸ Medicaid is an important source of funding for addiction services. Funds from local levies also provide resources for addiction services, although not every county has a local levy. Fifteen counties in Ohio do not have a levy to support alcohol and substance use disorders.⁴⁹ The primary sources of state funding for addiction services in 2012 came from the General Revenue Fund and the State Special Revenue Fund, including taxes on alcohol, tobacco, and gambling revenues.

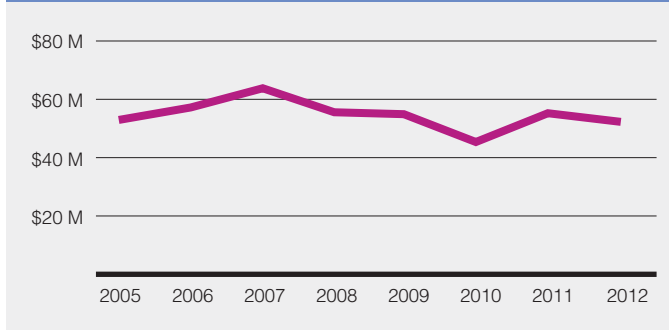
FIGURE 5: Sources of ADAMH Board Funding for Addiction Services, FY 2011 (includes Medicaid)



Source: 040 financial reports from boards to MHAS. This Figure utilizes data from reports that are submitted to MHAS by the ADAMH boards. These reports account for spending that occurs by the ADAMH boards. The state funding amount in Figure 5 does not match the state funding amount for FY 2011 in Figure 6 because not all state funding for addiction treatment and services passes through the boards.

In the FY 2012-2013 budget, the responsibility of making the nonfederal (state) share⁵⁰ of Medicaid payments for covered mental health and addiction services was "elevated" from the local boards to the state Medicaid entity. In previous biennia, the state provided support to local boards to cover the nonfederal share of Medicaid. Boards used local dollars if the state dollars did not cover the full amount required for the match. In FY 2013, the state took over this responsibility completely, which shifted availability and utilization of state and local funding for services. Starting in FY 2013, all Medicaid funds are accounted for in the Department of Medicaid.

FIGURE 6: State Funding for Addiction Services, FY 2005-2012



Source: Ohio Legislative Service Commission Budget in Detail

Recent Policy Changes

The FY 2014-2015 biennium began with the merger of ODMH and ODADAS into the MHAS. The primary federal source of treatment funding for mental health and alcohol and drug addiction, SAMHSA, is a merged agency, as are most of the local boards in Ohio.

In recent years Ohio, like many other states, has been dealing with increased use of opioids affecting all demographics across the state. The state has responded to the opiate crisis in a number of ways. The legislature passed HB 93 (129th GA) to tighten controls on dispensing and prescribing opioid pain killers in 2011. The House Health and Aging Committee created a subcommittee devoted to opiate addiction and treatment reform. More work has been done in temporary, special-topic committees which held meetings across the state in the summers of 2013 and 2014. These were the Prescription Drug Addiction and Healthcare Reform Study Committee in 2013 and Law Enforcement Perspectives on the Drug Epidemic and Its Impact on Families Study Committee in 2014. The 2013 committee focused on prescription drug misuse while the 2014 committee looked into the drug epidemic from a law enforcement perspective. The 2013 committee formulated a number of policy recommendations centered on preventing people from becoming addicted to pain killers and providing better care to people recovering from dependence. These recommendations have since been passed into law and include:

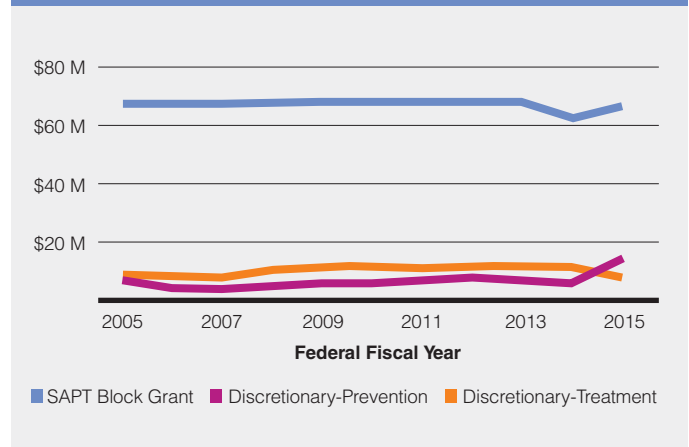
- Requiring parental permission for a minor to receive a prescription for a controlled substance (HB 314, 130th GA);
- Preventing opioids prescribed in hospice care from being diverted (HB 366, 130th GA); and
- Requiring hospitals to report instances of neonatal abstinence syndrome (HB 315, 130th GA).

Federal Policy and Funding

Federal drug policies and funding have varied, sometimes drastically, over the course of the last five decades since President Richard Nixon declared a “war” on drugs. The focus of the “war” is dependent on whether the current policy supports treatment over incarceration or vice versa. More recently the National Drug Control Strategy, released in 2010 by the administration of President Barack Obama, outlines a comprehensive strategy with measurable goals to change drug policy and to reduce the overall burden of drugs and drug addiction through local, state, national, and international efforts. This strategy has been revised and updated each subsequent year through 2014, with a current focus on preventing drug use, expanding access to treatment, reforming the criminal justice system to break the cycle of drug use and crime while protecting public safety, and supporting people in recovery by reducing stigma.⁵¹

A significant portion of resources for addiction services is provided by the federal government. Over the course of the last decade, funding for addiction services has experienced steady support from the federal government. The largest piece of dedicated federal funding for addiction services is the Substance Abuse Prevention and Treatment Block Grant (SAPT or SABG). The SAPT is awarded to MHAS, which then distributes funds to local ADAMH boards in Ohio. The amount of the grant has not varied substantially (Figure 7). No less than 20 percent of the SAPT grant must be spent on primary prevention efforts.⁵² SAMHSA also provides discretionary grants to the states for prevention and for treatment.

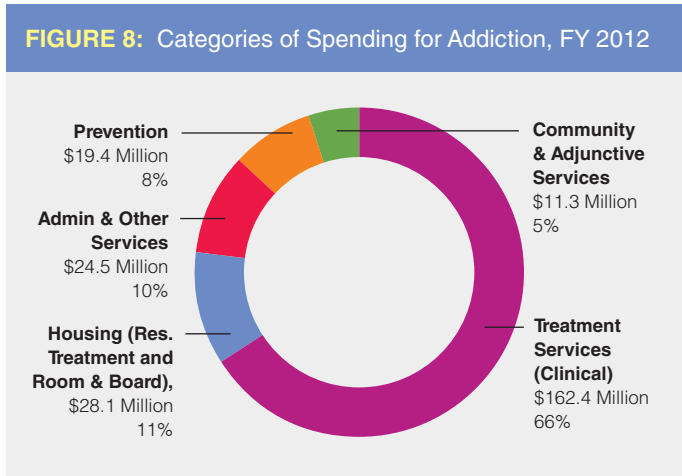
FIGURE 7: SAMHSA Funding to Ohio for Addiction Prevention and Treatment



Source: SAMHSA, Grant Awards by State

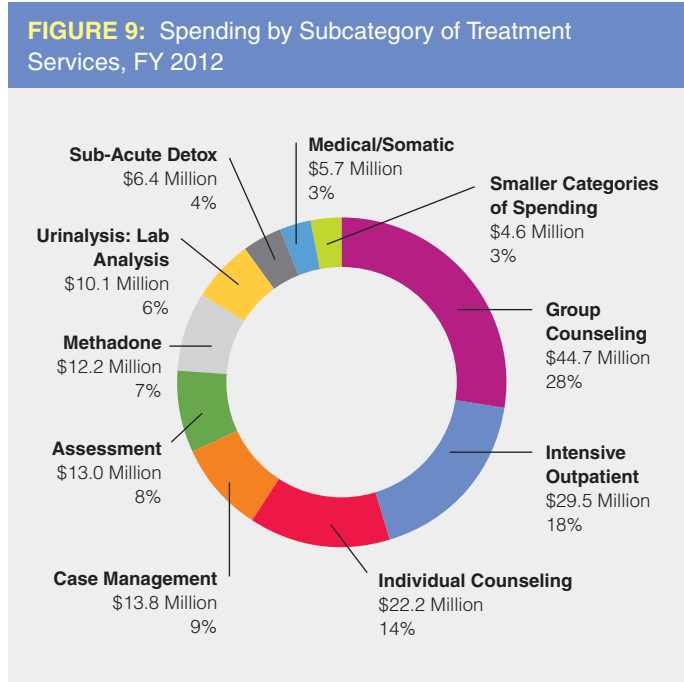
Spending on Services

Figure 8 is a statewide snapshot of addiction spending in Ohio for FY 2012, but the level of spending on these services varies by board. Boards in Ohio spend the majority of all sources of funding on treatment services. Figure 8 shows that treatment services are by far the largest area of spending at over \$162 million in FY 2012. This is followed by spending on housing,⁵³ board administrative and other services,⁵⁴ prevention services,⁵⁵ and community and adjunctive services.⁵⁶



Source: 040 financial reports from boards to MHAS, Categories by CCS

A closer look at the spending on treatment services category reveals that group counseling is the largest subcategory of spending, followed by intensive outpatient treatment, individual counseling, and case management. Figure 9 shows spending in each subcategory of treatment services.

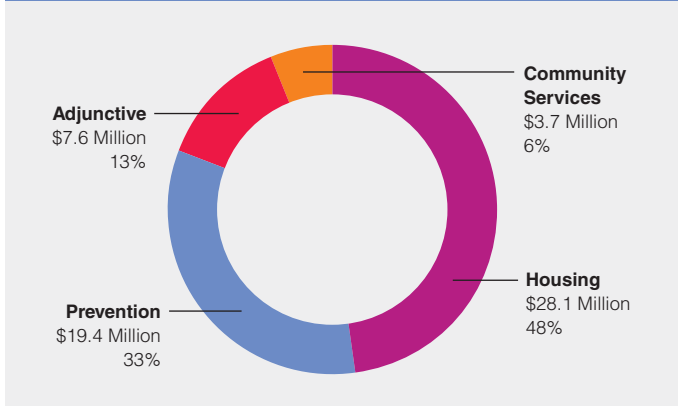


Source: 040 financial reports from boards to MHAS from 2012. Smaller Categories of Spending include (largest to smallest): Crisis Intervention, Ambulatory Detox, 23 Hour Observation Bed, Acute Detox Hospital, Urine Dip Screening, and Family Counseling

Housing, Prevention, Adjunctive, and Community Services

Boards spent nearly \$59 million on housing, prevention, adjunctive, and community services in 2012. These include, for example, hospital and non-hospital based residential services, education, outreach, room and board, and transportation, among many others provided at varying levels. These varying levels of spending are in large part due to availability of funds, because these services (including all varieties of residential treatment) are not covered by Medicaid. In fact they are often referred to as “non-Medicaid” services (see Appendix I). As the implementation of the ACA continues, these services will continue to be provided by the boards because they are not covered, fully or consistently, by Medicaid and all forms of insurance. Of the total spent on these services, 48 percent, or just over \$28 million, goes toward housing services, ranging from hospital and non-hospital residential treatment to room and board for people receiving some treatment services. Figure 10 looks at spending on these services, showing that the largest category is housing services, followed by prevention. Boards are required to spend at least 20 percent of their federal block grant on prevention-related services. Prevention-related services include education and information dissemination. Adjunctive services include child care, meals, and transportation, as well as significant spending on services that are “not otherwise classified.” The smallest category of spending, community services, includes outreach, referral and information, and hotlines.

