



# The Center for Behavioral Health Sciences

## **Alcohol, Drug Addiction and Mental Health Services Board of Cuyahoga County Needs Assessment**

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## **EXECUTIVE SUMMARY**

The Needs Assessment, referenced as “the study” in this document, evaluated current mental health and substance use disorder treatment and recovery support services, identified gaps in services and proposed recommendations for change at many levels in the Cuyahoga County system of care for which the ADAMHS Board makes programmatic and funding decisions.

This study, completed by Cleveland State University (CSU), analyzed data collected from January through December 2019 utilizing epidemiological analysis, utilization analysis, and input from both clients and “experts,” or agency executive directors and direct service providers. Demographic and epidemiological data found in Chapters 1 through 3 of this study were used to estimate the unmet needs for substance used disorder and mental health treatment in Cuyahoga County. This report was commissioned by the ADAMHS Board of Cuyahoga County as a part of the strategic planning for the agency to identify “areas of greatest need for client services for planning, funding, evaluating, and advocacy purposes.”

The executive summary provides a summary of the overall findings as they relate to the primary purpose of this needs-assessment project: shedding light on the need for mental health and substance use services in Cuyahoga County.

### **Estimated need for substance use treatment**

The study indicates a large disparity between individuals with substance use disorders and individuals who receive treatment in Cuyahoga County. The study estimates that in Cuyahoga County:

- Approximately 1,413 youth age 12 to 17 (1.6% of youth), and 62,116 adults age 18 and older (6.3% of adults) had an alcohol use disorder but did not receive treatment in the past year.
- Approximately 2,208 youth age 12 to 17 (2.5% of youth), and 30,565 adults age 18 and older (3.1% of adults) had a substance use disorder but did not receive treatment in the past year.
- Approximately 353 youth age 12 to 17 (0.4% of youth), and, 4,930 adults age 18 and older (0.5% of adults) had both alcohol and other substance use disorders in the past year but did not receive treatment for either one.

## **Estimated need for mental health treatment**

The study indicates a large disparity between individuals with a mental health disorder and individuals who receive treatment and/or service. The study estimates that in Cuyahoga County:

- Approximately 5,654 youth age 12-17 (6.4% of youth) reported having a major depressive episode (MDE) but did not receive any treatment in the past year.
- Approximately 62,116 adults age 18 and older (8.1% of adults) experienced a mental illness but did not receive any treatment in the past year.

## **Estimated need for dual diagnosis treatment:**

- Approximately 1,413 youth ages 12 to 17 (1.6% of youth) reported having both a major depressive episode and substance use disorder in the past year.
- Approximately 17,746 adults age 18 and older (1.8% of adults) reported having both serious mental illness and substance use disorder in the past year.

## **Need for publicly funded services and rate of uninsured:**

Many of the individuals who need substance use or mental health treatment in Cuyahoga County rely on publicly funded services, largely Medicaid, and/or are uninsured. This section also looks at the socioeconomic status of residents in Cuyahoga County.

## **Important findings:**

Based on analysis of the publicly funded client data provided by the ADAMHS Board and responses from surveys to behavioral health and systemwide partners, the data below describes important findings.

## **Role of the ADAMHS Board:**

Respondents most frequently saw the Board's role as providing funding. However, there were several other roles that were identified, including advocacy and support, oversight and accountability, and leadership.

### ***Funding:***

- Publicly funded substance use disorder and mental health treatment services were provided to 13,458 clients in 2019.
  - 5,013 received services funded by the ADAMHS Board only (37.2%)
  - 6,200 received services funded by Medicaid only (46.1%)
  - 2,245 received services funded by both the ADAMHS Board and Medicaid (16.7%).
  - The ADAMHS Board funded more MH services (67.7%) than SUD services (30.4%)
- Medicaid funded more mental health services (87.5%) than substance use services (11.8%).
- Services funded by both the ADAMHS Board and Medicaid were more often for substance use disorder treatment (83.9%) than for mental health treatment (5.6%).
- The ADAMHS Board provides recovery support services that are not covered by Medicaid and pays considerably more for services than Medicaid for each client, especially when the ADAMHS Board is the only payer.

### ***Equitable service delivery:***

The study analyzed service delivery by gender, race/ethnicity and age. Some important findings include:

Gender: Males were more likely than females to receive services funded by the ADAMHS Board only and when services were funded by both ADAMHS Board and Medicaid. Females were more likely than males to receive services funded by Medicaid only.

Age: Seniors age 65 and older were most likely to receive services that were funded by the ADAMHS Board. Children age 0 to 17 were least likely to receive services funded by the ADAMHS Board when client count is examined. Children age 0 to 17, on the other hand, were most likely to receive services funded by Medicaid.

### Race/Ethnicity:

- Whites were more likely than African Americans or Asians to receive services that were funded by the ADAMHS Board on an individual level, but each of the ADAMHS Board funded African Americans actually get more services per client

funded by the ADAMHS Board than whites. When examining service level data, blacks/African Americans were more likely than whites to receive services funded by the ADAMHS Board.

- African Americans were most likely (among race/ethnicity groups) to receive services that were funded by Medicaid. The high likelihood of services funded by Medicaid among blacks/African Americans might be explained by the fact that a very high proportion of African Americans receive Medicaid than the proportion of whites receiving Medicaid in Cuyahoga County.
- Hispanics and non-Hispanics were equally likely to receive services that were funded by the ADAMHS Board. They were also equally likely to receive services funded by Medicaid.
- The likelihood of receiving services that were funded by Medicaid was about the same for whites and blacks/African Americans.

***Risk factors and gaps in services:***

Risk factors that can contribute to mental health disorders and substance use include the literacy rate, having a disability, being homeless, Medicaid eligibility, experiencing violence through violent crimes, intimate partner violence and child maltreatment. Other risk factors include marital status, or single parent households, employment, arrest and incarceration rates and education.

Cuyahoga County residents have higher rates of these risk factors overall when compared to the state of Ohio and nationally. These categories are called Social Determinants of Health, which describe health disparities and unmet needs in the community. They can result in poor health outcomes, earlier death and increase risk of mental health and substance use disorders. While there are many at-risk populations in Cuyahoga County, the populations that frequently “fall through the cracks” and who experience health disparities are:

- persons with a dual diagnosis
- persons who are chronically homeless
- persons living in poverty (especially single mothers and their children)
- single women with children
- pregnant women
- transitional adults age 18-25
- persons whose primary language is other than English.

## Study Recommendations:

Researchers analyzed data from a wide-variety of resources, which are shared throughout the full study. The recommendations below are a compilation of the researcher's recommendations and recommendations that were made by providers, family members and clients. All of the provided recommendations aim to improve services for and meet the needs of persons living with mental illness and substance use disorders in Cuyahoga County.

### Recommendations for the system of care:

- **A greater need for care coordination and collaboration amongst substance use disorder and mental health service treatment providers.** Consider more co-located services and integrated behavioral healthcare models. Integrating mental health and substance use treatment to the extent possible, can have many benefits toward reducing health disparities, improving substance use and mental health outcomes, especially among the most underserved populations, improving outcomes and increasing efficiency. This is especially relevant for individuals with co-occurring disorders and those with multiple and/or chronic concerns.
- **Adaptation of culturally-competent and culturally-appropriate evidence-based interventions:** While identified in surveys, interviews, and focus groups, the research literature also supports the necessity of implementing interventions that are culturally-competent and culturally-appropriate as well as being evidence-based. Such strategies can enhance service acceptability and improve outcomes.
- **Client-engagement and client-based practice research:** To address the need for culturally-competent services and services that are acceptable to a wide range of populations, engage clients in developing models from the ground up, and keep them involved throughout.
- **Evidence-based interventions and Treatment Fidelity:** Consideration may be given to providing more centralized education, training, and resources to agencies and providers to support the implementation of evidence-based interventions. In addition to this suggestion, there may be other strategies to support implementing and sustaining evidence-based interventions county-wide. Once implemented, evidence-based interventions have very specific fidelity measures that must be accomplished to be considered an evidence-based practice. Treatment fidelity is an ongoing process to assess the extent that an evidence-based intervention has been implemented as designed and that providers adhere to the components of the intervention. Assessing fidelity on an

ongoing basis can be time-consuming, and perhaps is not a reimbursable activity. Dissemination of strategies for resource-efficient methods to assess fidelity could support agencies and providers in monitoring fidelity.

- **Adjust reimbursement toward population health**, move away from providing services to “the person in front of the provider, who is able to come in.” Several respondents identified the need for increased funding for specific types of services and providers.
- **Inclusion of identified social determinants of health and addressing barriers to accessing services in program development.** Tending to social determinants of health was especially important for the population served by agencies in Cuyahoga County, given the range of contributing health disparities.
- **Tele-health, service delivery, and COVID-19:** Continue to support and grow tele-health as a viable option for mental health and substance use service delivery, as appropriate. Many agencies began or increased their use of tele-health and are finding for the most part it is working well.
- **Increase access to medication assisted treatment (MAT):** MAT has been shown to be safe, cost-effective, reduce overdose risk, increase treatment retention, reduce transmission of infectious diseases, and reduces criminal activity. While MAT is supported in Cuyahoga County, there is an ongoing need to increase access and reduce barriers to access. This may include increasing provider and community knowledge of the full spectrum of available medications, including buprenorphine-naloxone (Suboxone) and naltrexone (Vivitrol), among others.
- **Harm reduction:** Continue harm reduction, which includes a set of strategies aimed at reducing the negative consequences associated with drug use. It is a public health strategy developed initially for adults with substance use problems for whom abstinence was not feasible. Harm reduction approaches have been effective in reducing morbidity and mortality in adult populations with substance-abusing populations when abstinence does not work. They have also been shown to lower risky alcohol use and risky behaviors associated with HIV transmission.
- **Increase prevention and public health strategies:** Several respondents mentioned the value and importance of prevention and we urge that prevention and public health approaches to addressing substance use and mental health be increasingly adopted to address disparities and improve outcomes.



### Recommendations for clients and families:

- Increase prevention and early intervention services.
- Instill a sense of hope that individuals can recover, get better stability in their lives and in their treatment, and that services being offered will help them.
- Develop skills for daily living and employment and assisting individuals with obtaining other services such as: Academic help and wraparound services for children, accessing SNAP and other services, housing and childcare.
- Help families find information on the treatment process and more support services.

### **Medicaid redesign recommendations:**

Respondents to the surveys were also asked to comment on the extent that Medicaid Redesign impacted service delivery as well as the role of the ADAMHS Board. Regarding Medicaid Redesign, respondents' comments may be characterized as both having a less than positive effect as well as having some benefits. Primary concerns were the length of time required to wait for reimbursement, having to negotiate the amount of reimbursement for specific services such as assessments and funding length of stay for residential treatment. Primary benefits were that it increased the number of individuals who could be served and began paying for services not funded previously.

### **Conclusion**

This document is a summary of the report's findings related to needs for treatment, gaps in services, risk factors, equitable service delivery, and the perception of the ADAMHS Board's role in the behavioral healthcare system. This executive summary also outlines a mixture of researcher and community recommendations for addressing areas of concern. The recommendations shared in the summary can be found throughout the study. Each chapter in this report includes a conclusion that summarizes key findings for specific research areas. The entire study concludes with recommendations from the authors based on the full research and overall findings. It is CSU's sincere hope that the report's findings and these recommendations will provide useful information and "food for thought" for strategically planning the way forward in Cuyahoga County's behavioral health system.

## **ACKNOWLEDGEMENT**

First and foremost, we would like to thank all the individuals and agencies that participated in this needs-assessment project through focus groups, online surveys, and interviews. Without their participation, we could not have done this project for the Alcohol, Drug Addiction and Mental Health Services (ADAMHS) Board of Cuyahoga County. We might add that we included overall results of the focus groups, surveys, and interviews, and apologize in advance if we did not include opinions you shared with us during the project.

We would also like to thank the ADAMHS Board of Cuyahoga County for this opportunity. We care deeply about the issues of mental health and substance use. We hope that this report helps the ADAMHS Board understand the needs of our vulnerable community that suffers from mental illness or substance use. We would especially like to thank Jessica Torres, Curtis Couch, Thomas Williams, Larry Smith, and Beth Pfohl from the ADAMHS Board. During the project, we met once every two weeks between February 1, 2020 to May 15, 2020 to discuss the progress of the project, and we appreciated their valuable insights and critiques.

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## INTRODUCTION

This report was commissioned by the ADAMHS Board of Cuyahoga County as a part of the strategic planning for the agency to identify “areas of greatest need for client services for planning, funding, evaluating, and advocacy purposes.”<sup>1</sup> Three major types of data are used to identify the greatest need for the mental health and substance use community in Cuyahoga County.

First, we collected primary, qualitative data through surveys, interviews, and focus groups. Initially, we had planned to collect data from all four constituents of the community: executive directors of the agencies that provide services, providers of the services, clients and their family members, and community leaders. Unfortunately, however, COVID-19 hit hard in the beginning of March 2020 after just a month into the project, forcing us to change the methods of data collection because of Ohio’s stay-at-home order for the remainder of the project. After discussions with the ADAMHS Board, we decided to conduct online surveys of executive directors and providers, virtual focus groups using Zoom with clients and their family members, and phone interviews with some executive directors as a follow-up to the online survey. We were, unfortunately, unable to collect information from community leaders for this project.

Second, we analyzed secondary, quantitative data using mainly the national prevalence of substance use and mental illness from the National Survey on Drug Use and Health (NSDUH) survey collected in 2018 by the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency in the U.S. Department of Health and Human Services, and the county population estimates based on the American Community Survey (ACS) collected in 2018 by the U.S. Census. As discussed in Chapter 1, Cuyahoga County is not representative of the country; thus, county prevalence of substance use and mental illness is not identical to the national prevalence. However, without conducting a survey among a county representative sample, this is the best estimate for the county prevalence for substance use and mental illness.

Third, we reviewed literature related to mental health and substance use, the service delivery for mental illness and substance use, and evidence-based practice as well as other national and state data related to mental health and substance use throughout the report. The triangulation, collecting data using different methods, especially the combination of quantitative and qualitative data, is considered the best research practice to learn about any topic, especially a topic as controversial as substance use and mental health. Although none of the data collected for this project is perfect, we

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<sup>1</sup> The quote from the RFP in Appendix A.

hope that triangulation allows us to report as accurately as we can the areas of greatest needs for the service delivery for our vulnerable members of the community.

The executive summary provides a summary of the overall findings as they relate to the primary purpose of this needs-assessment project: shedding light on the need for mental health and substance use services in Cuyahoga County.

Chapter 1 examines the estimates of Cuyahoga County demographics using the ACS 2018 and examines the unique features of the county population that need to be considered in order to understand the needs of substance use and mental illness treatment services in the county's population and determine the needs in the county.

Chapter 2 reviews the literature for risk factors for mental illness and substance use using the stress-process and life-course models, popular perspectives to examine the disparities in health outcomes. Space is limited to examine all possible risk factors or review all existing studies; instead we offer a brief summary of risk factors that are most frequently researched.

Chapter 3 provides estimates of substance use and mental illness in Cuyahoga County using the national prevalence from the NSDUH 2018 and the population estimate from the ACS 2018. This chapter also reviews the Monitoring the Future (MTF), Youth Risk Behavior Surveillance System (YRBSS), National Survey on Children's Health (NSCH), and National Health Interview Survey (NHIS), along with the Uniform Crime Reports (UCR) for drug use violations.

Chapter 4 provides estimates of unmet needs by specific populations and levels of care using the prevalence of unmet needs from the NSDUH 2018 and the population estimate from the ACS 2018. Unmet needs are examined by age, gender, and race/ethnicity.

Chapter 5 provides estimates of people who need publicly funded services for mental health and substance use. The health insurance information of Cuyahoga County is examined extensively first using the ACS 2018. Then the estimates of people who need publicly funded services are calculated using the prevalence of individuals who need publicly funded services from the NSDUH (2018) and the population estimate from the ACS 2018.

Chapter 6 examines utilization data by comparing local prevalence of mental illness and substance use (Chapter 3), local unmet needs (Chapter 4), local publicly funded service needs (Chapter 5), and local service rates calculated using the data provided by the

ADAMHS Board of Cuyahoga County. This chapter also reviews the National Survey on Substance use treatment Services (N-SSATS), Treatment Episode Data Set: Admissions (TEDS-A), and Treatment Episode Data Set: Discharges (TEDS-D).

Chapter 7 reviews the literature on the evidence-based practices for mental health and substance use interventions and promising practices for the future. The chapter also provides a summary from the surveys on the evidence-based practices used by the agencies funded by the ADAMHS Board.

Chapter 8 assesses the impact of the Medicaid Redesign Initiative that began in Ohio in 2017. The chapter provides a background on the redesign, a summary on how it changed the way behavioral health is funded, and a summary of responses from the executive director survey and provider survey.

Chapter 9 discusses the role of the ADAMHS Board for service delivery of mental health and substance use. This chapter mainly summarizes the results of focus groups, surveys, and interviews, including recommendations for the ADAMHS Board by the survey respondents, focus group participants, and interviews.

Conclusion and recommendations provide a brief summary of overall findings as well as our own recommendations for the ADAMHS Board for “planning, funding, evaluating, and advocacy” for the community of people who experience mental illness or substance use.

## **STUDY OVERVIEW**

The purpose of this project is to shed light on the need for mental health and substance use services in Cuyahoga County. The study includes all four types of possible needs assessments: epidemiological analysis, utilization analysis, and input from both clients and “experts”, or agency executive directors and direct service providers. Demographic and epidemiological data found in Chapters 1 through 3 of this study were used to estimate the unmet needs for substance use and mental health treatment in Cuyahoga County.

### **Estimated need for substance use treatment**

Overall, our estimates suggest there is a large disparity between those with alcohol and drug concerns and those who receive treatment in Cuyahoga County. There is also a large unmet need for services. We estimate that the following adults and youth could benefit from substance use treatment due to alcohol use disorder or drug use in Cuyahoga County:

- About 1,413 youth age 12 to 17 (1.6%) and 62,116 adults aged 18 and older (6.3%) had an alcohol use disorder but did not receive treatment in the past year.
- About 2,208 youth age 12 to 17 (2.5%) and 30,565 adults age 18 and older (3.1%) had an illicit drug use disorder but did not receive treatment in the past year.
- About 353 youth age 12 to 17 (0.4%) and 4,930 adults age 18 and older (0.5%) had both alcohol and illicit drug use disorders but did not receive treatment for either one in the past year.

## **Estimated need for mental health treatment**

Similarly, there is a large disparity between those with a mental health concern and those who receive services, suggesting a large unmet need for mental health treatment. In addition, suicide and drug overdose rates in Cuyahoga County are higher than the national rate. We estimate the following for adults and youth:

### ***Adult mental health needs***

- About 62,116 adults age 18 and older (6.3%) experienced a mental illness but did not receive any treatment in the past year.
- The most popular mental health treatment people received was prescription medication (13%). Only a small percentage of the population received inpatient (1.2%) or even outpatient (8.8%) mental health treatment.
- About 17,746 adults age 18 and older (1.8%) reported having both serious mental illness and SUD in the past year.

### ***Mental health needs of youth***

- About 12,455 youth (14.1%) reported having a major depressive episode (MDE) in the past year.
- Of the youth who experienced a major depressive episode, about half received treatment, and an estimated 5,654 youth age 12 to 17 who experienced a MDE did not get any treatment.
- About 1.6% of youth age 12 to 17 or an estimated 1,413 youth reported having both a major depressive episode and SUD in the past year.

## **Need for publicly funded services and rate of uninsured**

Many of the individuals who need substance abuse or mental health treatment in Cuyahoga County rely on publicly funded services, largely Medicaid.

- There is a high rate of individuals eligible for Medicaid in Cuyahoga County. Nationally, 20.5% of the population receives Medicaid, while 21.7%, or 306,958 residents in Cuyahoga County receive Medicaid.
- An even larger percentage of Cleveland residents (44.4%, or 167,907 individuals) are on Medicaid.
- A smaller percentage of Cuyahoga County residents are uninsured, when compared to the state of Ohio and nationally.
- 5.7% of residents, or 70,248 individuals are uninsured, compared to 6.5% of Ohio residents and 8.9% of the population in the United States.
- Cleveland's uninsured rate is higher than the County overall, as 7.9% or 29,959 individuals were uninsured in 2018.



## Gaps in service delivery

The following findings are based on an analysis of the publicly funded client data provided by the ADAMHS Board. It describes services publicly funded clients received during the period January 1, 2019 to December 31, 2019. The dataset includes 13,458 clients who in all, received a total of 421,938 services during this time period.

Of these 13,458 clients:

- Funding
  - 5,013 received services funded by the ADAMHS Board only (37.2%)
  - 6,200 received services funded by Medicaid only (46.1%)
  - 2,245 received services funded by both the ADAMHS Board and Medicaid (16.7%)
- Services received
  - 4,139 received services for substance use disorder (SUD) only (31.8%)
  - 8,345 received mental health (MH) services only (66.5%)
  - 374 received services for both SUD and MH (2.8%)
- ADAMHS Board and Medicaid Funding
  - The ADAMHS Board was more likely to fund MH services (67.7%) than SUD services (30.4%)
  - Medicaid was even more likely to fund MH services (87.5%) than SUD services (11.8%)
  - Services funded by both the ADAMHS Board and Medicaid were more likely for SUD services (83.9%) than for MH services (5.6%)

Overall, the ADAMHS Board pays considerably more on service than Medicaid for each client, especially when the ADAMHS Board is the only payer.

### ***Funding for SUD treatment, 12 and older***

Of the 1.2 million people in Cuyahoga County, an estimated:

- 15,860 people were uninsured and had a SUD in the past year
- 27,978 people were on Medicaid and had a SUD in the past year

Overall, only a small fraction of the 15,860 uninsured and 27,978 on Medicaid age 12 and older in Cuyahoga County who had SUD received any service for substance use funded by the ADAMHS Board (N=1,619), Medicaid (N=774), or both (N=2,111). These numbers include both SUD only and both SUD and MH clients.

### **Age 12 to 17**

Few of the youth who could benefit from services for SUD received services from either the ADAMHS Board or from Medicaid.

- 15 of the 176 uninsured youth received services for their SUD funded by the ADAMHS Board.
- 11 of the 1,356 on Medicaid received services for their SUD funded by Medicaid.
- 25 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 1,481 youth age 12 to 17 with SUD could benefit from publicly funded services for their SUD but did not receive treatment.

### **Age 18 to 64**

Overall, of the 15,577 uninsured and 19,186 on Medicaid age 18 to 64 in Cuyahoga County who had SUD in the past year:

- 1,535 received services for their SUD funded by the ADAMHS Board
- 719 received services for their SUD funded by Medicaid
- 2,066 received services for their SUD funded by both the ADAMHS Board and Medicaid

Based on our estimates, 30,443 adults age 18 to 64 with SUD could benefit from publicly funded services for their SUD but did not receive treatment.

## **Age 65 and over**

Overall, of the 107 uninsured and 7,436 on Medicaid age 65 and older in Cuyahoga County who had SUD in the past year:

- 69 received services for their SUD funded by the ADAMHS Board
- 44 received services for their SUD funded by Medicaid
- 20 received services for their SUD funded by both the ADAMHS Board and Medicaid

## ***Funding for Mental Health Treatment, 18 and older***

Of the 1.2 million people in Cuyahoga County, an estimated:

- 7,730 people were uninsured and had serious mental illness in the past year.
- 12,848 people were on Medicaid and had serious mental illness in the past year.

Overall, only a small fraction of the 7,730 uninsured and 12,848 on Medicaid age 18 and older in Cuyahoga County who had serious mental illness received any service for mental illness funded by the ADAMHS Board (N=3,490), Medicaid (N=5,467), or both (N=362). These numbers include both MH only and both SUD and MH clients.

## **Age 18 to 64**

Overall, 7,730 uninsured and 12,791 on Medicaid age 18 to 64 in Cuyahoga County who had serious mental illness in the past year:

- 2,280 received services for their mental illness funded by the ADAMHS Board
- 2,947 received services for their mental illness funded by Medicaid
- 316 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 14,978 adults age 18 to 64 with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

## **Age 65 and over**

Overall, 0 uninsured and 57 on Medicaid age 65 and older in Cuyahoga County had serious mental illness in the past year, and:

- 427 received services for their mental illness funded by the ADAMHS Board
- 216 received services for their mental illness funded by Medicaid
- 10 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 0 adult age 65 and older with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive them.

However, the numbers of adults age 65 and older who had any mental illness or a MDE in Cuyahoga County who could benefit publicly funded services for mental health are much higher than the number of individuals 65 and older with a serious mental illness.

## **Equitable service delivery**

- Males were more likely than females to receive services funded by the ADAMHS Board. On the other hand, females were more likely than males to receive services funded by Medicaid.
- Of the three age groups:
  - Seniors age 65 and older were most likely to receive services that were funded by the ADAMHS Board.
  - Children age 0 to 17 were least likely to receive services funded by the ADAMHS Board when client count is examined.
  - Children age 0 to 17, on the other hand, were most likely to receive services funded by Medicaid.
- Race/Ethnicity (Client Level Data)
  - Whites were more likely than blacks/African Americans or Asians to receive services that were funded by the ADAMHS Board.
  - Blacks/African Americans were least likely to receive services that were funded by the ADAMHS Board.
  - On the other hand, blacks/African Americans were most likely to among race/ethnicity groups to receive services that were funded by Medicaid.