FIGURE 10: Spending on Housing and Supportive Services, FY 2012



Source: 040 financial reports from boards to MHAS. The housing category includes both hospital and non-hospital based community residential treatment services, as well as room and board that was counted in the adjunctive services category on the financial report.

Much like the clinical treatment services discussed earlier, boards have varying levels of spending on housing and supportive services. These services are also not provided by every board. As seen in Table 4, the number of boards providing each service varies. Just because a board is providing a service does not mean that it is meeting all of the needs in its community. This table shows that there are 10 boards in the state that were not funding housing in 2012. Additionally, 14 boards were not providing any type of community service, and 20 were not providing any type of adjunctive service. Room and board is classified as an adjunctive service on the reporting form, but was re-classified as housing for the purposes of this report. All boards provided some type of prevention service.

TABLE 4: Number of Boards Funding Some Level of Housing and Supportive Services, FY 2012

| Service Category | Number of Boards Providing the Service (Out of 50) |
|---|--|
| Housing (Various types of residential treatment with and without room and board, standalone room and board for people receiving other treatment services) | 40 |
| Community Services (Consultation, hotline, intervention, outreach, referral and info, and training) | 36 |
| Prevention (Alternatives, community-based process, education, environmental, information dissemination, and problem identification and referral) | 50 |
| Adjunctive (Child care, meals, transportation, and alcohol and other drugs (AOD) services that are not otherwise classified (NOC)) | 30 |

Source: 040 financial reports from Boards to MHAS

MHAS Data on Addiction Treatment Services

In order to study the effects of certain drugs at the state and county board levels, a data request was made to MHAS. Specifically, unduplicated counts of clients at the board and state level by the following characteristics were requested:

- Drug of choice;
- Sex;
- Age;
- Level of care;
- Level of care by drug of choice; and
- Receiving medication-assisted treatment (MAT).

The response to the data request came from two data sources: Multi-Agency Community Service Information System (MACSIS) claims and Ohio Behavioral Health (OHBH) survey data. MACSIS counts were based on billing information while OHBH numbers were based on a survey that providers fill out for each client at admission. Generally, the board-level data was provided through OHBH data while statewide totals were from MACSIS. The unduplicated counts of clients were consolidated into biennia in order to reduce data suppression. In other words, an individual who received treatment in both 2011 and 2012 would be counted only once. In order to preserve patient confidentiality, any client count less than 25 in any category was suppressed by the department, including zeros. This approach resulted in significant suppression of board-level data for detailed level of care statistics.

The OHBH system was able to track at the board level nearly 120,000 clients receiving substance use treatment through the public system in 2011 and 2012, far less than the 160,000 identified statewide by MACSIS.⁵⁷ In each of the three biennia analyzed for this report, MACSIS figures were higher than OHBH.⁵⁸ Neither source includes the number of people in Ohio receiving services through private insurance or self-pay. Urban areas treated more people, with Cuyahoga-Lorain, Franklin, Hamilton, Summit, and Montgomery counties combined treating 50,771 individuals, or 42 percent of the total. Hamilton County's total was surpassed by both those of Summit and Montgomery counties, even though both have smaller populations.

In general, the board-level treatment populations follow the statewide pattern: a large increase in 2009-2010 followed

by a smaller decrease in 2011-2012. It should be noted that this pattern is not found in single-year client counts from the department's annual report.⁵⁹ This could either be a sign that there were fewer clients served over multiple years or a problem in the data itself. MHAS said that there were no policy changes in the time period examined that would have resulted in the boards treating more people in a shorter time period. In general, the percentage distribution of clients amongst the regions, organized according to regions developed by NSDUH, stayed fairly stable. There were modest increases in the following counties/regions:

- Belmont, Harrison, Monroe, Columbiana, Jefferson, Carroll, Tuscarawas, Washington;
- Brown, Clermont, Clinton, Warren;
- Geauga, Lake, Portage;
- Hamilton; and
- Mahoning, Stark.

These counties/regions saw a small decrease in the percentage of all clients statewide they served:

- Delaware, Morrow, Huron, Crawford, Marion, Richland, Union;
- Fairfield, Knox, Licking;
- Lucas; and
- Montgomery.

TABLE 5: Number of Ohioans Receiving Treatment through the Publicly-Funded System, by NSDUH Survey Region

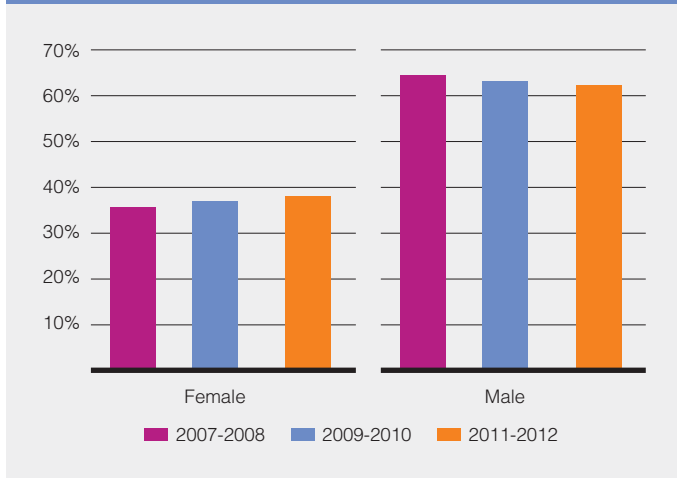
| | Number Receiving Treatment (OHBH) | | |
|--|-----------------------------------|----------------|----------------|
| | 2007-2008 | 2009-2010 | 2011-2012 |
| Statewide | 81,318 | 145,527 | 119,801 |
| Adams, Fayette, Gallia, Highland, Jackson, Lawrence, Meigs, Pickaway, Pike, Ross, Scioto | 3,723 | 6,868 | 5,940 |
| Allen, Auglaize, Champaign, Darke, Hardin, Logan, Miami, Preble, Shelby | 2,691 | 4,571 | 3,933 |
| Ashland, Holmes, Medina, Wayne | 1,994 | 2,890 | 2,785 |
| Ashtabula, Trumbull | 1,475 | 3,023 | 2,275 |
| Athens, Coshocton, Guernsey, Hocking, Morgan, Muskingum, Noble, Perry, Vinton | 2,405 | 4,329 | 3,872 |
| Belmont, Carroll, Columbiana, Harrison, Jefferson, Monroe, Tuscarawas, Washington | 2,546* | 5,496 | 4,990 |
| Brown, Clermont, Clinton, Warren | 2,343 | 6,123 | 5,268 |
| Butler | 1,567 | 3,178 | 1,673 |
| Clark, Greene, Madison | 3,043 | 5,321 | 3,988 |
| Crawford, Delaware, Huron, Marion, Morrow, Richland, Union | 2,804 | 3,484 | 2,627 |
| Cuyahoga, Lorain | 10,012 | 18,282 | 15,674 |
| Defiance, Fulton, Hancock, Henry, Mercer, Paulding, Putnam, Van Wert, Williams | 2,683 | 4,356 | 3,210 |
| Erie, Ottawa, Sandusky, Seneca, Wood, Wyandot | 1,829 | 3,201 | 2,824 |
| Fairfield, Knox, Licking | 3,162 | 4,492 | 1,395 |
| Franklin | 8,641 | 13,500 | 13,270 |
| Geauga, Lake, Portage | 2,485 | 5,383 | 5,526 |
| Hamilton | 4,327 | 8,086 | 7,722 |
| Lucas | 4,969 | 9,594 | 5,384 |
| Mahoning, Stark | 4,043 | 10,424 | 9,873 |
| Montgomery | 8,738 | 12,862 | 9,605 |
| Summit | 5,838 | 10,064 | 7,967 |

* Data suppression due to MHAS client confidentiality measures in some counties means this count may be low by up to 50 clients. Source: OHBH

Despite the large fluctuations of the total number of clients served, the demographics of the clients have stayed very stable. Men consistently made up 63 percent of the clients statewide across all three biennia.⁶⁰ Over the period of time included in this study, all but two board areas treated more men than women. From 2007 to 2010, Fairfield County provided services to more women than men; however, during 2011 – 2012 it provided more services to men than women. During the entire

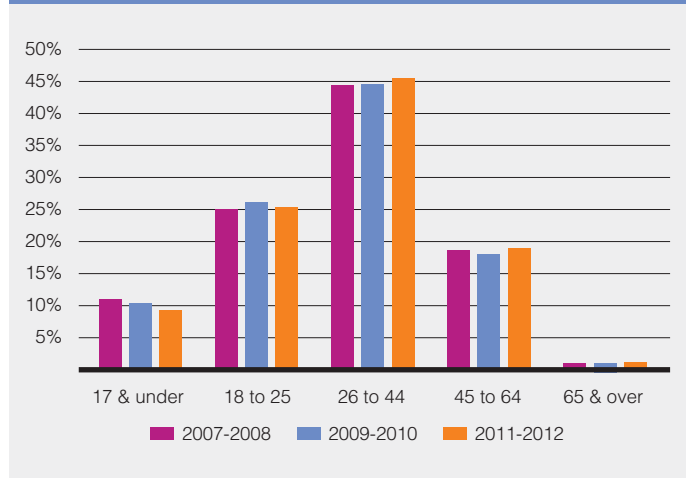
study period, the Adams, Lawrence, and Scioto Counties board area provided services to more women than men. The breakdown of clients by age group was similarly stable. The 26 to 44 age group made up 45 percent of all clients.⁶¹ About 10 percent of clients were age 17 and under. A quarter of clients were age 18 to 25. Another 20 percent were age 45 to 64, while very few were age 65 and over.

FIGURE 11: Percentage of Clients by Gender



Source: OHBH

FIGURE 12: Percentage of Clients by Age Group

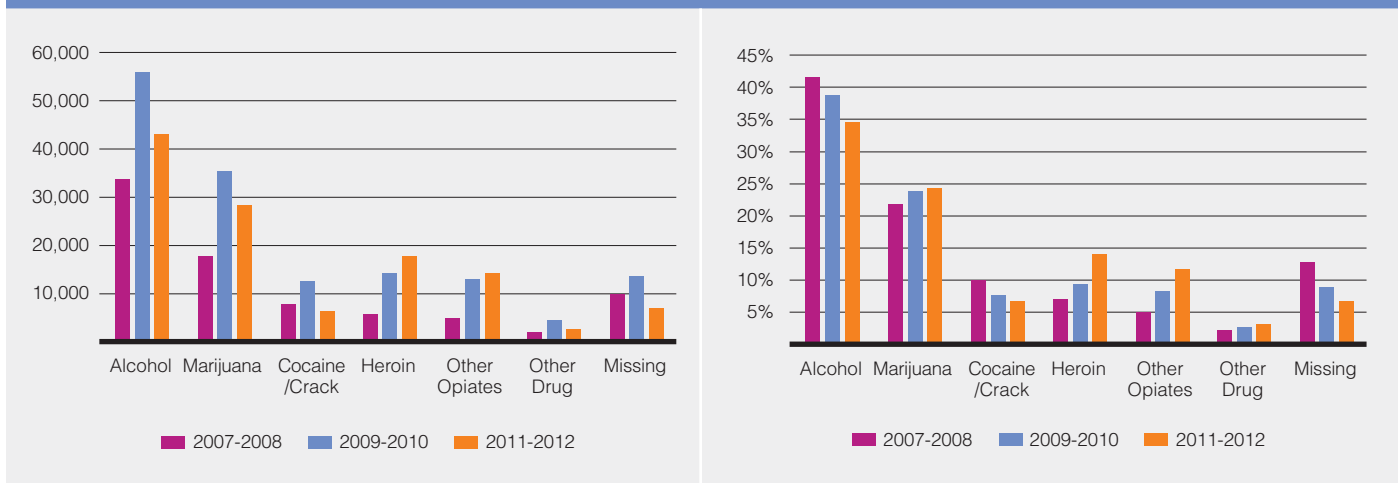


Source: MACSIS

According to OHBH data, the primary drug of choice for individuals in treatment has changed over time. This data must be treated with some caution given doubts about provider adherence to data recording protocols. The percentage of records missing this information ranged from 13 percent in 2007-2008 to six percent in 2011-2012. There was an increase of clients in treatment for every drug of choice category between 2007-2008 and 2009-2010. Patients in treatment for alcohol jumped from 34,000 to 56,000. With 35,000 people in treatment, there were almost twice as many clients being treated for marijuana in 2009-2010 as there were in 2007-2008. Most drugs saw a decline in the number of clients in treatment in 2011-2012 except for heroin and other opiates.

The large shifts in the total number of clients conceal the shift in the percentage distribution of drug of choice amongst clients. The percentage of clients in treatment for marijuana, heroin, and other opiates increased steadily over all three biennia. Alcohol and cocaine saw decreases. Still, alcohol remains the single most common drug for which to be in treatment. Over 40 percent of clients in 2007-2008 were being treated for alcohol. This decreased to 35 percent of clients statewide in 2011-2012. Marijuana is the drug of choice for nearly 25 percent of people in treatment in the same biennia. Heroin and other opiates together make up another quarter of people in treatment.⁶²

FIGURE 13: Number and Percentage of Clients by Drug of Choice



Source: OHBH

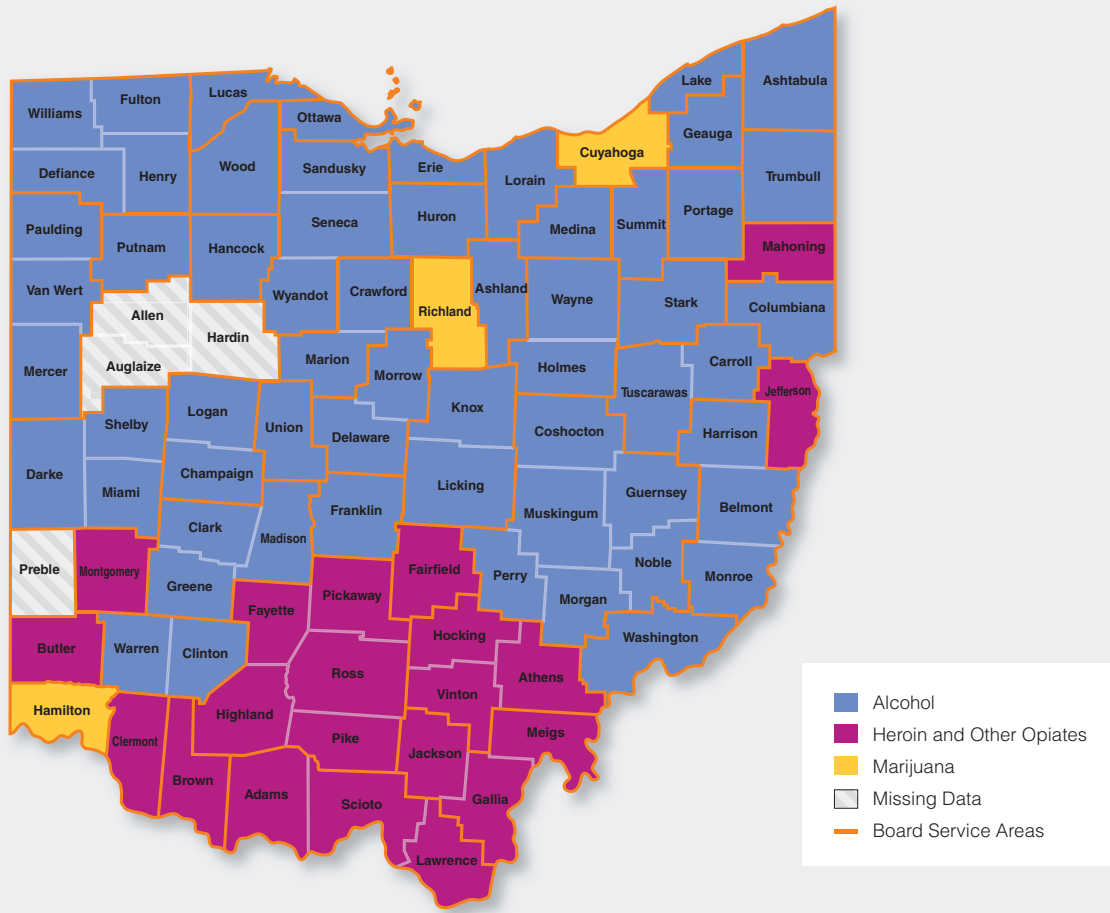
Given the prevalence of alcohol and marijuana use statewide, it is not surprising that alcohol was the most frequently treated substance in 34 board areas, and the second most frequent in eight others in FYs 2011-2012 (Table 6). Recently released data for FY 2013 shows that opioids, heroin and other opiates combined, have surpassed alcohol as the primary drug of choice for which someone is in treatment in Ohio.⁶³ In 2011-2012, 11 board areas had clients with heroin and other opiates as the most frequently treated substances. Boards with this characteristic had a distinctive regional pattern and were located in the southern or eastern parts of the state (Figure 14). These board areas were Athens-Hocking-Vinton, Brown, Butler, Clermont, Fairfield, Gallia-Jackson-Meigs, Jefferson, Mahoning, Montgomery, Paint Valley (Fayette, Highland, Pickaway, Pike, Ross), and Adams-Lawrence-Scioto. Board areas with opioids as the second most frequent client drug of choice were more widely dispersed geographically and included Franklin County, one of the largest urban areas in the state.⁶⁴

TABLE 6: Most Common Primary Drug of Choice for which to be in Treatment by Board Area, 2011-2012

| Client Drug of Choice | Number of Boards | |
|----------------------------------|------------------|----------------------|
| | Most Frequent | Second Most Frequent |
| Alcohol | 34 | 8 |
| Heroin & Other Opiates (Opioids) | 11 | 12 |
| Marijuana | 3 | 25 |
| Missing | 2 | 5 |

Source: OHBH

FIGURE 14: Most Common Primary Drug of Choice for which to be in Treatment by Board Area, 2011-2012



Source: OHBH. Note: Erie and Ottawa counties are served by the same board.

Level of Care and Drug of Choice

The choice and availability of levels of care used to treat addiction varies by drug. OHBH categorizes treatment into nine categories in the 2011-2012 biennium. As previously defined, these are:

- Acute Detoxification;
- Ambulatory Detoxification;
- Day Treatment;
- Intensive Outpatient;
- Medical Community Residential;
- Non-Intensive Outpatient;
- Non-Medical Community Residential;
- Pre-Treatment; and
- Sub-Acute Detoxification.

For this report, when breaking down level of care by each drug type, some levels of care were consolidated into an “Other” category due to data suppression. This category never exceeded one percent of clients in treatment for any specific drug type and is solely composed out of the treatment levels listed above.

Over the course of the three biennia, there has been some change in the makeup of levels of treatment utilized. Non-intensive outpatient treatment dropped from 78 percent of clients in 2007-2008 to 63 percent in 2011-2012. Pre-treatment grew from 4 percent to 11 percent of clients in the time period studied. Intensive outpatient and non-medical community residential treatment also saw small increases in the percentage of clients served in those levels of care.

In 2011-2012, outpatient treatment made up the vast majority of drug treatment in the state. Overall, 63 percent of clients were in non-intensive outpatient treatment. More than half of all clients were in this level of care in every drug category except for heroin. Intensive outpatient treatment made up another 13 percent. Pre-treatment made up 11 percent, and 6 percent were treated in non-medical community residential settings. Another 6 percent of clients were serviced with all levels of detoxification.

TABLE 7: Percent of Clients Treated in Each Level of Care, All Drugs of Choice

| Level of Care | 2007-2008 | 2009-2010 | 2011-2012 |
|-----------------------------------|-----------|-----------|-----------|
| Non-Intensive Outpatient | 77.8% | 67.5% | 63.4% |
| Intensive Outpatient | 9.5% | 10.7% | 13.4% |
| Pre-Treatment | 4.5% | 12.3% | 10.7% |
| Non-Medical Community Residential | 3.0% | 4.1% | 5.8% |
| Sub-Acute Detoxification | 3.6% | 3.9% | 4.3% |
| Ambulatory Detoxification | 1.0% | 0.5% | 0.9% |
| Day Treatment | 0.1% | 0.3% | 0.7% |
| Acute Detoxification | 0.5% | 0.5% | 0.6% |
| Medical Community Residential | 0.1% | 0.2% | 0.2% |

Source: OHBH

The level of care breakdown is similar for alcohol as it is for all drugs, largely because at 35 percent of all clients, alcohol is the most common substance for which people are receiving treatment.

The second-most common drug to be in treatment for is marijuana. Clients in treatment for marijuana have the highest share of any drug of choice receiving outpatient treatment at 83 percent. They also have the lowest share receiving detoxification: less than half of one percent of clients are in detoxification treatment for marijuana.

A lower percentage of clients in treatment for cocaine and crack received services in a non-intensive outpatient setting than for all drugs and a higher percentage were treated in intensive outpatient and non-medical community settings.

Detoxification was used by over 20 percent of clients in treatment for heroin, the largest percentage for clients in treatment for any drug type. Other opiates had 10.5 percent of clients in detoxification. Heroin was the only drug type where fewer than half were treated in a non-intensive outpatient setting.