- The high likelihood of services funded by Medicaid among blacks/African Americans might be explained by the fact that a higher proportion of African Americans are on Medicaid than the proportion of whites in Cuyahoga County.
- Hispanics and non-Hispanics were equally likely to receive services that were funded by the ADAMHS Board. They were also equally likely to receive services funded by Medicaid.
- Race/Ethnicity (Service Level Data)
  - When examining service level data, blacks/African Americans were more likely than whites to receive services that were funded by the ADAMHS Board.
  - The likelihood of receiving services that were funded by Medicaid was about the same for whites and blacks/African Americans.
- While at the individual client level, African Americans might be less likely than whites to receive services funded by the ADAMHS Board, each of the ADAMHS Board funded African Americans received more services per client funded by the ADAMHS Board than whites.
- When examining the amount of payments the ADAMHS Board spent on clients by race, we found that:
  - The ADAMHS Board funded an average of \$114.94 per service for black/African American clients and \$86.90 per service for white clients for mental health services.
  - The ADAMHS Board funded an average of \$54.79 per service for black/African American clients and \$55.91 per service for white clients for SUD services.

### **Funding oversight**

This analysis examined the extent that clients remained either on ADAMHS Board funding, Medicaid funding, and/or moved between the two funding sources.

- There was a total of 2,941 clients in the dataset who received services between July 1, 2019 through December 31, 2019.

- Publicly funded clients did not move to Medicaid from ADAMHS Board as the primary payer. In all, of the 1,399 clients who started out with ADAMHS Board funding, 1,242 people remained on ADAMHS Board as the primary payer.
- Of 1,399 clients who started out with the ADAMHS Board funding, only 166 clients moved from ADAMHS Board to Medicaid as the primary payer. Of these 166 clients, 37 came back to ADAMHS Board as the primary payer.

## **Demographics of Cuyahoga County**

People who are served by agencies funded by the ADAMHS Board are a highly diverse population, with multiple risk factors contributing to their mental health and substance use concerns and the need for treatment. Following is a summary of the demographics of the County, and prevalence of risk factors associated with substance use and mental health treatment. These data are drawn from a range of national, state, and regional databases and reports.

### ***Age***

- Cuyahoga County residents are slightly older than the national median age (40.4 years vs. 38.2 years).
- The County also has a smaller proportion of those under age 25 and a larger percentage of those over 75 years in age when compared nationally.

### ***Socioeconomic status***

- Cuyahoga County residents have a consistently lower SES, when measured by household income, unemployment rate, poverty, and educational attainment.
- Cuyahoga County ranked 37<sup>th</sup> in median household income among 88 counties in Ohio.
- Cleveland ranked 248<sup>th</sup> in median household income among 250 cities in Ohio. Median household income of Cuyahoga County is significantly lower than the national median household income (\$49,910 vs \$61,937).
- The lower median household income is driven by the low median household income of Cleveland residents of \$29,953, which is less than half the national

median household income and less than the 2020 federal poverty guidelines for a household with five people (\$30,680).

## **Risk factors**

Risk factors that can contribute to mental health disorders and substance use include the literacy rate, having a disability, being homeless, Medicaid eligibility, experiencing violence through violent crimes, intimate partner violence and child maltreatment. Other risk factors include marital status, or single parent households, employment, and education. Cuyahoga County residents have higher rates of these risk factors overall when compared to the state of Ohio and nationally.

- In terms of literacy, almost 1 in 3 adult residents of Cleveland are disadvantaged economically due to their lack of literacy skills.
- The overall percentage of persons with a disability is higher in Cuyahoga County (10.9%) and Cleveland (17.0%), when compared to the national average (8.6%).
- Cuyahoga County had the largest number of homeless persons among all counties in Ohio.
- At one point in time in January 2017, Cuyahoga County had 1,727 homeless persons in shelters, compared to 1,691 in Franklin County and 1,162 in Hamilton County.
- With 4,004 beds in permanent supportive housing for homeless persons, Cuyahoga County has about 25% of the total number of beds (16,770) in the state.

## ***Victims of crime***

- Residents of Cuyahoga County are twice as likely to be the victim of a crime than Ohio residents, or the country overall.
- The murder rate and nonnegligent manslaughter per 10,000 individuals (1.18) in Cuyahoga County was twice that of the U.S. as a whole (.53).
- Crime rates are even more staggering in Cleveland, as the rate of violent crime (155.68) per 10,000 residents was more than four times the national rate (39.40 per 10,000).

### ***Intimate partner violence***

- Estimates of lifetime intimate partner violence victimization are similar in Ohio when compared to national prevalence rates, with one exception.
- Both females and males in Ohio reported a higher rate of any psychological aggression. For females, the rate in Ohio is 46.8%, compared to 36.4% nationally. Similarly, the rate for males in Ohio is 48.6%, compared to 34.2% nationally.
- Over one-third of women in Ohio (34.5%) reported experiencing physical intimate partner violence in their lifetime, higher than the national average of 30.6%.

### ***Child maltreatment***

- The percentage of children under age six who were investigated for maltreatment gradually increased from 2000 to 2008.
- Children living in Cleveland were between two and three times more likely than children residing in the suburban areas of the County to be investigated for child maltreatment.
- Overall, 6.9% of children under age six in Cuyahoga County were involved with the Department of Children and Family Services.

### ***Marital status***

- A smaller percent of Cleveland residents are married (24.1%), than residents of Cuyahoga County overall (39.3%). The disparity is even greater when compared to the national average of 47.8%.
- Only 15.6% of African-American residents of Cleveland are married, compared to 20.8% of African-Americans in Cuyahoga County, and 29.3% nationally.
- Cleveland has the highest percent of female head of households (19.6%), higher than Cuyahoga County overall (14.8%) and nationally (12.5%).



## ***Unemployment***

- Unemployment data are from 2018, and it is anticipated that rates will be even higher in 2020, given the impact of COVID-19 on employment. Specifically, based on Bureau of Labor Statistics, the county had a higher unemployment rate than the state overall, and it is anticipated that a similar trend will be evident.
- The unemployment rate in Cuyahoga County of 6.9% is higher than the rate in Ohio overall (4.9%) and nationally (4.9%).
- The unemployment rate in Cleveland is quite high, at 11.7%.

## ***Education***

- Educational attainment of Cuyahoga County residents is comparable to the U.S. population and the state of Ohio overall. However, there are quite large racial/ethnic differences in educational attainment among residents of Cuyahoga County.
- Both Black or African-American and Hispanic or persons of Latino origin have lower educational attainments compared to national averages. Rates were even lower when looking at Cleveland only.
- High school graduation rates are lower for persons of Hispanic or Latino origin than Blacks or African-Americans or whites.
- Nationally, 86.5% of African-Americans achieve a high school degree, compared to 85.9% in Ohio, 84.7% in Cuyahoga County, and 79.10% in Cleveland.
- 73.6% of persons of Hispanic or Latino origin in Cuyahoga County, and only 66% in Cleveland receive a high school degree. Among persons of Hispanic or Latino origin, only 69.7% achieve a high school degree nationally, 76.5% in Ohio.

## ***Arrest and incarceration rates***

Other indicators of the potential need for services include high levels of arrest that were drug use violations and a large number of individuals who are under the supervision of the criminal justice system.

- Cuyahoga County had the highest number of commitments with a total of 7,396 inmates with 15.2% of the total incarcerated offenders of Ohio.
- Of those, 95.5% were males, and a disproportionately high percent (75.1) were African Americans.

### **Crime rates**

Many of the individuals arrested in Cleveland tested positive for drugs. The high prevalence of substance use prior to the crime, especially property crimes, suggest that people commit crimes to support their drug use. In 1997, even before the opioid epidemic, 64% of males and 57% of female arrestees tested positive for a drug.

### **The social determinants of health**

In summary, these factors are some of the social determinants of health that contribute to residents' health disparities. Ultimately, these health disparities and the unmet needs for adequate mental health and substance use treatment contribute to residents' dying at a younger age.

- While there are many at-risk populations in Cuyahoga County, the population that frequently “falls through the cracks” and who experience health disparities are:
  - persons with a dual diagnosis
  - persons who are chronically homeless
- Other underserved populations who may experience health disparities include:
  - women with children
  - pregnant women
  - transitional adults age 18-25
  - persons whose primary language is other than English.

### **Evidence-based interventions**

To meet the myriad and complex needs for substance use and mental health treatment, all agencies are encouraged to use evidence-based interventions. In surveys of executive directors and providers, respondents were asked to indicate the evidence-

based interventions used at their agency. The interventions most frequently reported were:

- Assertive Community Treatment
- Cognitive Behavior Therapy
- Cognitive Processing Therapy
- Dialectical Behavior Therapy
- Eye Movement Desensitization and Reprocessing (EMDR)
- Motivational Interviewing
- 12-step self-help
- Seeking Safety
- Solution-Focused Therapy

There were myriad other interventions identified, many of which were reported by one agency or provider. Most of the interventions reported were evidence-based, while some may be considered to be “promising practices” or needing additional research to assess their efficacy. The extent that all the identified interventions are culturally-appropriate or have been adapted to meet the needs of the communities being served is an area that may merit further exploration and delving further into the research literature.

### **Medicaid redesign**

Respondents to the surveys were also asked to comment on the extent that Medicaid Redesign impacted service delivery as well as the role of the ADAMHS Board. Regarding Medicaid Redesign, respondents’ comments may be characterized as both having a less than positive effect as well as having some benefits.

Primary concerns were the length of time required to wait for reimbursement, having to negotiate the amount of reimbursement for specific services such as assessments and funding length of stay for residential treatment.

Primary benefits were that it increased the number of individuals who could be served and began paying for services not funded previously.

### **Role of the ADAMHS Board**

Regarding the role of the ADAMHS Board, respondents most frequently saw the Board’s role as providing funding. However, there were several other roles that were identified, including advocacy and support, oversight and accountability, and leadership.

## **Respondents' recommendations**

Respondents' provided their recommendations for improving services and what they thought individuals needed to get better. These include:

- the needs of individuals for hope that they can recover, or get better
- stability in their lives and in their treatment
- skills for daily living and employment
- and the belief that services being offered will actually help them.

Individuals may also need assistance in obtaining other needed services, such as:

- academic help for their children
- accessing SNAP and other services
- housing
- childcare.
- Families need information on the treatment process and more support services.

## **Recommendation for Medication Assisted Treatment**

While medication-assisted treatment (MAT) is available and offered at a higher rate than the national average, respondents indicated that there continues to be a need for MAT, including consideration of the types of medications available and prescribed, the number of MAT providers, and the need for provider education on MAT.

## **Recommendations for the system of care**

In terms of the system of care, several respondents and focus group participants identified:

- the need for additional prevention services
- early intervention
- a greater need for care coordination for substance use and mental health services
- collaboration between mental health and substance use providers
- an increased emphasis toward a population health direction.

There was a recognition that reimbursement would need to be adjusted toward population health, moving away from providing services to “the person in front of the

provider, who is able to come in.” Several respondents identified the need for increased funding of specific types of services and providers.

There was a call to pay increased attention to the social determinants of health and factors that may be barriers to accessing services, such as being able to get off work, and having caregiving responsibilities. These are especially important because of the high prevalence of single-female households in Cuyahoga County. Tending to the social determinants of health was seen as especially important for the population served by agencies in Cuyahoga County, given the range of contributing health disparities.

## **Conclusion**

The report concludes with recommendations from the authors. These recommendations are drawn from the report’s findings as well as the authors’ understanding of the current state of the art in behavioral health. The most important recommendation, and our sincere hope is that the recommendations, along with the report’s findings may serve as a resource in planning how to best meet need the needs of the residents of Cuyahoga County for substance use and mental health service.

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# CHAPTER 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF CUYAHOGA COUNTY RESIDENTS

## 1.1 Introduction

This chapter reviews the most current county census data on socio-demographic characteristics of Cuyahoga County population, such as the population size, type of residential areas, gender, age, race/ethnicity, citizenship status, refugee status, marital status, type of household, median household income, unemployment rate, poverty, languages spoken at home and bilingual speakers, difficulty communicating, adult literacy, veteran status, disability status, LGBTQ, homelessness, criminal victimization and domestic violence experience, sexual, physical, and emotional abuse experience and trauma, and criminal justice involvement.

Most analyses in this chapter are based on the American Community Survey (ACS)<sup>2</sup> collected by the U.S. Census Bureau, and compare the county census data with the national, state, and city census data. Through these comparisons, we can assess the unique features of the Cuyahoga County population that need to be taken into account when seeking to understand the need for substance use and mental illness treatment services in the county's population. Most analyses in this chapter also include Franklin and Hamilton counties as comparisons. Unless otherwise noted, all census data in this chapter come from the most recent ACS 2018, and all state and county rankings are based on the five-year estimates calculated for ACS in 2018.