FIGURE 15: Percentage of Clients in Levels of Care by Drug, 2011-2012

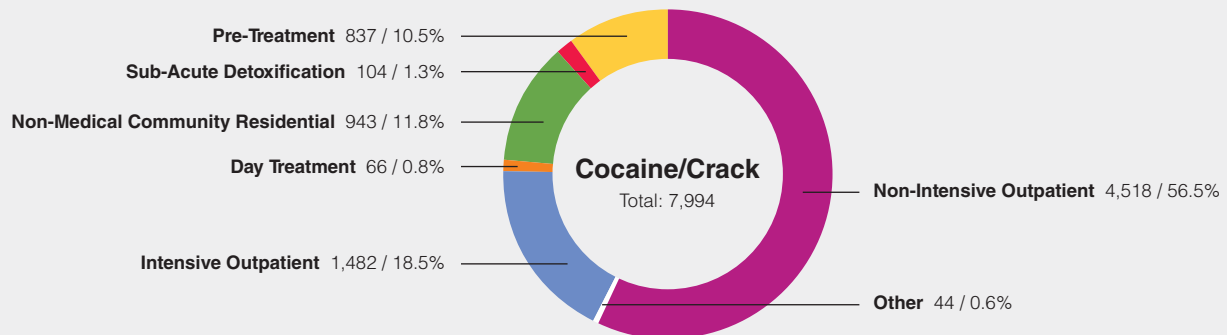
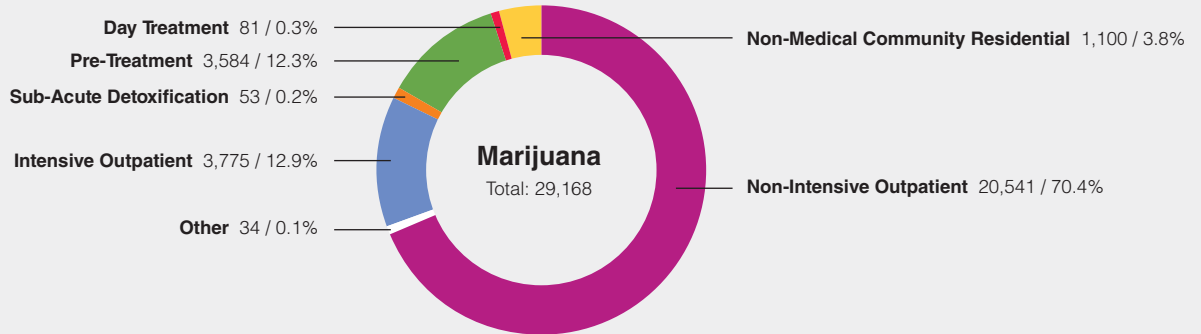
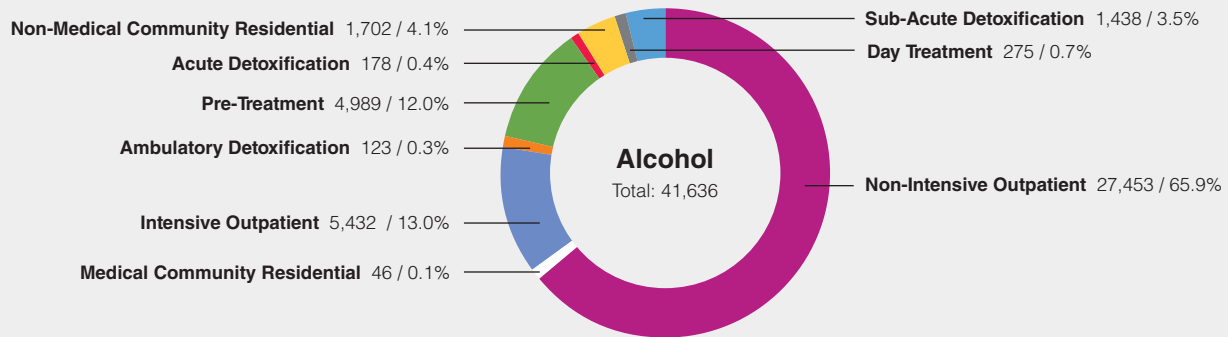
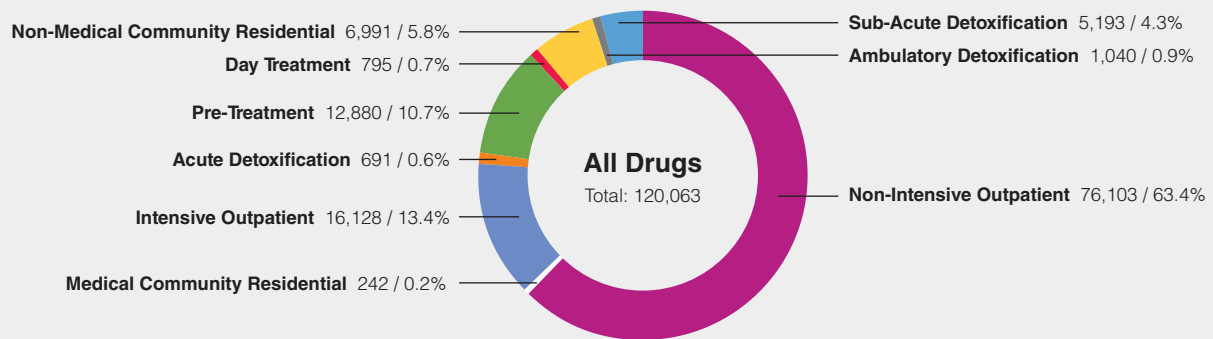
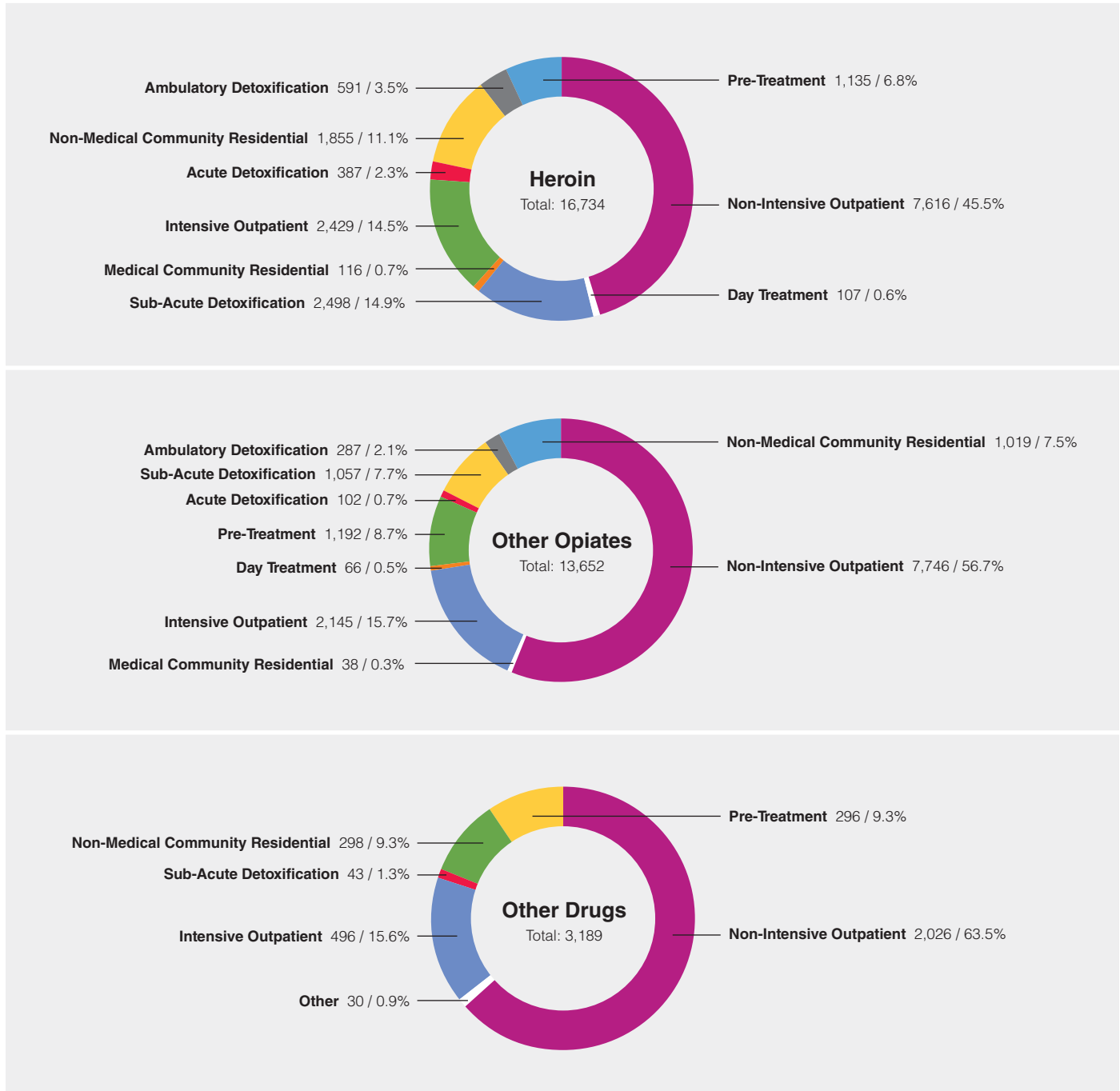


Figure 15 *continued*

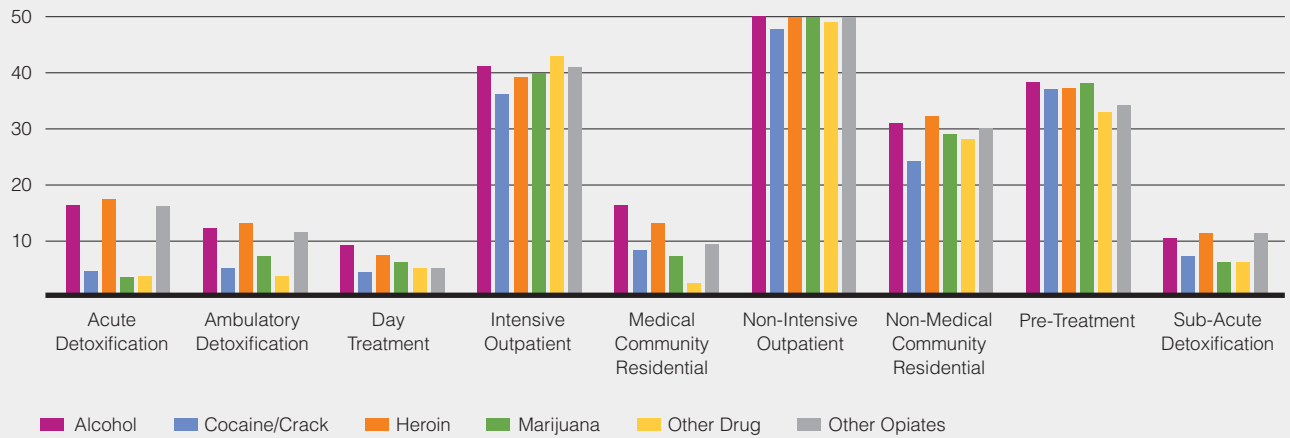


Source: OHBH

At the county board level, not every level of care is utilized to treat every drug. The only near-universal level of care used to treat any given drug type across all biennia is non-intensive outpatient treatment. Day treatment, medical community residential, and acute, sub-acute, and ambulatory

detoxification were each utilized by fewer than 20 out of the 50 county boards for any drug type in 2011-2012. The data does not address whether the level of care that a client needs is necessarily the level of care that he or she is receiving.