Significance tests were conducted using 95% confidence intervals comparing the county prevalence and national prevalence. A star \* next to the prevalence of Cuyahoga County in the tables indicates that it is significantly different from the national prevalence.

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<sup>2</sup><https://data.census.gov/cedsci/table?t=Age%20and%20Sex&tid=ACSST1Y2018.S0101&hidePreview=false&vintage=2018>

## 1.2 Population size

Located at the northeast corner of Ohio (see Figure 1.2.1), Cuyahoga County consists of 70 communities, including 38 cities, 29 villages, and three townships (see Figure 1.2.2). Cuyahoga County has an estimated 1.2 million residents (see Table 1.2.1), which makes the county the second-largest county by population among 88 counties in Ohio. About 10.6% of the people of Ohio reside in Cuyahoga County. Franklin County with a slightly larger population size (1.3 million) and Columbus as its seat, is the largest county of Ohio by population and Hamilton County with a slightly smaller population size (0.8 million) and Cincinnati as its seat is the third-largest county of Ohio by population. Cuyahoga County's seat, the city of Cleveland, covers the largest area of the county and is the second-largest city in Ohio following Columbus, and almost 30.9% of the county's population resides in Cleveland.

Figure 1.2.1 55 counties in Ohio<sup>3</sup>



<sup>3</sup> <https://www.kissclipart.com/ohio-county-map-printable-clipart-cuyahoga-county-tyexlb/>

Figure 1.2.2 Community boundaries of Cuyahoga County<sup>4</sup>

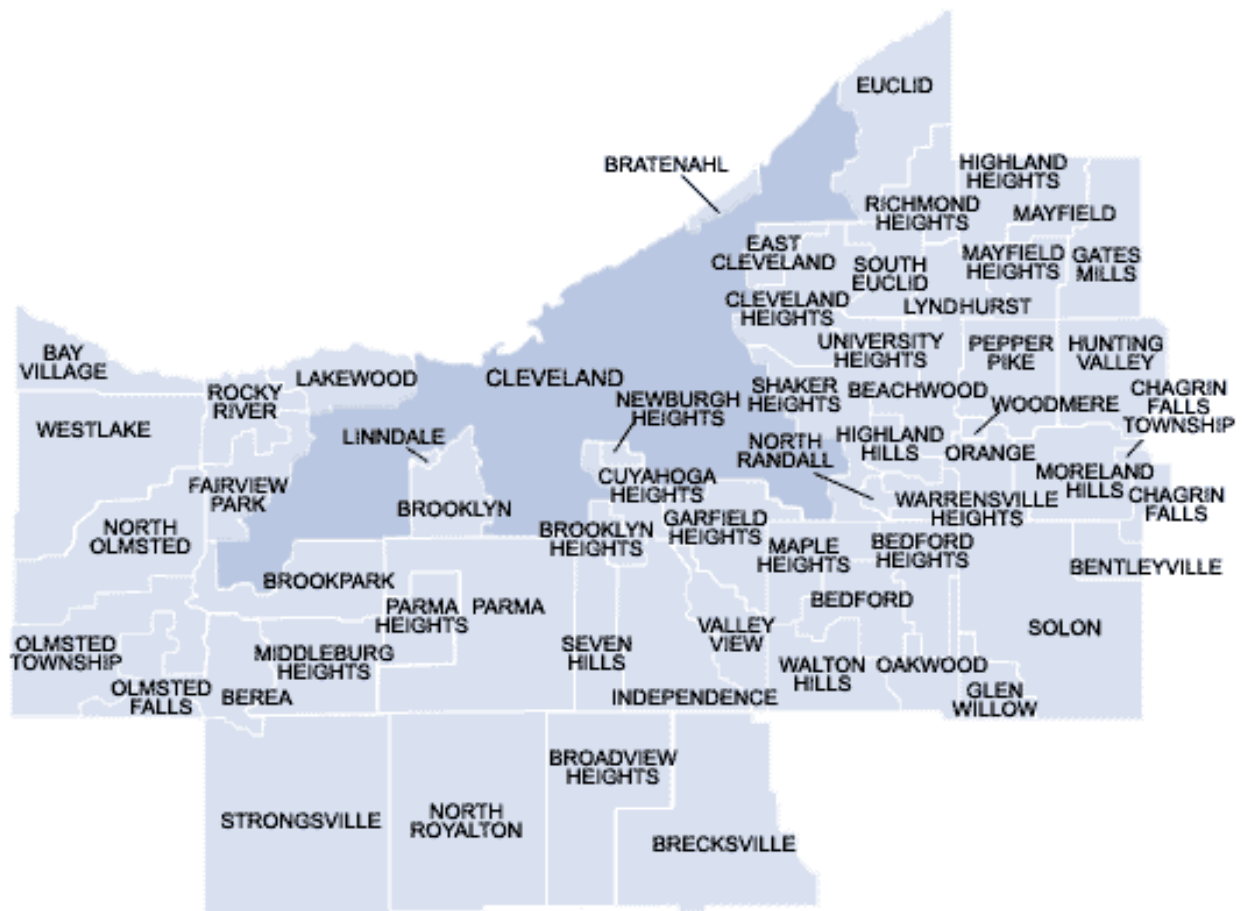


Table 1.2.1 Population size, 2018<sup>5</sup>

	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781

Source: American Community Survey, 2018

<sup>4</sup> Source: <https://boe.cuyahogacounty.us/en-US/Maps.aspx>

<sup>5</sup> <https://data.census.gov/cedsci/table?tid=ACSDP1Y2018.DP05>

### 1.3 Type of residential areas

Cuyahoga County, like Franklin County and Hamilton County, with a large metropolitan city, is an urban county with most of its residents residing in what the U.S. Census considers as urban areas. In fact, 100% of residents in Cleveland live in an urban area (see Table 1.3.1). Almost all residents in Cuyahoga County (99.5%) also reside in urban areas. In comparison, the proportion of the population living in urban areas is significantly lower at 79.0% nationally and 79.5% statewide.

Table 1.3.1 Percentage distribution of type of residential areas, 2010<sup>6</sup>

Residential areas	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total housing units	131,704,730	5,127,508	527,186	377,364	<b>621,763</b>	207,536
Urban	79.0%	79.5%	98.8%	98.1%	<b>99.5%*</b>	100.0%
Rural	21.0%	20.5%	1.2%	1.9%	<b>0.5%*</b>	0.0%

Source: United States Census, 2010

### 1.4 Gender

The proportion of females in Cuyahoga County (52.3%) is comparable to the national proportion of females (50.8%) or the proportion of female residents in the other two counties (see Table 1.4.1).

Table 1.4.1 Percentage distribution of gender, 2018<sup>7</sup>

Gender	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781
Males	49.2%	49.0%	48.8%	48.3%	<b>47.7%</b>	49.1%
Females	50.8%	51.0%	51.2%	51.7%	<b>52.3%</b>	50.9%

Source: American Community Survey, 2018

<sup>6</sup>

<https://data.census.gov/cedsci/table?q=urban&hidePreview=false&tid=DECENNIALSF12010.H2&vintage=2010>

<sup>7</sup>

<https://data.census.gov/cedsci/table?t=Age%20and%20Sex&tid=ACSST1Y2018.S0101&hidePreview=false&vintage=2018>

## 1.5 Age

The median age of Cuyahoga County is slightly older (40.4 years) than the national median age (38.2 years; see Table 1.5.1), but this is due to the older population of residents who reside outside of Cleveland since the median age of Cleveland is much younger (36.3 years) than the county median age. The difference in the median age between Cuyahoga County (40.4 years) and Franklin County (34.1 years) is stark.

Table 1.5.1 Median age and percentage distribution of age group, 2018<sup>8</sup>

Age	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781
Median age	38.2	39.5	34.1	36.6	<b>40.4</b>	36.3
Under 5	6.0%	5.9%	7.1%	6.5%	<b>5.7%</b>	6.2%
5 to 9	6.1%	5.9%	6.2%	6.0%	<b>5.3%</b>	5.6%
10 to 14	6.5%	6.4%	6.4%	6.6%	<b>6.1%</b>	5.8%
15 to 19	6.6%	6.6%	6.6%	6.6%	<b>6.0%</b>	6.4%
20 to 24	6.6%	6.4%	6.8%	6.5%	<b>6.3%</b>	8.0%
25 to 29	7.1%	6.8%	9.7%	8.0%	<b>7.5%</b>	9.0%
30 to 34	6.7%	6.3%	8.6%	7.3%	<b>6.6%</b>	7.4%
35 to 39	6.6%	6.2%	7.1%	6.5%	<b>5.9%</b>	5.8%
40 to 44	6.1%	5.8%	6.3%	5.4%	<b>5.6%</b>	5.3%
45 to 49	6.3%	6.3%	6.1%	5.8%	<b>6.0%</b>	5.5%
50 to 54	6.4%	6.5%	5.7%	6.2%	<b>6.4%</b>	6.4%
55 to 59	6.6%	7.0%	5.7%	7.0%	<b>7.1%</b>	7.7%
60 to 64	6.3%	6.8%	5.6%	6.3%	<b>7.2%</b>	6.7%
65 to 69	5.2%	5.6%	4.2%	5.0%	<b>6.0%</b>	5.0%
70 to 74	4.1%	4.2%	3.1%	3.8%	<b>4.1%</b>	3.5%
75 to 79	2.9%	3.1%	2.0%	2.6%	<b>3.4%</b>	2.5%
80 to 84	1.9%	2.0%	1.4%	1.8%	<b>2.1%</b>	1.5%
85+	1.9%	2.1%	1.4%	2.1%	<b>2.6%</b>	1.8%

Source: American Community Survey, 2018

8

<https://data.census.gov/cedsci/table?t=Age%20and%20Sex&tid=ACSST1Y2018.S0101&hidePreview=false&vintage=2018>

The distribution of age groups (see Table 1.5.2) shows that Cuyahoga County has a consistently lower percentage of residents who are 44 years or younger.

About a quarter (23.1%) of residents of the county are between 0 to 19 years old, and about a third of residents (29.4%) are between 0 to 24 years old. A higher percentage of residents in Cuyahoga County are age 65 years and older (18.2%) than the national percentage (16.0%) of this age group. Cuyahoga County also has consistently lower percentages of age groups under 25 years old, while consistently higher percentages of age groups over 55 years old compared to the age distribution nationally.

The age distribution of Cuyahoga County overall explains the higher median age than the national median age. An estimated 226,137 residents in Cuyahoga County are 65 years old or older, and an estimated 366,576 residents in Cuyahoga County are between 0 and 24 years old.

Table 1.5.2 Percentage distribution of age group, 2018<sup>9</sup>

Age	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781
0 to 19	25.2%	24.9%	26.3%	25.7%	<b>23.1%</b>	24.0%
10 to 44	46.3%	44.6%	51.4%	46.9%	<b>44.1%</b>	47.6%
35 to 64	38.3%	38.5%	36.6%	37.2%	<b>44.8%</b>	44.8%
65+	16.0%	17.1%	12.0%	15.3%	<b>18.2%</b>	14.3%

Source: American Community Survey, 2018

9

<https://data.census.gov/cedsci/table?t=Age%20and%20Sex&tid=ACSST1Y2018.S0101&hidePreview=false&vintage=2018>

## 1.6 Race/Ethnicity

Of the demographic characteristics, one that makes Cuyahoga County notably different from the population of the U.S. is race and ethnicity. Though the U.S. Census collects the information on race and ethnicity separately, Table 1.6.1 reports the combined distribution of race and ethnicity for simplicity. All racial groups shown are non-Hispanic or non-Latino, and the percentage of any race group shown in the table should, therefore, be interpreted as that for "non-Hispanic or non-Latino."

Cuyahoga County has a significantly larger percentage of blacks or African Americans (28.8%) than the national percentage of this group (12.3%). The high percentage of blacks or African Americans in the county derives from the high percentage of this group in Cleveland (46.6%), where almost half of its residents are blacks or African Americans and whites in comparison are the minority (34.1%). Cuyahoga County, on the other hand, has a significantly smaller percentage of Hispanics or Latinos (6.2%) than the national percentage of this group (18.3%).