FIGURE 16: Number of Boards Utilizing Level of Care by Drug out of 50 Boards, 2011-2012



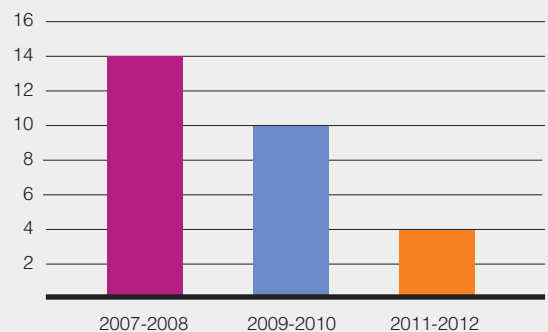
Source: OHBH

**Medication-Assisted Treatment:
What is it and how is it utilized in Ohio?**

Medication-assisted treatment is “the use of medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of substance use disorders.”⁶⁵ MAT provides a safe, controlled level of medication to reduce problem addiction behavior.⁶⁶ MAT is considered the standard of care for opioid-use disorder.⁶⁷ MAT is also available to treat alcohol use disorders, though its use is not widespread. The U.S. Food and Drug Administration (FDA) has approved three medications for the treatment of opioid (both heroin and prescription medications) dependence.⁶⁸ These include methadone, buprenorphine, and naltrexone. Methadone and buprenorphine both relieve withdrawal symptoms, block cravings, and prevent the euphoric effects that would otherwise occur if opioids are used. Suboxone is the brand name for buprenorphine when it is combined with naloxone. Naloxone reverses the effect of opioid overdose. These FDA-approved medications are long-acting opioids that do not create the “cycle of euphoria, crash, and craving” that heroin and abused prescription opiates do, because the effects are felt over a longer period of time.⁶⁹ There is potential for abuse of these medications, which is why they are prescribed and carefully monitored under medical guidance. Naltrexone (brand name Vivitrol) blocks the brain’s opioid receptors so that they cannot be activated in order to prevent relapse and is considered non-addictive. Vivitrol is administered as a long-acting injection. All of these medications must be administered under the control of medical professionals in conjunction with behavioral therapy.

MHAS data show that the use of MAT has become more widespread over time. More board areas are utilizing MAT (Figure 17). In 2007-2008, 14 boards did not have any clients treated with MAT. By 2011-2012, this number shrank to 4 board areas. While the total number of clients receiving MAT for heroin and other opiate use increased every year, the increase in the total number of clients being treated for opiate use means that MAT is reaching a lower percentage of clients. MAT is not utilized evenly throughout the state. In 2011-2012, there were 17 boards that provided MAT to 25 or more clients, which together accounts for 95 percent of all instances of MAT in that biennium. Those same boards saw 67 percent of all clients with an opiate diagnosis. This indicates a large number of boards are treating a relatively few number of clients with MAT.

FIGURE 17: Number of Board Areas with No Clients Receiving MAT



Source: MACSIS

TABLE 8: Clients Receiving MAT⁷⁰

| | Number of Clients Receiving MAT | Percent of the Clients Who Are Receiving Treatment for Opioid Use Who Are Receiving MAT |
|-----------|---------------------------------|---|
| 2007-2008 | 2,455 | 17.7% |
| 2009-2010 | 3,929 | 13.3% |
| 2011-2012 | 4,260 | 11.5% |

Source: MACSIS

Treatment Discharge Data

The Treatment Episode Data Set (TEDS), coordinated by SAMHSA, collects survey information for people in treatment for drug use at admission and discharge. It is based on the OHBH dataset, but provides a duplicated count of clients who are admitted and discharged in a year. While it is required that a treatment facility that receives any public reimbursement submit this data to the state for all clients, compliance is not universal, especially at discharge. Still, this is the data the state submits to the federal government as representative of treatment episodes within facilities that provide publicly funded services.

Table 9 shows that for all drugs, 36 percent of discharges resulted from successful completion of the clients' treatment plans in 2011. Alcohol and marijuana both had higher successful completion rates than the all-drug average. Only

22 percent of discharges of patients with heroin as the primary drug of choice successfully completed treatment. Heroin and other opiates also had the highest rate of people leaving against medical advice, at about 30 percent for both.⁷¹

Table 10 shows long-term residential rehabilitation and non-intensive outpatient treatment had the highest rates of clients successfully completing treatment. Detoxification levels of care recorded the lowest percentages of clients successfully completing their treatment, but the highest percentages transferred to another level of care. TEDS defines successfully completing treatment as completing all parts of a treatment plan or program, which can include multiple levels of care. Detoxification is often the first part of many treatment plans, while long-term rehabilitation and outpatient care are often the last.

As seen in Table 10, for most service settings, those leaving against professional advice were in the mid-to-high 20 percent range, with the exception of ambulatory detoxification at 39 percent and non-intensive outpatient at 19 percent. Clients are more likely to be terminated by the facility in outpatient settings. About 3 percent of clients leave treatment due to incarceration, which is more likely to occur in outpatient settings. Eight percent leave for other reasons. This category can include moving, hospitalizations, or other reasons outside the client's control. Even if clients did not complete all stages of their treatment plans, it is not shown in this data whether or not they returned to using drugs.

TABLE 9: Reason for Discharge, 2011

| Primary Drug of Choice | Total Number Discharged | Treatment Completed | Left Against Professional Advice | Terminated by Facility | Transferred | Incarcerated | Death | Other |
|------------------------|-------------------------|---------------------|----------------------------------|------------------------|-------------|--------------|-------|-------|
| Alcohol | 17,668 | 44% | 18% | 15% | 13% | 2% | 0% | 8% |
| Cocaine | 4,299 | 29% | 23% | 18% | 17% | 3% | 0% | 9% |
| Marijuana | 12,514 | 39% | 17% | 18% | 13% | 4% | 0% | 9% |
| Heroin | 6,633 | 22% | 28% | 20% | 18% | 4% | 0% | 7% |
| Other Opiates | 5,399 | 26% | 31% | 20% | 10% | 4% | 0% | 8% |
| Other | 1,240 | 34% | 24% | 18% | 11% | 4% | 0% | 9% |
| None Listed | 2,125 | 40% | 18% | 16% | 11% | 2% | 1% | 12% |
| Total | 49,878 | 36% | 21% | 18% | 13% | 3% | 0% | 8% |

Source: TEDS. Total number of discharges in this table does not match the total in Table 10 due to discharges where the primary drug of choice was left empty.

TABLE 10: Reason for Discharge by Service Setting for All Primary Drugs of Choice, 2011

| Service Setting at Discharge | Total Number Discharged | Treatment Completed | Left Against Professional Advice | Terminated by Facility | Transferred | Incarcerated | Death | Other |
|--|-------------------------|---------------------|----------------------------------|------------------------|-------------|--------------|-------|-------|
| Detoxification, 24-Hour Hospital Inpatient | 289 | 13% | 22% | 6% | 56% | 0% | 0% | 3% |
| Detoxification, 24 Hour, Free-Standing Residential | 2,330 | 27% | 29% | 6% | 34% | 0% | 0% | 4% |
| Rehabilitation/Residential, Short-Term (≤30 Days) | 86 | 36% | 26% | 16% | 9% | 1% | 0% | 12% |
| Rehabilitation/Residential, Long-Term (>30 Days) | 3,302 | 41% | 28% | 15% | 9% | 2% | 0% | 5% |
| Ambulatory, Intensive Outpatient | 7,373 | 33% | 26% | 22% | 7% | 4% | 0% | 7% |
| Ambulatory, Non-Intensive Outpatient | 36,383 | 37% | 19% | 18% | 13% | 3% | 0% | 9% |
| Ambulatory, Detoxification | 152 | 22% | 39% | 21% | 7% | 2% | 0% | 10% |
| Total | 49,915 | 36% | 21% | 18% | 13% | 3% | 0% | 8% |

Source: TEDS

Clients are discharged from treatment for different reasons for different drugs. The differences between the distribution of reasons for leaving treatment is present even when comparing clients discharged from the same level of care for different drugs. The reason for discharge by service setting is shown in Tables 11, 12, and 13 for three major drug types – alcohol, marijuana, and heroin and other opiates. Alcohol and marijuana had comparable rates of completion

across all service settings. It is worth noting that few people were discharged from detoxification services for marijuana. Opiates had a lower rate of discharges for completed treatment than alcohol or marijuana and higher rates of leaving against professional advice and being terminated by the facility. Marijuana and opiates had an overall higher rate of discharge due to incarceration than alcohol did.

TABLE 11: Reason for Discharge by Service Setting, Alcohol Primary Drug of Choice, 2011

| Service Setting at Discharge | Total Number Discharged | Treatment Completed | Left Against Professional Advice | Terminated by Facility | Transferred | Incarcerated | Death | Other |
|---|-------------------------|---------------------|----------------------------------|------------------------|-------------|--------------|-------|-------|
| Detoxification | 851 | 24% | 13% | 5% | 53% | 0% | 0% | 5% |
| Rehabilitation/Residential | 917 | 46% | 27% | 13% | 8% | 2% | 0% | 5% |
| Ambulatory, Intensive Outpatient | 2,569 | 39% | 23% | 22% | 7% | 3% | 0% | 7% |
| Ambulatory, Non-Intensive Outpatient | 13,330 | 46% | 17% | 15% | 11% | 3% | 0% | 8% |
| Total | 17,667 | 44% | 18% | 15% | 13% | 2% | 0% | 8% |

Source: TEDS

TABLE 12: Reason for Discharge by Service Setting, Marijuana Primary Drug of Choice, 2011

| Service Setting at Discharge | Total Number Discharged | Treatment Completed | Left Against Professional Advice | Terminated by Facility | Transferred | Incarcerated | Death | Other |
|---|-------------------------|---------------------|----------------------------------|------------------------|-------------|--------------|-------|-------|
| Detoxification | 35 | 40% | 34% | 17% | 6% | 0% | 0% | 3% |
| Rehabilitation/Residential | 413 | 43% | 21% | 13% | 12% | 4% | 0% | 7% |
| Ambulatory, Intensive Outpatient | 1,729 | 39% | 20% | 22% | 7% | 4% | 0% | 8% |
| Ambulatory, Non-Intensive Outpatient | 10,337 | 39% | 17% | 18% | 14% | 4% | 0% | 9% |
| Total | 12,514 | 39% | 17% | 18% | 13% | 4% | 0% | 9% |

Source: TEDS

TABLE 13: Reason for Discharge by Service Setting, Opiates Primary Drug of Choice, 2011

| Service Setting at Discharge | Total Number Discharged | Treatment Completed | Left Against Professional Advice | Terminated by Facility | Transferred | Incarcerated | Death | Other |
|---|-------------------------|---------------------|----------------------------------|------------------------|-------------|--------------|-------|-------|
| Detoxification | 1,785 | 25% | 36% | 7% | 28% | 0% | 0% | 4% |
| Rehabilitation/Residential | 1,273 | 38% | 29% | 17% | 9% | 3% | 0% | 4% |
| Ambulatory, Intensive Outpatient | 1,824 | 20% | 33% | 26% | 6% | 6% | 0% | 7% |
| Ambulatory, Non-Intensive Outpatient | 7,149 | 22% | 27% | 22% | 14% | 5% | 1% | 9% |
| Total | 12,031 | 24% | 29% | 20% | 15% | 4% | 0% | 8% |

Source: TEDS

Hospital Data

More than \$4 billion was spent on ER visits and hospital treatments for Ohioans with diagnoses related to alcohol or other drug use in calendar year 2012.⁷² Ohioans with AOD-related diagnoses visited ERs or were admitted to inpatient hospital treatment more than more than 250,000 times.⁷³ In 53,000 visits, the patients' primary diagnoses were alcohol or other drug-related. Even for visits in which the AOD-related diagnosis was not the primary diagnosis for which the patient sought treatment, the primary diagnosis was often a condition in which drug use could be a contributing factor. An example would be a person with an alcohol addiction being admitted to a hospital for kidney failure. Better tracking patients who visit the ER or are admitted to the hospital with diagnoses related to alcohol and drug use could yield important information about this population and how it interacts with the broader treatment system.

Tables 14 and 15 summarize the counties with the highest and lowest per-capita ER visits and hospital admissions with primary and secondary alcohol and drug diagnoses, excluding nicotine.⁷⁴ Smaller counties tended to have lower per-capita visits than larger counties. Since this data tracks admissions and visits instead of people, it is not a measure of incidence or prevalence, but offers a measure into how often hospitals are utilized in a community to treat substance use related issues. An individual could have multiple admissions. Appendix II contains this information for all counties.

TABLE 14: Counties with the Highest Number of ER Visits and Hospital Admissions with any AOD-Related Diagnosis as a Percentage of Population, 2012

| County | County Population | Emergency Room Visits | Inpatient Admissions | Hospital Visits as a Percentage of County Population |
|-----------------|-------------------|-----------------------|----------------------|--|
| Hamilton | 802,516 | 18,704 | 11,832 | 3.8% |
| Cuyahoga | 1,266,049 | 20,528 | 21,166 | 3.3% |
| Wayne | 114,910 | 2,576 | 946 | 3.1% |
| Lucas | 437,201 | 4,852 | 7,711 | 2.9% |
| Clermont | 199,109 | 3,021 | 2,351 | 2.7% |
| Clark | 136,435 | 2,114 | 1,553 | 2.7% |

Source: Ohio Hospital Association, U.S. Census Bureau

TABLE 15: Counties with the Lowest Number of ER Visits and Hospital Admissions with any AOD-Related Diagnosis as a Percentage of Population, 2012

| County | County Population | Emergency Room Visits | Inpatient Admissions | Hospital Visits as a Percentage of County Population |
|-----------------|-------------------|-----------------------|----------------------|--|
| Lawrence | 62,114 | 12 | 261 | 0.4% |
| Monroe | 14,589 | 34 | 64 | 0.7% |
| Carroll | 28,574 | 97 | 98 | 0.7% |
| Mercer | 40,867 | 161 | 181 | 0.8% |
| Paulding | 19,308 | 93 | 71 | 0.8% |
| Van Wert | 28,739 | 147 | 98 | 0.9% |

Source: Ohio Hospital Association, U.S. Census Bureau

Conclusion

In the future it will be important to continue to monitor and evaluate the addiction treatment system and how well it is reaching people in need of treatment. The ACA, namely the expansion of the Medicaid program, will impact the clients and services described in this report. The publicly-funded treatment system is already beginning to see shifts in the types of services it is providing and the population it is serving. The information gathered and analyzed as a result of this report offer a baseline against which to measure change over the coming years. Certain questions remain and additional information would help in understanding these changes:

- There is a need for better reporting of data, both on the numbers of clients and outcomes. The data available to researchers is lacking in regards to measuring the factors that lead to treatment completion and the complete picture of clients being treated.
- The system must develop an effective measurement for unmet need. The first step would be to evaluate both publicly and privately funded treatment services to get a more complete picture. This includes services funded through Medicaid, Medicare, state and local funds, and all private insurance and self-pay. NSDUH survey data is a good tool to estimate the number of people needing but not receiving treatment, but without a full picture of the services that are being provided, the survey data is not comparable to the number receiving services.
- Especially as it relates to developing public policy, stakeholders should collect better state level data on the effect that substance abuse has on Ohio's workforce. This data is only available at a national level, and it is unclear if these statistics accurately reflect the situation in Ohio.
- In light of the continuing crisis with opioids – both prescription opiates and heroin – in Ohio, it is important to have a better understanding of the extent to which MAT is being utilized. Data needs to be collected to determine where it is being offered, who is prescribing MAT, and under what circumstances.
- We need to better understand the extent to which choices around level of care are being driven by availability of providers and/or by funding, rather than client assessment. We also need to assess how increased access to health insurance for previously uninsured Ohioans has changed or will change this dynamic.
- Hospital data on visits and admissions related to substance abuse can be a helpful barometer of the need for substance use treatment. Combined with data on overdoses, this information would establish a baseline to understand and compare substance abuse trends. Treatment systems can be adjusted based on these trends in order to meet the needs of individual communities, which should ultimately result in fewer overdoses and hospital visits related to substance abuse.
- Additional research should consider the overall impact of the ACA on ADAMH boards and their finances. It will be important to know whether boards will shift to paying primarily for supportive services.
- Research should also be conducted to determine which populations are left uncovered after the ACA is more fully implemented, and how Ohio's safety net will continue to provide substance use treatment for individuals that do not have a payer for services.
- Medicaid elevation created the need for providers to report data in several different data systems. Provider adherence to reporting protocols in OHBH appears to have been affected by the change. The existence of multiple data systems has made it more difficult to track funding and the needs of people living with substance use issues. We are still in a transition period, but information on clients, service delivery, and outcomes needs to be made more transparent, standardized, and reliable moving forward.
- Limitations of this analysis, given that the data is before 2014, include the absence of the impact of Medicaid expansion on this population and on the substance use services some are no doubt receiving. We are beginning to see this data, but it will take time to reveal the full effect that Medicaid expansion has made and to understand the needs that will continue.

Appendix I: Medicaid Covered and Non-Medicaid Covered Alcohol and Drug Addiction Treatment Services

| COVERED BY MEDICAID | NOT COVERED BY MEDICAID |
|---|--------------------------|
| Alcohol/Drug Screening Analysis/Lab Urinalysis | 23-Hour Observation Bed |
| Ambulatory Detox (Outpatient) | Acute Detox Hospital |
| Assessment | Consultation |
| Case Management (Up to 30 hours per week when combined with counseling and medical somatic) | Driver Intervention |
| Crisis Intervention | Family Counseling |
| Counseling (Individual or Group) | Hotline |
| Induction of Buprenorphine | Intervention |
| Injection of Naltrexone | Outreach |
| Intensive Outpatient Treatment | Prevention |
| Medical Somatic (Pharmacological Management) | Referral and Information |
| Methadone Administration | Residential Treatment |
| | Room and Board |
| | Training |
| | Transportation |
| | Other Services |

Source: MHAS 040 financial reporting form and Department of Medicaid

Appendix II: Categories and Descriptions of Drugs

| CATEGORY | DESCRIPTION | DRUGS | COMMON STREET NAMES | WHAT DO THEY LOOK LIKE? | HOW ARE THEY ABUSED? | CONTROL STATUS (BASED ON FEDERAL LAW) |
|--|--|--|--|--|---|---|
| Alcohol | Any drink containing ethanol | Ethanol | Wine, Beer, Hard Alcohol | Liquid | Drank | Excluded from the controlled substances law |
| Narcotics/Opioids | Substances that dull the senses and relieve pain. This includes both naturally occurring and synthetically made drugs. This category includes prescription drugs and illicitly produced drugs. | Opium, Morphine, Codeine, Heroin, Oxycodone, Hydrocodone, Hydromorphone, OxyContin, Vicodin, Methadone, Fentanyl | Smack, Horse, Mud, Brown Sugar, Junk, Black Tat, Big H, Dover's Powder, OC, Ox, Oxy, Oxycotton, Sippin Syrup | Tablets, skin patches, powder, chunks, liquid, syrups, suppositories, or lollipops | Swallowed, smoked, sniffed, or injected | Controlled substances that vary from Schedule I to V |
| Stimulants | Drugs that speed up the body systems. These include prescription drugs and illicitly produced drugs. | Amphetamines (Adderall or Dexedrine), Methylphenidate (Concerta or Ritalin), Diet Aids (Didrex, bontril, Fastin and others), Methamphetamines, Cocaine, Methcathinone | Bennies, Black Beauties, Cat, Coke, Crank, Crystal, Flake, Ice, Pellets, R-Ball, Skippy, Snow, Speed, Uppers, Vitamin R | Pills, powders, rocks, or injectable liquids | Swallowed, smoked, snorted, or injected | Many have medical uses. Vary from not controlled to controlled on Schedule I to V. The non-controlled substances are often available over-the-counter. |
| Depressants/ Barbiturates/ Benzodiazepines | Drugs that put one to sleep, relieve anxiety or muscle spasms and prevent seizures. Generally, legitimate pharmaceutical products that are diverted to the illicit market. Typically used in larger quantities than used for therapeutic purposes. | Butalbital, Phenobarbital, Pentothal, Seconal, Nembutal, Valium, Xanax, Halcion, Ativan, Klonopin, Restoril, Rohypnol, Ambien, Sonata, Meprobamate, Methaqualone (Quaalude), Alprazolam, Clonazepam, Diazepam, GHB | Barbs, Benzos, Downers, Georgia Home Boy, GHB, Liquid X, Nerve Pills, Phennies, R2, Reds, Roofies, Rophies, Tranks, Yellowts | Pills, syrups, or injectable liquids | Swallowed or injected | Many have medical uses. Most depressants are controlled substances ranging from Schedule I to V. Rohypnol is not manufactured or legally marketed in the US. |
| Hallucinogens | Drugs that alter human perception and mood. They are found in plants and fungi or synthetically produced. | MDMA (Ecstasy), LSD, Hallucinogenic Mushrooms, K2 (Spice), Ketamine, Peyote, Mescaline | Acid, Blotter, Blotter Acid, Cubes, Doses, Fry, Mind Candy, Mushrooms, Shrooms, Special K, STP, X, XTC | Variety of solid forms, including pills, or impregnated paper | Swallowed or smoked | Schedule I |
| Marijuana/Cannabis | A mind-altering drug produced by the cannabis sativa plant. THC (delta-9-tetrahydrocannabinol) is believed to be the main psychoactive ingredient. | Marijuana, THC, Cannabis | Aunt Mary, BC Bud, Blunts, Boom, Chronic, Dope, Gangster, Ganja, Grass, Hash, Herb, Hydro, Indo, Joint, Kif, Mary Jane, Mota, Pot, Reefer, Sinsemilla, Skunk, Smoke, Weed, Yerba | Dry, shredded green/brown mix of plant parts | Smoked in a cigarette, cigar, pipe or bong. Can also be mixed with foods or brewed as a tea. | Schedule I. Marinol, a synthetic version of THC, is a Schedule III substance that can be prescribed for the control of nausea and vomiting during the treatment of cancer and AIDS. |
| Inhalants | Invisible, volatile substances found in common household products that when inhaled induce psychoactive or mind altering effects. | More than 1,000 household products are very dangerous when inhaled. Common items include felt tip markers, glue, cleaning fluids, paint, spray paints, butane lighter fluid (butane) and paint thinner | Gluey, Huff, Rush, Whippets | Any household item that produces vapors that can be inhaled | Inhalation through nose or mouth in variety of ways, such as sniffing, snorting, bagging, or huffing. | Common household items are legally available for their intended and legitimate uses. |