Table 1.6.1 Percentage distribution of race/ethnicity, 2018<sup>10</sup>

Race/ethnicity	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781
Hispanic or Latino (of any race)	18.3%	3.9%	5.7%	3.5%	<b>6.2%*</b>	12.3%
White	60.2%	78.6%	62.3%	64.9%	<b>58.5%</b>	34.1%
Black or African American	12.3%	12.2%	22.5%	25.1%	<b>28.8%*</b>	46.6%
American Indian and Alaska Native	0.7%	0.2%	0.1%	0.1%	<b>0.1%</b>	0.1%
Asian	5.6%	2.3%	5.4%	3.0%	<b>3.0%</b>	2.8%
Native Hawaiian and other Pacific Islander	0.2%	0.0%	0.0%	0.2%	<b>0.0%</b>	0.0%
Some other race <sup>11</sup>	0.3%	0.2%	0.3%	0.2%	<b>0.3%</b>	0.4%
Two or more	2.5%	2.7%	3.6%	3.1%	<b>3.0%</b>	3.6%

Source: American Community Survey, 2018

<sup>10</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0500000US39035&t=American%20Indian%20and%20Alaska%20Native%3AAsian%3ABlack%20or%20African%20American%3AHispanic%20or%20Latino%3ANative%20Hawaiian%20and%20Pacific%20Islander%3ANot%20Hispanic%20or%20Latino%3ASome%20Other%20Race%3ATwo%20or%20More%20Races%3AWhite&layer=VT\\_2018\\_050\\_00\\_PY\\_D1&cid=CP05\\_2014\\_001E&tid=ACSCP1Y2018.CP05&hidePreview=false&vintage=2018](https://data.census.gov/cedsci/table?g=0100000US_0500000US39035&t=American%20Indian%20and%20Alaska%20Native%3AAsian%3ABlack%20or%20African%20American%3AHispanic%20or%20Latino%3ANative%20Hawaiian%20and%20Pacific%20Islander%3ANot%20Hispanic%20or%20Latino%3ASome%20Other%20Race%3ATwo%20or%20More%20Races%3AWhite&layer=VT_2018_050_00_PY_D1&cid=CP05_2014_001E&tid=ACSCP1Y2018.CP05&hidePreview=false&vintage=2018)

<sup>11</sup> According to the U.S. Census, "some other race" include anyone who are not white, black or African American, American Indian and Alaska Native, Asian, or Native Hawaiian and other pacific islander.

## 1.7 Citizenship status

The percentage of people in Cuyahoga County who are not U.S. citizens is significantly smaller than the national percentage of non-citizens (see Table 1.7.1). A total of 34,253 residents of Cuyahoga County (of those 10,588 reside in Cleveland) are not citizens of the U.S., which amounts to 2.8% of the county residents or less than half of the percentage of non-citizens nationally (6.8%).

Table 1.7.1 Percentage distribution of non-citizen population, 2018<sup>12</sup>

	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population	327,167,439	11,689,442	1,310,300	816,684	<b>1,243,857</b>	383,781
Not citizen	6.8%	2.2%	6.1%	3.0%	<b>2.8%*</b>	2.8%

Source: American Community Survey, 2018

## 1.8 Refugee status

According to the Refugee Processing Center within the Department of State Bureau of Population, Refugees, and Migration (2019), a total of 33,612 refugees from 58 countries have settled in Ohio since 2002<sup>13</sup>. The number of refugees and people with Special Immigrant Visas settled in Ohio in a single year peaked at 224 in 2016 and has been decreasing since, much like the trend seen in the rest of the county. About 10% of refugees in Ohio (or 3,363 refugees) have settled in Cleveland since 2002. Refugees from Somalia (20.1%), Democratic Republic of Congo (17.8%), and Burma/Myanmar (14.0%) make up a large portion of refugees settled in Cleveland.

## 1.9 Marital status

Table 1.9.1 shows that Cuyahoga County, as compared nationally, has a significantly smaller percentage of residents age 15 and older who are married (39.3%) and a much larger percentage of the population who have never married (40.6%). This might largely be the result of such a high percentage of Cleveland residents who are never married (53.8%) or of such a low percentage of Cleveland residents who are married (24.1%) compared to the national percentages. The low percentage of those who are married in the county is inconsistent with the fact that Cuyahoga County has a higher median age

<sup>12</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSDT1Y2018.B05001&vintage=2018&hidePreview=false&layer=place&cid=S2901\\_C01\\_001E&t=Citizenship](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSDT1Y2018.B05001&vintage=2018&hidePreview=false&layer=place&cid=S2901_C01_001E&t=Citizenship)

<sup>13</sup> <https://www.wrapsnet.org/admissions-and-arrivals/>



than the national median age, thus the higher likelihood of its residents ever being married.

Marital status was examined separately<sup>14</sup> for whites and blacks or African Americans (See Table 1.9.1). Cuyahoga County’s low percentage of married residents might largely be explained by a high percentage, more than half, of blacks or African Americans in the county who are never married (55.9%) and only a small percentage of blacks or African Americans in the county who are married (20.8%). The percentages for “married” and “never married” for Cleveland are essentially reverses of the percentages for these groups in the U.S. (29.3% and 49.9%).

Table 1.9.1 Percentage distribution of marital status among people age 15 and older by race, 2018<sup>15</sup>

Marital status and race		U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total	Population age 15+	266,322,302	9,552,948	1,051,683	660,573	<b>1,031,037</b>	315,963
	Married	47.8%	46.8%	42.0%	43.3%	<b>39.3%*</b>	24.1%
	Widowed	5.7%	6.2%	4.5%	5.6%	<b>6.5%</b>	5.6%
	Divorced	10.9%	12.1%	11.7%	10.7%	<b>11.6%</b>	13.5%
	Separated	1.9%	1.6%	1.7%	1.6%	<b>1.9%</b>	3.0%
	Never married	33.8%	33.2%	40.0%	38.8%	<b>40.6%</b>	53.8%
White	Population age 15+	195,803,002	7,880,557	716,353	458,491	<b>666,625</b>	140,675
	Married	51.1%	50.2%	46.8%	48.7%	<b>47.1%</b>	31.4%
	Widowed	6.1%	6.5%	4.7%	6.0%	<b>6.9%</b>	5.4%
	Divorced	11.4%	12.3%	11.9%	10.5%	<b>11.4%</b>	13.9%
	Separated	1.6%	1.4%	1.3%	1.1%	<b>1.2%</b>	2.5%
	Never married	29.8%	29.5%	35.3%	33.6%	<b>33.4%</b>	46.8%
Black/ African American	Population age 15+	33,116,906	1,137,847	223,827	160,648	<b>290,104</b>	143,003
	Married	29.3%	24.5%	25.8%	27.8%	<b>20.8%*</b>	15.6%
	Widowed	5.6%	5.9%	5.0%	5.6%	<b>6.8%</b>	6.5%
	Divorced	11.8%	13.3%	14.3%	12.5%	<b>13.3%</b>	14.0%
	Separated	3.5%	3.0%	2.9%	2.9%	<b>3.2%</b>	3.2%
	Never married	49.9%	53.2%	51.9%	51.1%	<b>55.9%*</b>	60.8%

Source: American Community Survey, 2018

<sup>14</sup> Whites and blacks and African Americans shown in Table 1.9.1 are not “non-Hispanic or Latinos.”  
<sup>15</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1201&vintage=2018&hidePreview=false&layer=place&cid=S1101\\_C01\\_001E&t=Marital%20Status%20and%20Marital%20History](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1201&vintage=2018&hidePreview=false&layer=place&cid=S1101_C01_001E&t=Marital%20Status%20and%20Marital%20History)

## 1.10 Type of household

Consistent with the smaller percentage of residents who are married, Cuyahoga County has a significantly smaller percentage of households that are married, family households and a significantly larger percentage of households that are non-family households<sup>16</sup> compared to the national percentages for these two types of households (see Table 1.10.1). Married households represent almost half of all households in the U.S. (47.9%) while a much smaller percentage of households in Cuyahoga County (34.9%). Non-married households represent 34.8% of households nationally while a much larger percentage of households in Cuyahoga County (45.5%).

Table 1.10.1 Percentage distribution of type of household, 2018<sup>17</sup>

Household type	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total household	121,520,180	4,685,447	519,468	344,562	<b>542,122</b>	173,025
Married household	47.9%	45.1%	38.9%	38.9%	<b>34.9%*</b>	19.4%
Male householder	4.9%	4.9%	4.8%	5.0%	<b>4.8%</b>	6.7%
Female householder	12.4%	12.5%	14.2%	14.4%	<b>14.8%</b>	19.6%
Non-family household	34.8%	37.6%	42.0%	41.7%	<b>45.5%*</b>	54.4%

Source: American Community Survey, 2018

Once again, Cuyahoga County's low percentage of households that are married households can be explained by Cleveland's low percentage of households that are married households. More than half (54.4%) of all households in Cleveland are non-family households, only 1 in 5 (19.4%) households in Cleveland are married households, and households in Cleveland are more likely to be female households without a husband (19.6%), as compared to the national percentage (12.4%) for female households.

<sup>16</sup> The U.S. Census defines family household as "a household maintained by a householder who is in a family and includes any unrelated people (unrelated subfamily members and/or secondary individuals) who may be residing there."

<sup>17</sup>

<https://data.census.gov/cedsci/table?t=Families%20and%20Household%20Characteristics&tid=ACST1Y2018.S1101&hidePreview=false&vintage=2018>

## 1.11 Median household income

In 2018, Ohio ranked 34<sup>th</sup> in median household income among 50 states and the District of Columbia, Cuyahoga County ranked 37<sup>th</sup> in median household income among 88 counties in Ohio, and Cleveland ranked 248<sup>th</sup> in median household income among 250 cities in Ohio (with Youngstown and East Cleveland as the bottom two communities).

Table 1.11.1 shows that the median household income of Cuyahoga County (\$49,910) is significantly lower than the national median household income (\$61,937), and this is driven from the low median household income of Cleveland (\$29,953), which is less than half of the national median household income and less than the federal poverty guideline for 2020 for a household with five people (\$30,680)<sup>18</sup>.

Table 1.11.1 Median household income by race/ethnicity<sup>19</sup>, 2018<sup>20</sup>

Race/ethnicity	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population	\$61,937	\$56,111	\$60,373	\$57,189	<b>\$49,910*</b>	\$29,953
White	\$65,902	\$60,783	\$70,400	\$68,190	<b>\$62,568</b>	\$42,463
Black or African American	\$41,511	\$33,590	\$37,464	\$37,022	<b>\$29,889*</b>	\$21,483
Hispanic or Latino origin	\$51,404	\$44,813	\$54,277	\$43,380	<b>\$34,469*</b>	\$30,409

Source: American Community Survey, 2018

There are considerable race/ethnicity differences in the median household income, as shown in Table 1.11.1 The median household income of blacks or African Americans (\$29,889) is less than half of the median household income of whites (\$62,568) in Cuyahoga County. While the median household income of whites in Cuyahoga County is reasonably comparable to the national median household income, whites (\$42,463), blacks or African Americans (\$21,483), and Hispanics or Latino origins (\$30,409) in Cleveland have the median household income lower than the national median household income (\$61,937). The median household income of \$21,483 for blacks or African Americans in Cleveland is less than the federal poverty guideline in 2020 for a household with three people (\$21,720).

<sup>18</sup> <https://aspe.hhs.gov/poverty-guidelines>

<sup>19</sup> Whites and blacks and African Americans shown in Table 1.11.1 are not “non-Hispanic or Latinos.”

<sup>20</sup>

[https://data.census.gov/cedsci/table?q=S1903%3A%20MEDIAN%20INCOME%20IN%20THE%20PAST%2012%20MONTHS%20%28IN%202018%20INFLATION-ADJUSTED%20DOLLARS%29&tid=ACSS1Y2018.S1903&vintage=2018&hidePreview=true&layer=county&cid=S0801\\_C01\\_001E](https://data.census.gov/cedsci/table?q=S1903%3A%20MEDIAN%20INCOME%20IN%20THE%20PAST%2012%20MONTHS%20%28IN%202018%20INFLATION-ADJUSTED%20DOLLARS%29&tid=ACSS1Y2018.S1903&vintage=2018&hidePreview=true&layer=county&cid=S0801_C01_001E)

## 1.12 Unemployment rate

Ohio had the 21st highest unemployment rate among 50 states and District of Columbia, and Cuyahoga County had the 5<sup>th</sup> highest unemployment rate among 88 counties of Ohio (Migs, Pike, Vinton, and Jackson counties had a higher unemployment rate than Cuyahoga County).

Table 1.12.1 shows that the unemployment rate is higher in Cuyahoga County (6.9%), as compared to the unemployment rate for the U.S. (4.9%), Ohio (4.9%), Franklin County (4.6%), or Hamilton County (3.9%). The high unemployment rate of the county is once again due to the high unemployment rate of Cleveland (11.7%). As Table 1.12 shows, race/ethnicity differences in the unemployment rate are greater in Cuyahoga County, where the unemployment for blacks or African Americans (12.1%) is almost three times that of white's (4.7%), compared to the race difference in unemployment rates nationally.