Appendix III: ER Visits and Hospital Admissions with AOD-Related Diagnoses by County, 2012 (Excluding Nicotine)

| | POPULATION | EMERGENCY ROOM | | INPATIENT | | HOSPITAL VISITS AS A PERCENTAGE OF COUNTY POPULATION |
|------------------|-------------------|----------------|----------------|---------------|----------------|--|
| | | PRIMARY | ANY | PRIMARY | ANY | |
| Statewide | 11,553,031 | 38,420 | 128,468 | 14,913 | 126,069 | 2.2% |
| Adams | 28,366 | 79 | 270 | 17 | 222 | 1.7% |
| Allen | 105,329 | 268 | 696 | 193 | 1,436 | 2.0% |
| Ashland | 53,199 | 88 | 392 | 31 | 210 | 1.1% |
| Ashtabula | 100,298 | 455 | 1,316 | 195 | 1,338 | 2.6% |
| Athens | 64,489 | 213 | 727 | 34 | 463 | 1.8% |
| Auglaize | 45,869 | 76 | 245 | 61 | 353 | 1.3% |
| Belmont | 69,626 | 135 | 324 | 44 | 332 | 0.9% |
| Brown | 44,429 | 99 | 601 | 42 | 375 | 2.2% |
| Butler | 370,959 | 1,223 | 3,697 | 348 | 3,558 | 2.0% |
| Carroll | 28,574 | 40 | 97 | 8 | 98 | 0.7% |
| Champaign | 39,602 | 92 | 347 | 47 | 325 | 1.7% |
| Clark | 136,435 | 623 | 2,114 | 123 | 1,553 | 2.7% |
| Clermont | 199,109 | 671 | 3,021 | 351 | 2,351 | 2.7% |
| Clinton | 41,887 | 143 | 409 | 27 | 403 | 1.9% |
| Columbiana | 106,458 | 220 | 913 | 64 | 826 | 1.6% |
| Coshocton | 36,840 | 63 | 179 | 27 | 280 | 1.2% |
| Crawford | 42,874 | 146 | 410 | 25 | 332 | 1.7% |
| Cuyahoga | 1,266,049 | 5,915 | 20,528 | 2,840 | 21,166 | 3.3% |
| Darke | 52,501 | 83 | 387 | 12 | 254 | 1.2% |
| Defiance | 38,812 | 117 | 292 | 23 | 286 | 1.5% |
| Delaware | 181,188 | 308 | 1,023 | 133 | 944 | 1.1% |
| Erie | 76,390 | 365 | 1,002 | 119 | 1,034 | 2.7% |
| Fairfield | 147,509 | 310 | 872 | 141 | 978 | 1.3% |
| Fayette | 28,849 | 91 | 448 | 42 | 313 | 2.6% |
| Franklin | 1,196,070 | 3,724 | 12,853 | 1,832 | 13,834 | 2.2% |
| Fulton | 42,572 | 109 | 285 | 20 | 261 | 1.3% |
| Gallia | 30,811 | 50 | 262 | 8 | 100 | 1.2% |
| Geauga | 93,840 | 155 | 419 | 90 | 681 | 1.2% |
| Greene | 163,852 | 457 | 1,140 | 211 | 1,283 | 1.5% |
| Guernsey | 39,835 | 147 | 468 | 45 | 465 | 2.3% |
| Hamilton | 802,516 | 3,341 | 18,704 | 1,047 | 11,832 | 3.8% |
| Hancock | 75,670 | 162 | 526 | 60 | 522 | 1.4% |
| Hardin | 31,654 | 80 | 176 | 36 | 262 | 1.4% |
| Harrison | 15,705 | 38 | 140 | 6 | 79 | 1.4% |
| Henry | 28,085 | 73 | 178 | 5 | 126 | 1.1% |
| Highland | 43,047 | 122 | 592 | 37 | 360 | 2.2% |
| Hocking | 29,352 | 104 | 227 | 29 | 203 | 1.5% |
| Holmes | 43,094 | 48 | 275 | 11 | 102 | 0.9% |
| Huron | 59,294 | 187 | 546 | 79 | 471 | 1.7% |
| Jackson | 32,902 | 71 | 348 | 12 | 195 | 1.7% |
| Jefferson | 68,360 | 321 | 815 | 168 | 819 | 2.4% |

| | POPULATION | EMERGENCY ROOM | | INPATIENT | | HOSPITAL VISITS AS A PERCENTAGE OF COUNTY POPULATION |
|------------|------------|----------------|-------|-----------|-------|--|
| | | PRIMARY | ANY | PRIMARY | ANY | |
| Knox | 60,793 | 167 | 339 | 85 | 403 | 1.2% |
| Lake | 229,528 | 871 | 2,279 | 343 | 2,527 | 2.1% |
| Lawrence | 62,114 | 6 | 12 | 40 | 261 | 0.4% |
| Licking | 167,715 | 539 | 1,118 | 330 | 1,267 | 1.4% |
| Logan | 45,442 | 99 | 253 | 57 | 348 | 1.3% |
| Lorain | 301,597 | 1,335 | 3,063 | 526 | 3,712 | 2.2% |
| Lucas | 437,201 | 1,836 | 4,852 | 454 | 7,711 | 2.9% |
| Madison | 42,982 | 125 | 333 | 42 | 345 | 1.6% |
| Mahoning | 235,463 | 676 | 2,037 | 291 | 2,899 | 2.1% |
| Marion | 66,216 | 218 | 811 | 47 | 665 | 2.2% |
| Medina | 173,725 | 439 | 1,141 | 177 | 1,232 | 1.4% |
| Meigs | 23,616 | 22 | 145 | 13 | 98 | 1.0% |
| Mercer | 40,867 | 54 | 161 | 19 | 181 | 0.8% |
| Miami | 103,063 | 262 | 749 | 91 | 832 | 1.5% |
| Monroe | 14,589 | 9 | 34 | 8 | 64 | 0.7% |
| Montgomery | 536,270 | 2,264 | 5,899 | 949 | 6,803 | 2.4% |
| Morgan | 14,926 | 21 | 73 | 7 | 115 | 1.3% |
| Morrow | 34,988 | 58 | 172 | 12 | 183 | 1.0% |
| Muskingum | 85,934 | 277 | 1,013 | 97 | 1,157 | 2.5% |
| Noble | 14,601 | 22 | 59 | 5 | 74 | 0.9% |
| Ottawa | 41,355 | 83 | 271 | 20 | 335 | 1.5% |
| Paulding | 19,308 | 20 | 93 | 7 | 71 | 0.8% |
| Perry | 36,000 | 97 | 254 | 51 | 380 | 1.8% |
| Pickaway | 56,347 | 176 | 704 | 80 | 469 | 2.1% |
| Pike | 28,515 | 102 | 242 | 28 | 278 | 1.8% |
| Portage | 163,851 | 436 | 1,400 | 236 | 1,622 | 1.8% |
| Preble | 41,873 | 54 | 151 | 27 | 258 | 1.0% |
| Putnam | 34,201 | 48 | 109 | 20 | 198 | 0.9% |
| Richland | 122,585 | 324 | 930 | 97 | 987 | 1.6% |
| Ross | 77,475 | 226 | 643 | 88 | 927 | 2.0% |
| Sandusky | 60,461 | 136 | 257 | 11 | 322 | 1.0% |
| Scioto | 78,592 | 330 | 825 | 52 | 906 | 2.2% |
| Seneca | 56,033 | 155 | 438 | 27 | 342 | 1.4% |
| Shelby | 49,197 | 122 | 386 | 38 | 278 | 1.3% |
| Stark | 375,105 | 1,375 | 3,653 | 302 | 3,033 | 1.8% |
| Summit | 541,106 | 2,243 | 7,430 | 796 | 6,403 | 2.6% |
| Trumbull | 207,403 | 591 | 1,625 | 361 | 2,772 | 2.1% |
| Tuscarawas | 92,391 | 206 | 593 | 32 | 556 | 1.2% |
| Union | 52,786 | 77 | 246 | 32 | 286 | 1.0% |
| VanWert | 28,739 | 48 | 147 | 10 | 98 | 0.9% |
| Vinton | 13,251 | 26 | 79 | 8 | 85 | 1.2% |
| Warren | 217,310 | 458 | 1,336 | 134 | 1,165 | 1.2% |
| Washington | 61,466 | 104 | 339 | 30 | 461 | 1.3% |
| Wayne | 114,910 | 303 | 2,576 | 117 | 946 | 3.1% |
| Williams | 37,542 | 85 | 248 | 15 | 166 | 1.1% |
| Wood | 128,708 | 242 | 561 | 52 | 699 | 1.0% |
| Wyandot | 22,591 | 41 | 125 | 6 | 124 | 1.1% |

Appendix IV: List of alcohol and drug related ICD9 diagnosis codes

| MENTAL DISORDERS | |
|---|--|
| Alcohol-induced mental disorders | 2911, 2912, 2913, 2914, 2915, 29181, 29182, 29189, 2919 |
| Drug-induced mental disorders | 2920, 29211, 29212, 2922, 29281, 29282, 29283, 29284, 29285, 29289, 2929 |
| Alcohol dependence | 30300, 30301, 30302, 30303, 30390, 30391, 30392, 30393 |
| Drug dependence | 30400, 30401, 30402, 30403, 30410, 30411, 30412, 30413, 30420, 30421, 30422, 30423, 30430, 30431, 30432, 30433, 30440, 30441, 30442, 30443, 30450, 30451, 30452, 30453, 30460, 30461, 30462, 30463, 30470, 30471, 30472, 30473, 30480, 30481, 30482, 30483, 30490, 30491, 30492, 30493 |
| Nondependent abuse of drugs* | 30500, 30501, 30502, 30503, 3051, 30520, 30521, 30522, 30523, 30530, 30531, 30532, 30533, 30540, 30541, 30542, 30543, 30550, 30551, 30552, 30553, 30560, 30561, 30562, 30563, 30570, 30571, 30572, 30573, 30580, 30581, 30582, 30583, 30590, 30591, 30592, 30593 |
| INJURY AND POISONING | |
| Poisoning by central nervous system stimulants | 9701, 97081 |
| Toxic effect of alcohol | 9800, 9801, 9802, 9808, 9809 |
| SUPPLEMENTARY CLASSIFICATION OF EXTERNAL CAUSES OF INJURY AND POISONING | |
| Accidental poisoning by drugs, medicinal substances and biologicals | E8500, E8501, E8502, E851, E8523, E8525, E8528, E8529, E8530, E8532, E8538, E8539, E8540, E8541, E8588, E8589 |
| Accidental poisoning by alcohol | E8600, E8601, E8602, E8608, E8609 |

* Code 3051, Nondependent Abuse of Nicotine, was excluded

End Notes

- 1 Presentation by Michael Botticelli, Director, Office of National Drug Control Policy. *The Opioid Problem: Public Health and Community Solutions*. Ohio Association of County Behavioral Health Authorities Opioid Conference, March 31, 2015. Columbus, Ohio.
- 2 While Medicare can be a payer for substance abuse services, this refers to only Medicaid and community behavioral health services.
- 3 A subsequent challenge to the structure of the ACA was considered by the U.S. Supreme Court in *King v. Burwell*, 576 U.S. ___ (2015). The petitioners argued that the ACA did not permit the federal government to provide subsidies for health insurance to individuals who would otherwise qualify for them but lived in states that chose not to set up their own health insurance exchanges in favor of ceding that authority to the federal government. Ohio was one of these 34 states. In 2015, the Supreme Court ruled 6 to 3 against the petitioners, thereby maintaining the sustainability and structure of the ACA and the health insurance marketplaces.
- 4 Grandfathered plans were in existence before the ACA became law and are not subject to its requirements unless certain specified changes were made to the plan that caused it to lose in grandfathered status.
- 5 ASPE Issue Brief, Health Insurance Marketplaces 2015 Open Enrollment Period: March Enrollment Report, for the period: November 15, 2014 – February 15, 2015 (Including Additional Special Enrollment Period Activity Reported through 2-22-15), March 10, 2015.
- 6 Includes a behavioral health procedure; MHAS provider service; Inpatient Patient Psych claim; Inpatient Detox; or behavioral health drug.
- 7 John McCarthy, Director, Ohio Department of Medicaid: FY16-17 Budget Priorities. House Finance Subcommittee on Health and Human Services, February 26, 2015.
- 8 Substance dependence is classified in the DSM-IV (This definition was used as a definition for the NSDUH survey. The current version of the DSM is version V). Criteria for dependence or significant impairment or distress, as manifested by 3 or more of the following during a 12 month period: tolerance or markedly increased amounts of the substance to achieve intoxication or desired effect or markedly diminished effect with continued use of the same amount of substance; withdrawal symptoms or the use of certain substances to avoid withdrawal symptoms; use of a substance in larger amounts or over a longer period than was intended; persistent desire or unsuccessful efforts to cut down or control substance use; involvement in chronic behavior to obtain the substance, use the substance, or recover from its effects; reduction or abandonment of social, occupational or recreational activities because of substance use; use of substances even though there is a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance. (DSMIV-TR Criteria for Substance Abuse for Dependency)
- 9 About Population Data / NSDUH, <http://www.samhsa.gov/data/population-data-nsduh/about>
- 10 Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically, including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006.
- 11 Based on NSDUH Population Estimates of Ohio population age 18 and over for 2012 and 2013 survey
- 12 Substance abuse is classified in the DSM-IV (This definition was used as a definition for the NSDUH survey. The current version of the DSM is version V). Criteria for substance abuse: a pattern of substance use leading to significant impairment or distress, as manifested by one or more of the following during in the past 12 month period: failure to fulfill major role obligations at work, school, home such as repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglect of children or household; frequent use of substances in situation in which it is physically hazardous (e.g., driving an automobile or operating a machine when impaired by substance use); frequent legal problems (e.g. arrests, disorderly conduct) for substance abuse; continued use despite having persistent or recurrent social or interpersonal problems (e.g., arguments with spouse about consequences of intoxication, physical fights). (DSMIV-TR Criteria for Substance Abuse for Dependency)
- 13 Ohio Department of Health, Office of Vital Statistics. Note: often more than one drug is involved in an overdose death.
- 14 Ohio Department of Public Safety, Ohio: Traffic Crash Facts, 01/01/2012 to 12/31/2012 All Counties, Table 6.06, Alcohol Statistics: Alcohol-related Crashes by Crash Severity (October 2013). <http://www.publicsafety.ohio.gov/links/2012CrashFacts.pdf>
- 15 The Science of Addiction, National Institute on Drug Abuse. July 2014. <http://www.drugabuse.gov/related-topics/addiction-science>
- 16 The Science of Addiction, National Institute on Drug Abuse. July 2014. <http://www.drugabuse.gov/related-topics/addiction-science>
- 17 *New Definition of Addiction: Addiction is a Chronic Brain Disease, Not Just Bad Behavior or Bad Choices*, Science Daily. August 2011.
- 18 SAMHSA, The NSDUH Report, September 4, 2014. "Substance Use and Mental Health Estimates from the 2013 National Survey on Drug Use and Health: Overview of Findings." <http://www.samhsa.gov/data/sites/default/files/NSDUH-SR200-RecoveryMonth-2014/NSDUH-SR200-RecoveryMonth-2014.htm>
- 19 *The Science of Addiction*, National Institute on Drug Abuse. July 2014. <http://www.drugabuse.gov/related-topics/addiction-science>
- 20 *Is Addiction a Disease?* Kevin McCauley, Institute for Addiction Study. www.instituteforaddictionstudy.com/PDF/Addiction%20Q%20&%20A.pdf

- 21 *Life After DSM-5: New Classification for Substance Use and Addiction Disorders*. Dr. Christine Delos Reyes. August 2014.
- 22 *Ibid.*
- 23 *Ibid.*
- 24 *Ibid.*
- 25 *Ibid.*
- 26 *Ibid.*
- 27 *Ibid.*
- 28 *Ibid.*
- 29 *Ibid.*
- 30 *Ibid.*
- 31 Kaplan, L. *The Role of Recovery Support Services in Recovery-oriented Systems of Care*. White Paper. DHHS Publication No. (SMA) 08-4315. Rockville, MD. Center for Substance Abuse Services, SAMHSA, 2008. <https://store.samhsa.gov/shin/content/SMA08-4315/SMA08-4315.pdf>
- 32 *Drugs of Abuse: A DEA Resource Guide*. Department of Justice, Drug Enforcement Administration. 2011.
- 33 *Ibid.*
- 34 Ohio Department of Rehabilitation and Correction, 2014 Annual Report
- 35 The Supreme Court of Ohio, Specialized Dockets Certification, Active Certification Status Sheet, <http://www.supremecourt.ohio.gov/JCS/specDockets/certification/statusSheet.pdf>
- 36 Tracy Plouck. Testimony before the House Transportation Subcommittee. Ohio Department of Mental Health and Addiction Services. March 5, 2015.
- 37 *Ibid.*
- 38 <http://media.samhsa.gov/data/2k9/SAParents/SAParents.htm>
- 39 Boros, D.L., Dick, T., Allen, C.W. (2014, July) *Opiates Impact & Child Welfare. Safe children, Strong Families, Supportive Communities*.
- 40 *Ibid* <http://www.pcsao.org/Presentations/2014/CWOpiateEngmtProject7114.pdf>
- 41 Ward, Roger (2014, July). Heroin, Cocaine and Child Protection. www.pcsao.org/Presentations/2014/OpiateConfRogerWardsPresentation.pdf
- 42 Substance Abuse and Mental Health Services Administration, Results from the 2013 *National Survey on Drug Use and Health: Summary of National Findings*, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014. <http://media.samhsa.gov/data/NSDUH/2013SummNatFindDetTables/NationalFindings/NSDUHresults2013.htm#2.10> and U.S. Census Bureau, Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States: April 1, 2010 to July 1, 2012. Calculation by The Center for Community Solutions.
- 43 National Drug Intelligence Center (2010). National Threat Assessment: The Economic Impact of Illicit Drug Use on American Society. Washington, DC: United States Department of Justice.
- 44 Rehm J, Mathers C, Popova S, Thavorncharoensap M, Teerawattananon Y, Patra J. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *Lancet*. 2009 Jun 27;373(9682):2223-33
- 45 U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. 14 short employer cost savings briefs. Available at: <http://store.samhsa.gov/shin/content/SMA08-4350/SMA08-4350.pdf> Accessed December 12, 2014
- 46 <http://www.vindy.com/news/2015/feb/05/consolidation-imminent-for-addiction-ser/>
- 47 Ohio Department of Mental Health and Addiction Services, History: ODMH and ODADAS, <http://mha.ohio.gov/>
- 48 Beginning in 2013, all Medicaid funds are accounted for in the Department of Medicaid.
- 49 OACBHA http://www.oacbha.org/levy_clearinghouse.php
- 50 Medicaid is a federal-state program that provides payment for health care services for low-income individuals. In 2012, the federal government covered 64.15 percent of costs, known as the Federal Medical Assistance Percentage (FMAP). In federal fiscal year 2015, this rate is 62.64 percent. In the past, if the state funding distributed to boards was not sufficient to cover the state portion of the Medicaid match for covered mental health and substance use disorders, then the boards were responsible for funding the difference.
- 51 Office of National Drug Control Policy, <http://www.whitehouse.gov/ondcp/national-drug-controlstrategy>
- 52 Substance Abuse Prevention and Treatment Block Grant, <http://www.samhsa.gov/grants/blockgrants/sabg>
- 53 Services included in housing category: medical community residential: hospital, medical community residential: non-hospital, non-medical community residential, BH medical community residential: hospital, BH medical community residential: non-hospital, BH non-medical non-acute residential, room and board

- 54 Services included in administrative and other services category: continuous quality improvement; fiscal administration; general administration; resource development; utilization review; FDA approved medications; capital expenditures; salaries, fringes, and operating
- 55 Services included in prevention services category: alternatives, community based process, education, environmental, information dissemination, and problem identification & referral
- 56 Services included in community and adjunctive services: consultation, hotline, intervention, outreach, referral and information, training, child care, meals, transportation, and AOD services, not otherwise classified
- 57 Medicaid-only providers were not obliged to submit OHBH forms to the department. Director Orman Hall, ODADAS. Phone conversation. September 26, 2014
- 58 MACSIS client counts for previous biennia- 2007-2008: 104,937, 2008-2009: 175,756
- 59 Evidently many clients were in treatment in more than one year, however. The department's annual reports provide a duplicated annual count of clients. This number is consistently around 100,000 for all state fiscal years between 2007 and 2012. The individual client counts for these years are: FY 2007: 99,314, FY 2008: 100,270, FY 2009: 103,469, FY 2010: 100,490, FY 2011: 98,902, FY 2012: 98,419. Source: ODADAS Annual Reports 2007, 2008-2009, 2011, and 2012 and 2013 Combined ODADAS/ ODMH Annual Report.
- 60 Nationally, the prevalence of substance use disorders is about twice that for men as it is for women. SAMHSA. Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings. <http://www.samhsa.gov/data/sites/default/files/NSDUHnationalfindingresults2012/NSDUHnationalfindingresults2012/NSDUHresults2012.htm>
- 61 Ohio Behavioral Health
- 62 Ohio Behavioral Health
- 63 Annual Report 2014. Ohio Department of Mental Health and Addiction Services. <http://mha.ohio.gov/Portals/0/assets/News/annual%20reports/AR2014-OhioMHAS-FINAL.pdf>
- 64 Boards with opioids as the second most frequent drug of choice were Ashland, Logan-Champaign, Clark-Greene-Madison, Columbiana, Delaware-Morrow, Franklin, Crawford-Marion, Mercer-Van Wert-Paulding, Union, Warren-Clinton, Wayne-Holmes, and Wood.
- 65 Healthcare Brief: Office of National Drug Control Policy, Medication-Assisted Treatment for Opioid Addiction. http://www.whitehouse.gov/sites/default/files/ondcp/recovery/medication_assisted_treatment_9-21-20121.pdf
- 66 SAMHSA. Medication-Assisted Treatment for Opioid Addiction. <http://store.samhsa.gov/shin/content/SMA09-4443/SMA09-4443.pdf>
- 67 Presentation by Michael Botticelli, Director, Office of National Drug Control Policy. *The Opioid Problem: Public Health and Community Solutions*. Ohio Association of County Behavioral Health Authorities Opioid Conference, March 31, 2015. Columbus, Ohio.
- 68 There are also medications to treat alcohol dependence.
- 69 NIDA. Principles of Drug Addiction Treatment: A Research-Based Guide (Third Edition). FAQ: Is the use of medications like methadone and buprenorphine simply replacing one addiction with another?
- 70 This count only refers to people who received MAT through their county MHA board and does not reflect a full count of people who received MAT to treat their opiate use problem. According to the National Survey of Substance Abuse Treatment Services, there were 4,904 clients receiving methadone as part of their substance use treatment program in a single-day count in 2013. Another 2,618 were receiving buprenorphine. SAMHSA, Behavioral Health Barometer: Ohio, 2014. http://www.samhsa.gov/data/sites/default/files/State_BHBarometers_2014_2/BHBarometer-OH.pdf
- 71 It is important to note that a client leaving against professional advice may not be using drugs again.
- 72 Ohio Hospital Association
- 73 Hospital admissions and ER visits are counted separately by the OHA. If a person is admitted to hospital following an ER visit, that is only counted as an admission.
- 74 For a complete listing of diagnosis codes used for this analysis, consult Appendix IV.





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