Table 1.12.1 Frequency distribution of unemployed population and unemployment rate among people age 16 and older by race/ethnicity<sup>21</sup>, 2018<sup>22</sup>

Race/ethnicity	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population 16 years+	262,185,951 (4.9%)	9,407,612 (4.9%)	1,038,679 (4.6%)	650,356 (3.9%)	<b>1,015,678</b> <b>(6.9%)</b>	310,568 (11.7%)
White	192,991,617 (4.2%)	7,769,309 (4.2%)	708,936 (3.6%)	453,301 (2.9%)	<b>658,412</b> <b>(4.7%)</b>	138,824 (9.7%)
Black or African American	32,556,753 (8.7%)	1,117,259 (9.5%)	220,993 (7.8%)	156,827 (6.7%)	<b>284,776</b> <b>(12.1%)</b>	139,988 (13.9%)
Hispanic or Latino origin (of any race)	43,116,658 (5.7%)	312,451 (7.3%)	48,252 (4.5%)	17,963 (7.9%)	<b>54,997</b> <b>(8.9%)</b>	34,558 (11.3%)

Source: American Community Survey, 2018

With COVID19, the unemployment rate has skyrocketed throughout the U.S. The U.S. Bureau of Labor Statistics report that the unemployment rate in Ohio, as of April 2020, at 16.8%<sup>23</sup>. Given that Cuyahoga County typically has a higher unemployment rate than the state of Ohio overall, it is anticipated that a similar trend will be evident.

<sup>21</sup> Whites and blacks and African Americans shown in Table 1.12.1 are not “non-Hispanic or Latinos.” Thus, the three race/ethnicity groups shown on the table are not mutually exclusive.

<sup>22</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_1600000US3916000&tid=ACSST1Y2018.S2301&vintage=2018&t=Employment&hidePreview=false&layer=county&cid=S0801\\_C01\\_001E](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_1600000US3916000&tid=ACSST1Y2018.S2301&vintage=2018&t=Employment&hidePreview=false&layer=county&cid=S0801_C01_001E)

<sup>23</sup> U.S. Bureau of Labor Statistics (May 2020) Local Area Unemployment Statistics

Overall, unemployment in Cuyahoga County has spiked, and is at its highest rate since 2010.

### 1.13 Poverty

Ohio had the 15th highest poverty rate among 50 states and the District of Columbia, and Cuyahoga County had the 16<sup>th</sup> highest poverty rate among 88 counties in Ohio.

Consistent with the low median household income and the high unemployment rate, Table 1.13 shows that the poverty rate of Cuyahoga County (17.7%) is significantly higher than the national poverty rate (13.1%). Once again, the high poverty rate of the county is explained by the high poverty rate of Cleveland, where almost 1 in 3 people (33.1%) live in poverty.

Table 1.13.1 Poverty rate, 2018<sup>24</sup>

	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Population for whom poverty status is determined	319,184,033	11,362,304	1,281,150	798,445	<b>1,218,045</b>	373,568
Population in poverty	13.1%	13.9%	15.5%	15.4%	<b>17.7%*</b>	33.1%

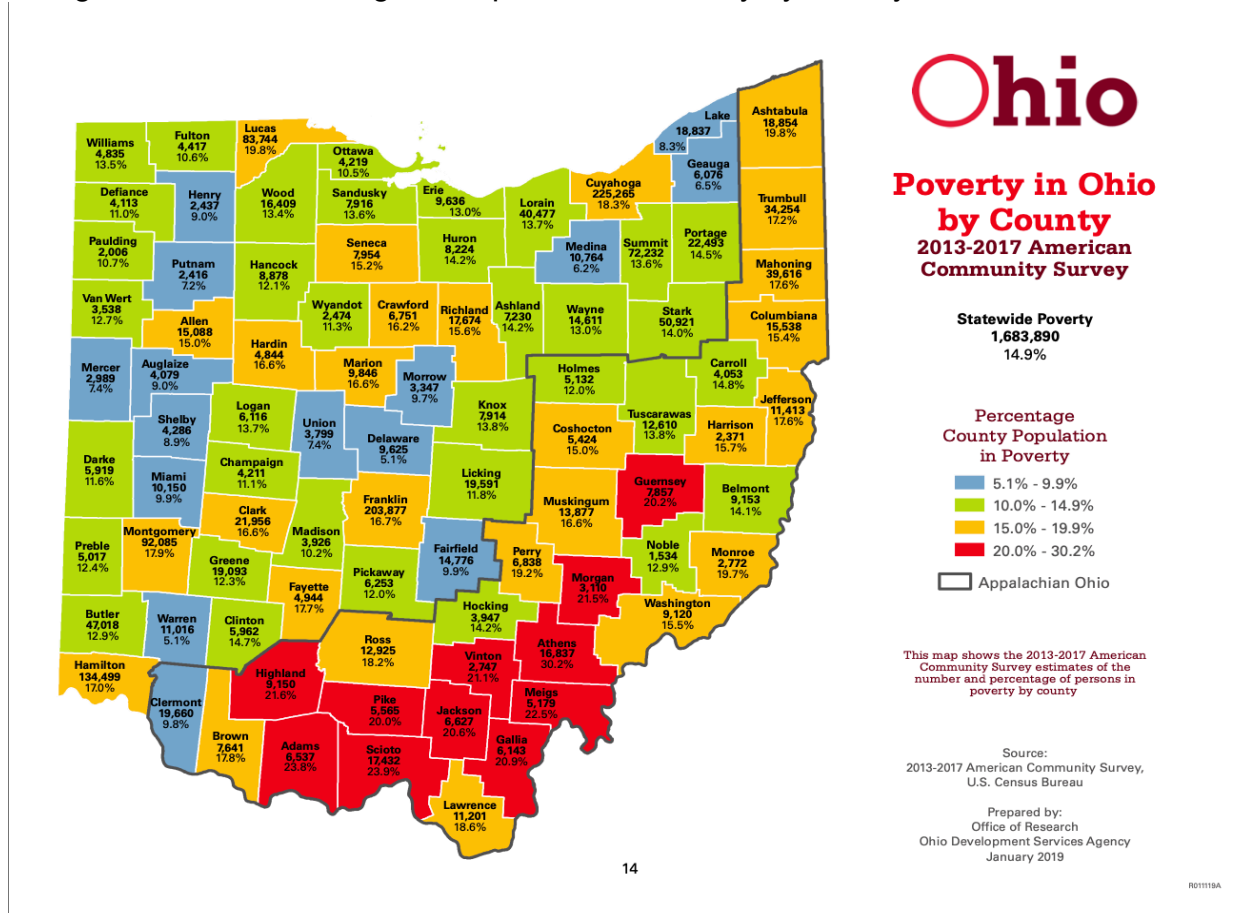
Source: American Community Survey, 2018

<sup>24</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACST1Y2018.S1701&vintage=2018&hidePreview=false&layer=place&cid=S1701\\_C01\\_001E&t=Poverty](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACST1Y2018.S1701&vintage=2018&hidePreview=false&layer=place&cid=S1701_C01_001E&t=Poverty)

The map of the percentage of population in poverty by county in Ohio (see Figure 1.13.1) shows the counties with metropolitan area central cities like Cuyahoga, Franklin, and Hamilton to have a high poverty level, with Cleveland having one the highest poverty rates among large cities in Ohio (see Figure 1.13.2).

Figure 1.13.1 Percentage of Population in Poverty by County in Ohio, 2013-2017<sup>25</sup>

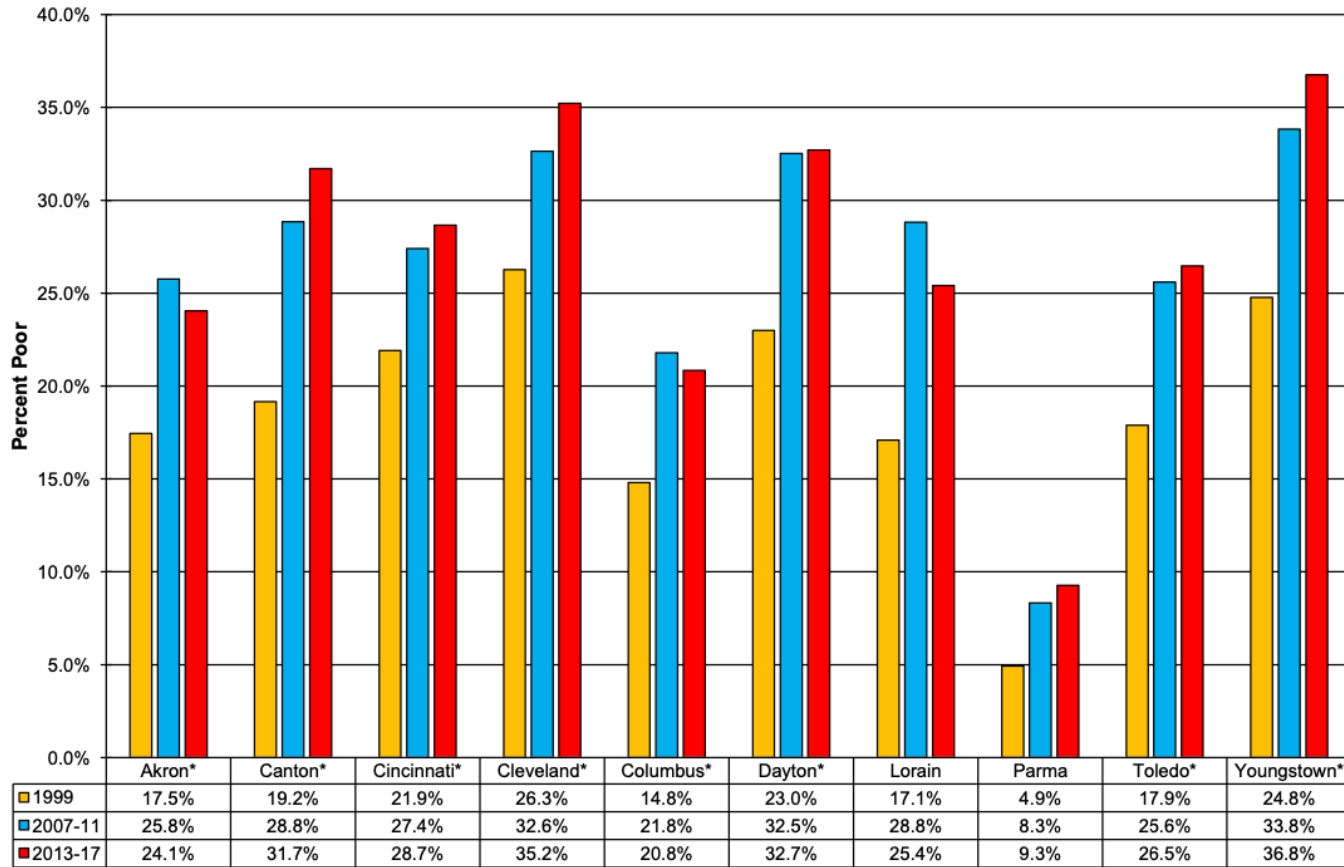


Source: Ohio Development Services Agency

<sup>25</sup> Source: Ohio Development Services Agency. (2019) The Ohio Poverty Report. <https://www.development.ohio.gov/files/research/p7005.pdf>

Figure 1.13.2 Poverty Rate among 10 Large Cities in Ohio<sup>26</sup>

**Changing Poverty Rates in Ohio's 10 Largest Cities  
1999, 2007-2011 and 2013-2017**



Source: U.S. Census Bureau

■ 1999

■ 2007-11

■ 2013-17

Note: \* - A metropolitan area central city.

Source: Ohio Development Services Agency

<sup>26</sup> Source: Ohio Development Services Agency. (2019) The Ohio Poverty Report. <https://www.development.ohio.gov/files/research/p7005.pdf>

Moreover, as Table 1.13.2 shows, Cuyahoga County has a higher percentage of families in poverty (13.1%) compared to the national percentage of families in poverty (9.3%). Once again, the percentage of families in poverty in Cleveland is problematically high (27.5%), indicating that almost 1 in 3 families in Cleveland live in poverty. Additionally, poverty is higher among female households (without the presence of a husband) than married-couple households. About 32.0% female households in Cuyahoga County or 44.1% of female households in Cleveland live in poverty (see Table 1.13.2).

Table 1.13.2 Poverty rate by type of household, 2018<sup>27</sup>

Household	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total families	79,241,578	2,924,244	301,328	200,962	<b>295,330</b>	78,875
Families in poverty	9.3%	9.7%	10.3%	10.7%	<b>13.1%</b>	27.5%
Total female households	15,061,738	584,057	73,876	49,534	<b>79,963</b>	33,838
Female household in poverty	25.7%	29.5%	25.9%	30.8%	<b>32.0%*</b>	44.1%

Source: American Community Survey, 2018

<sup>27</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701\\_C01\\_001E&t=Poverty](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701_C01_001E&t=Poverty)



Furthermore, young children compared to adults are more likely to live in poverty. Table 1.13.3 shows that children under 18 years of age live in poverty at a higher rate than adults, where one in four (26.6%) children under 18 years of age in Cuyahoga County live in poverty.

The poverty rate is even more staggering and unacceptably high in Cleveland, where over half (50.5%) of all children under 18 years of age live in poverty. The poverty rate is, however, higher for any age group in Cleveland compared to the national rate; one in four (25.4%) residents age 60 and older live in poverty in Cleveland, and this rate is much higher than the national poverty rate for this age group (9.9%).

Table 1.13.3 Poverty rate by age group, 2018<sup>28</sup>

Age group	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population age 18 and under	72,163,269	2,540,270	301,209	183,541	<b>254,511</b>	81,532
Population age 18 and older in poverty	18.0%	19.5%	22.3%	22.3%	<b>26.6%*</b>	50.5%
Total population age 18 to 64	195,883,446	6,893,270	825,515	495,406	<b>744,854</b>	238,732
Population age 18 to 64 in poverty	12.3%	13.3%	14.2%	14.3%	<b>16.3%*</b>	29.6%
Total population age 60+	71,621,407	2,716,468	227,252	170,540	<b>306,905</b>	78,691
Population age 60+ in poverty	9.9%	9.2%	9.1%	9.2%	<b>12.1%</b>	25.4%

Source: American Community Survey, 2018

28

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1701&vintage=2018&hidePreview=false&layer=place&cid=S1701\\_C01\\_001E&t=Poverty](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1701&vintage=2018&hidePreview=false&layer=place&cid=S1701_C01_001E&t=Poverty)

Consistent with the fact that young children compared to adults are more likely to live in poverty, the more children a family has, overall, the higher the poverty rate. As Table 1.13.4 shows, an increase in the number of children in the family is associated with an increased likelihood of living in poverty. In Cuyahoga County, 35.1% of families with three or four children and 63.2% of families with five or more children live in poverty. In Cleveland, 58.2% of families with three or four children and 100% of families with five or more children live in poverty.

Table 1.13.4 Poverty rate by number of children, 2018<sup>29</sup>

Number of children	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total Families	79,241,578	2,924,244	301,328	200,962	<b>295,330</b>	78,875
No child	4.7%	4.0%	3.5%	3.8%	<b>5.1%</b>	11.4%
1 or 2 children	12.1%	14.1%	13.0%	13.8%	<b>19.3%*</b>	36.3%
3 or 4 children	23.0%	24.2%	31.2%	31.7%	<b>35.1%*</b>	58.2%
5 or more children	38.5%	40.3%	48.5%	47.1%	<b>63.2%*</b>	100.0%

Source: American Community Survey, 2018

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[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_1600000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701\\_C01\\_001E&t=Poverty](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_1600000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701_C01_001E&t=Poverty)

Table 1.13.5 shows that poverty is overall more common among black or African American families than among white families, and the race difference in poverty is even greater in Cuyahoga County. This is explained by the higher percentage of black or African American families in the county living in poverty (26.1%), as compared nationally (18.5%). On the other hand, the poverty rate for white families in Cuyahoga County (7.5%) is comparable to the national poverty rate for white families (7.3%).

In Cleveland, the poverty rate is higher for both white (20.0%) and black or African American (34.1%) families compared to the national percentages for the two groups (7.3% and 18.5%, respectively). The poverty rate is problematically high among blacks or African American families in Cleveland (34.1%), indicating that more than one in three black or African American families in Cleveland live in poverty.

Table 1.13.5 Poverty rate by race<sup>30</sup>, 2018<sup>31</sup>

Race	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total White Families	60,115,487	2,469,064	204,591	138,849	<b>197,813</b>	33,933
White families in poverty	7.3%	7.5%	5.9%	6.6%	<b>7.5%</b>	20.0%
Total black or African American families	9,008,219	318,068	65,603	51,993	<b>79,093</b>	36,892
Black or African American families in poverty	18.5%	23.9%	22.8%	20.4%	<b>26.1%*</b>	34.1%

Source: American Community Survey, 2018

<sup>30</sup> Whites and blacks and African Americans shown in Table 1.13.5 are not “non-Hispanic or Latinos.”  
<sup>31</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701\\_C01\\_001E&t=Poverty](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1702&vintage=2018&hidePreview=false&layer=place&cid=S1701_C01_001E&t=Poverty)

## 1.14 Educational attainment

Table 1.14.1 shows that educational attainment is comparable or higher among the residents in Cuyahoga County compared to the educational attainment of the population for the U.S. or Ohio. Among residents older than 25 years in Cuyahoga County, 89.9% complete high school, and 33.9% complete a bachelor's degree, while the comparable percentages were 88.3% and 32.6% for the U.S. and 90.7% and 29.0% for Ohio.

Educational attainment among residents older than 25 years old in Cleveland is, however, much lower compared to the national, state, or county educational attainments. Among residents in Cleveland, the high school graduation rate is almost 10% lower at 80.4% and the bachelor's degree attainment rate (17.0%) is almost half of the national rate (88.3% and 32.6%).

Table 1.14.1 also shows the educational attainment by race/ethnicity<sup>32</sup>. There are quite large race/ethnicity differences in educational attainment among residents in Cuyahoga County. A higher percentage of whites in Cuyahoga County (92.6%) graduate from high school than the national percentage (88.3%), a smaller percentage of blacks or African Americans (84.7%) and Hispanics or Latino origin (73.6%) graduate from high school than the national percentage. The bachelor's degree attainment for blacks or African Americans (14.8%) and Hispanics or Latino origin (16.2%) in Cuyahoga County is less than half of that of whites (40.8%) or the national percentage (32.6%).

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<sup>32</sup> Whites and blacks and African Americans shown in Table 1.14.1 are not "non-Hispanic or Latinos." Thus, the three race/ethnicity groups shown on the tables are not mutually exclusive.

Table 1.14.1 Percentage distribution of educational attainment among people age 25 and older by race/ethnicity, 2018<sup>33</sup>

Education level and race/ethnicity		U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total	Population	223,158,847	8,027,035	876,835	553,559	<b>877,281</b>	260,982
	High school+	88.3%	90.7%	91.7%	91.3%	<b>89.9%</b>	80.4%
	Bachelor's degree+	32.6%	29.0%	40.6%	38.5%	<b>33.9%</b>	17.0%
White	Population	166,573,830	6,709,567	610,292	391,192	<b>581,125</b>	119,673
	High school+	90.2%	91.6%	93.3%	93.5%	<b>92.6%</b>	82.6%
	Bachelor's degree+	33.9%	29.9%	45.5%	44.1%	<b>40.8%*</b>	25.3%
Black or African American	Population	26,865,725	925,725	181,093	132,104	<b>239,916</b>	118,159
	High school+	86.5%	85.9%	88.2%	85.1%	<b>84.7%</b>	79.1%
	Bachelor's degree+	22.0%	17.7%	20.3%	20.5%	<b>14.8%*</b>	7.6%
Hispanic or Latino origin	Population	34,244,734	233,733	37,075	13,689	<b>43,513</b>	27,249
	High school+	69.7%	76.5%	77.0%	82.0%	<b>73.6%</b>	66.0%
	Bachelor's degree+	17.0%	19.2%	25.0%	27.0%	<b>16.2%</b>	5.7%

Source: American Community Survey, 2018

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[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1501&vintage=2018&hidePreview=false&layer=place&cid=S1501\\_C01\\_001E&t=Educational%20Attainment](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1501&vintage=2018&hidePreview=false&layer=place&cid=S1501_C01_001E&t=Educational%20Attainment)

## 1.15 Language spoken at home and bilingual speakers

Consistent with the small presence of non-U.S. citizens and Hispanics or Latinos in Cuyahoga County, the large majority of residents in the county (87.8%) speak English only at home (see Table 1.15.1), which is a significantly larger percentage than the percentage of the population nationally who speaks English only at home (78.1%). The remaining 12.2% of residents of the county speak more than one language or a language other than English only at home. Spanish is the most popular second language in Cuyahoga County with 4.5% of the county residents speaking Spanish at home (see Table 1.15.1).

Table 1.15.1 Percentage distribution of language spoken at home among population age 5 and older, 2018<sup>34</sup>

Language	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Population 5 years+	307,521,124	10,996,313	1,217,274	763,779	<b>1,172,691</b>	359,937
English only	78.1%	92.7%	86.1%	92.0%	<b>87.8%*</b>	85.2%
Language other than English	21.9%	7.3%	13.9%	8.0%	<b>12.2%*</b>	14.8%
Spanish	13.5%	2.4%	3.6%	2.5%	<b>4.5%*</b>	9.2%
Other Indo-European Languages	3.7%	2.7%	3.2%	2.3%	<b>4.3%</b>	2.9%
Asian and Pacific Islander languages	3.6%	1.3%	3.0%	1.5%	<b>1.7%</b>	1.9%
Other languages	1.2%	1.0%	4.1%	1.6%	<b>1.6%</b>	0.8%

Source: American Community Survey, 2018

<sup>34</sup> <https://data.census.gov/cedsci/table?q=language&tid=ACSST1Y2018.S1601>

## 1.16 Difficulty communicating

Of those who speak Spanish in the county, the majority (67.1%) speak English well while 32.9% or an estimated 17,500 Spanish-speaking residents in Cuyahoga County do not speak English well (see Table 1.16.1). Of these who speak a language other than English or Spanish at home, the majority (62.9%) speak English well, while 37.1% or an estimated 33,382 of residents of Cuyahoga County who speak a language other than English or Spanish at home do not speak English well.

Table 1.16.1 Percentage distribution of English-speaking ability by second language spoken at home among population age 5 and older, 2018<sup>35</sup>

Language	U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Population 5 years+ speak Spanish	41,460,427	261,305	43,337	19,024	<b>53,192</b>	33,161
Speak Spanish and English well	60.8%	64.3%	53.7%	59.2%	<b>67.1%*</b>	59.0%
Speak Spanish but English not well	39.2%	35.7%	46.3%	40.8%	<b>32.9%*</b>	41.0%
Population 5 years+ speak other language	25,808,241	546,003	125,827	41,735	<b>89,979</b>	20,096
Speak other language and English well	63.7%	65.7%	61.8%	70.4%	<b>62.9%</b>	59.1%
Speak other language but English not well	36.3%	34.3%	38.2%	29.6%	<b>37.1%</b>	40.9%

Source: American Community Survey, 2018

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[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSDT1Y2018.B06007&vintage=2018&t=Language%20Spoken%20at%20Home&hidePreview=false&cid=B16001\\_001E&layer=place](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSDT1Y2018.B06007&vintage=2018&t=Language%20Spoken%20at%20Home&hidePreview=false&cid=B16001_001E&layer=place)

Table 1.16.2 shows that 1.3% of native-born and 3.0% of foreign-born residents of Cuyahoga County have a difficult time communicating in English. Cuyahoga County, therefore, has quite a large number of residents (an estimated 50,426 residents) who require help communicating.

Table 1.16.2 Percentage distribution of difficulty speaking in English among people age 5 and older, 2018<sup>36</sup>

	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Population 5 years+	307,521,124	10,996,313	1,217,274	763,779	<b>1,172,691</b>	359,937
Difficulty with English (Native born)	1.6%	0.7%	0.6%	0.3%	<b>1.3%</b>	3.1%
Difficulty with English (Foreign born)	6.8%	1.8%	5.0%	2.3%	<b>3.0%*</b>	2.9%

Source: American Community Survey, 2018

<sup>36</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSDT1Y2018.B06007&vintage=2018&t=Language%20Spoken%20at%20Home&hidePreview=false&cid=B16001\\_001E&layer=place](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSDT1Y2018.B06007&vintage=2018&t=Language%20Spoken%20at%20Home&hidePreview=false&cid=B16001_001E&layer=place)



## 1.17 Adult literacy

Adult literacy data shown in Table 1.17.1 are based on the Program for the International Assessment of Adult Competencies (PIAAC) and the National Adult Literacy Survey (NALS) conducted by the National Center for Education Statistics within the U.S. Department of Education and the Institute of Education Sciences. Literacy is examined based on three types of literacy: prose literacy, document literacy, and quantitative literacy<sup>37</sup>.

Table 1.17.1 shows the percentages of adults who scored below the basic level of prose literacy, which is considered a low level of literacy that makes completing basic everyday tasks difficult<sup>38</sup>. Ohio had the 15<sup>th</sup> lowest percentage of people who lack basic prose literacy skills among 50 states and the District of Columbia in 2003. Cuyahoga County had the 19<sup>th</sup> lowest percentage of people lacking basic prose literacy skills among 88 counties.

Table 1.17.1 Adult literacy rate among adults age 16+ living in households or prisons <sup>39</sup>, 2003<sup>40</sup>

	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>
Population of adults age 16+	222,000,000	8,715,916	822,290	625,898	<b>1,043,290</b>
Lacking basic prose literacy skills	14.0%	9.0%	13.0%	7.0%	<b>9.0%</b>

Source: American Community Survey, 2018

A report on literacy needs assessment conducted by Case Western Reserve University used 1992 results of the NALS and the 2000 U.S. Census to estimate the Cuyahoga County and city literacy rates. The NALS used different ways to measure literacy level than PIAAC or NALS. The study reports that 15% of the population age 16 and older in Cuyahoga County are Level 1 literacy<sup>41</sup> and 31% of the population age 16 and older in Cleveland are Level 1 literacy, which indicate that almost 1 in 3 adult residents of Cleveland are disadvantaged economically due to their lack of literacy skills.

<sup>37</sup> See for more detail: <https://nces.ed.gov/naal/literacytypes.asp>

<sup>38</sup> Source: [https://nces.ed.gov/naal/perf\\_levels.asp](https://nces.ed.gov/naal/perf_levels.asp)

<sup>39</sup> The percentage for Ohio is the percentage of people who scored below basic in prose and those who could not be tested because of language barriers.

<sup>40</sup> <https://nces.ed.gov/naal/estimates/StateEstimates.aspx>

<sup>41</sup> Most people at Level 1 literacy can read to some extent, but they are at a significant disadvantage economically because they are likely working at the minimum-wage jobs. (<https://files.eric.ed.gov/fulltext/ED533519.pdf>)

## 1.18 Veteran status

According to the ACS 2018, Cuyahoga County has an estimated 61,115 veterans, which amounts to 6.2% of the civilian population of the county age 18 and older (see Table 1.18.1). The percentage of veterans in Cuyahoga County (6.2%) is slightly smaller than the national or state percentages (7.1%). As the table also shows, more than 90% of veterans across the U.S. are males.

Table 1.18.1 Percentage distribution of veterans and veterans who are males among civilian population age 18 and older, 2018<sup>42</sup>

	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Civilian population age 18+	252,806,449	9,090,982	1,005,055	629,138	<b>985,725</b>	300,974
Veterans	7.1%	7.5%	6.1%	6.0%	<b>6.2%</b>	5.8%
Veterans who are males	90.8%	92.4%	92.2%	92.2%	<b>91.6%</b>	90.9%

Source: American Community Survey, 2018

<sup>42</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S2101&vintage=2018&t=Veterans&hidePreview=false&layer=place&cid=S2101\\_C01\\_001E](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S2101&vintage=2018&t=Veterans&hidePreview=false&layer=place&cid=S2101_C01_001E)

## 1.19 Disability<sup>43</sup>

Table 1.19.1 shows that the overall percentage of the civilian noninstitutionalized population under 65 years with a disability is higher in Cuyahoga County (10.9%) compared to the national percentage (8.6%). The high percentage of residents with a disability in the county is driven by the high percentage of residents with a disability in Cleveland, where 17.0% of the city’s civilian noninstitutionalized population under 65 years is with a disability.

There does not appear to be any race/ethnicity difference in the prevalence of disability among people in Cuyahoga County. However, the percentage of residents with a disability among blacks or African Americans (14.5%) or Hispanic or Latinos (13.2%) is higher than that for whites (9.0%) in Cuyahoga County.

Table 1.19.1 Percentage distribution of people with a disability among civilian noninstitutionalized population<sup>44</sup> under 65 years of age by race/ethnicity<sup>45</sup>, 2018<sup>46</sup>

Race/ethnicity		U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total	Population	271,112,139	9,588,462	1,148,200	688,994	<b>1,010,276</b>	324,463
	With a disability	8.6%	10.1%	8.4%	8.2%	<b>10.9%</b>	17.0%
White	Population	190,840,796	7,641,413	731,455	449,229	<b>610,816</b>	131,923
	With a disability	8.7%	9.9%	8.7%	7.7%	<b>9.0%</b>	16.9%
Black or African American	Population	35,709,377	1,229,145	270,065	181,429	<b>305,732</b>	152,620
	With a disability	10.70%	12.0%	8.8%	10.1%	<b>14.5%</b>	16.9%
Hispanic or Latino (of any race)	Population	54,693,938	422,867	71,920	27,258	<b>71,162</b>	43,383
	With a disability	6.8%	9.2%	6.3%	6.5%	<b>13.2%</b>	17.0%

Source: American Community Survey, 2018

<sup>43</sup> According to the US Census (March 9, 2020), “Disability data come from the American Community Survey (ACS), the Survey of Income and Program Participation (SIPP), and the Current Population Survey (CPS). All three surveys ask about six disability types: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Respondents who report any one of the six disability types are considered to have a disability.”  
<https://www.census.gov/topics/health/disability/guidance.html>

<sup>44</sup> Civilian noninstitutionalized population is defined as “All U.S. civilians not residing in institutional group quarters facilities such as correctional institutions, juvenile facilities, skilled nursing facilities, and other long-term care living arrangements.”

<sup>45</sup> Whites and blacks and African Americans shown in Table 1.19.1 are not “non-Hispanic or Latinos.”

Thus, the three race/ethnicity groups shown on the table are not mutually exclusive.

<sup>46</sup>

[https://data.census.gov/cedsci/table?q=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1810&vintage=2018&t=Disability&hidePreview=false&layer=place&cid=S1810\\_C01\\_001E](https://data.census.gov/cedsci/table?q=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1810&vintage=2018&t=Disability&hidePreview=false&layer=place&cid=S1810_C01_001E)

Table 1.19.2 shows the percentage distributions of the type of disability among the civilian noninstitutionalized population under 65 years of age with a disability. There is not much difference across census regions in terms of the prevalence of different types of disability.

Cleveland has higher percentages of people with every type of disability, compared to the national percentages, but this is because the percentage of people with a disability for Cleveland (17.0%) is almost twice that of the national percentage (8.6%).

Table 1.19.2 Percentage distribution of type of disability among the civilian noninstitutionalized population under 65 years of age, 2018<sup>47</sup>

Disability	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population	271,112,139	9,588,462	1,148,200	688,994	<b>1,010,276</b>	324,463
A hearing difficulty	1.6%	1.8%	1.1%	1.1%	<b>1.6%</b>	2.1%
A vision difficulty	1.6%	1.7%	1.5%	1.6%	<b>2.0%</b>	3.1%
A cognitive difficulty	4.1%	5.1%	4.6%	4.0%	<b>5.4%</b>	8.3%
An ambulatory difficulty	3.6%	4.2%	3.4%	3.3%	<b>4.7%</b>	8.3%
A self-care difficulty	1.5%	1.6%	1.4%	1.4%	<b>1.7%</b>	2.7%
An independent living difficulty	2.7%	3.1%	2.7%	2.5%	<b>3.3%</b>	5.1%

Source: American Community Survey, 2018

<sup>47</sup>

[https://data.census.gov/cedsci/table?g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_160000US3916000&tid=ACSST1Y2018.S1810&vintage=2018&t=Disability&hidePreview=false&layer=place&cid=S1810\\_C01\\_001E](https://data.census.gov/cedsci/table?g=0100000US_0400000US39_0500000US39035,39049,39061_160000US3916000&tid=ACSST1Y2018.S1810&vintage=2018&t=Disability&hidePreview=false&layer=place&cid=S1810_C01_001E)

## 1.20 LGBTQ

The U.S. Census does not collect information on the sexual orientation or gender identity of individuals. Instead, the information collected by the U.S. Census is the number of households with same-sex couples. According to the U.S. Census 2010<sup>48</sup>, after five years of the Supreme Court ruling allowing same-sex marriage, there are 19,684 same-sex couples in Ohio; of these, the vast majority are unmarried couples (86.5%). About 18% (or 3,480) of same-sex couples in Ohio are raising their “own” children. Cuyahoga County has an estimated 2,610 same-sex couples, of which 18% of couples raise their “own” child. Cleveland has an estimated 1,178 same-sex couples.

There are three major sources for estimating the national prevalence of the LGBTQ population. First, Gallup<sup>49</sup> estimates in 2017 that 4.5% of American adults identify as lesbian, gay, bisexual, or transgender (LGBT). The percentage is higher among the younger generations with 8.2% of millennials identify as LGBT. A higher percentage of women (5.1%) than men (3.9%) identify as LGBT, and a higher percentage of Hispanics (6.1%) than whites (4.0%), blacks (4.0%), or Asians (4.9%) identify as LGBT in 2017. A higher percentage of those who made less than \$36,000 identify as LGBT (6.2%) than those who made more money (less than 4.7%) in 2017.

Based on the ACS population estimates for 2017 and the percentage estimates of LGBTQ by gender based on the 2017 Gallup, the estimated number of LGBTQ population among age 21 and older are calculated for Ohio, Cuyahoga County, and Cleveland (see Table 1.20.1). Our calculation indicates that an estimated 42,816 adults who identify as LGBTQ reside in Cuyahoga County.

Table 1.20.1 Estimated number of LGBTQ population base on Gallup poll, 2017<sup>50</sup>

	Ohio		Cuyahoga County		Cleveland	
	Males	Females	Males	Females	Males	Females
Estimated number of LGBTQ population	161,255	226,838	<b>17,093</b>	<b>25,723</b>	5,167	7,637

Source: Gallup, 2017 and American Community Survey, 2018

Another source of the prevalence of the LGBTQ population is the data collected by the Williams Institute of UCLA School of Law (see Table 1.20.2), which provides the

<sup>48</sup> Source: [https://williamsinstitute.law.ucla.edu/wp-content/uploads/Census2010Snapshot\\_Ohio\\_v2.pdf](https://williamsinstitute.law.ucla.edu/wp-content/uploads/Census2010Snapshot_Ohio_v2.pdf)

<sup>49</sup> Source: <https://news.gallup.com/poll/234863/estimate-lgbt-population-rises.aspx>

<sup>50</sup> The population estimates based on the ACS 2017

([https://data.census.gov/cedsci/table?q=gender&g=0100000US\\_0400000US39\\_0500000US39035,39049,39061\\_1600000US3916000&hidePreview=true&tid=ACSST1Y2017.S0101&t=Age%20and%20Sex&vint age=2012&layer=VT\\_2012\\_160\\_00\\_PY\\_D1&cid=S0101\\_C01\\_001E](https://data.census.gov/cedsci/table?q=gender&g=0100000US_0400000US39_0500000US39035,39049,39061_1600000US3916000&hidePreview=true&tid=ACSST1Y2017.S0101&t=Age%20and%20Sex&vint age=2012&layer=VT_2012_160_00_PY_D1&cid=S0101_C01_001E))

LGBTQ prevalence for Ohio for 2017. The prevalence of the LGBTQ population in Ohio at 4.3% is a little lower than the national prevalence at 4.5%.

The data also show that a higher percentage of females (5.8%) than males (4.2%) identify as LGBTQ in Ohio. Nationally, 29% of those who identify as LGBTQ are raising children. A higher percentage of Latinos identify as LGBTQ (2.1%) than in the population of the U.S., and whites comprise 58%, blacks comprise 12% of those who identify as LGBTQ in Ohio. The younger generations comprise a higher percentage of those who identify as LGBTQ than older generations. A higher percentage of those who identify as LGBTQ are unemployed (11%), uninsured (10%), food insecure (33%), or have income less than \$24K (33%) compared to ones who do not identify as LGBTQ (5%, 7%, 16%, and 21%, respectively). The prevalence of LGBTQ and the correlates of LGBTQ are identical overall to the ones found in Gallup.

Table 1.20.2 Estimated number of LGBTQ population based on the Williams Institute of UCLA School of Law, 2017<sup>51</sup>

	%LGBTQ	#LGBTQ	#LGB	#LGB (Cisgender)	#LGB (Trans)	#Trans (Total)	#Trans (Straight /other)	# Trans (LGB)
U.S.	4.5%	11,343,000	10,338,000	9,946,000	392,000	1,397,150	1,005,000	392,000
Ohio	4.3%	389,000	361,000	349,000	11,000	39,950	29,000	11,000

Source: Williams Institute of UCLA School of Law, 2017 and American Community Survey, 2018

Another source of the prevalence of LGBTQ is the Youth Risk Behavior Surveillance System (YRBSS), which is discussed in more detail in the next chapter. The YRBSS is a school-based survey that encompasses both national and local surveys involving representative samples of 9th- through 12th-grade students. The national survey is conducted by the Centers for Disease Control and Prevention (CDC) among a nationally representative sample of students in both public and private schools, and local surveys are conducted by the Departments of Health and Education using the representative sample of students at each local level.

Based on Ohio estimates for self-identified LGBTQ status from the YRBSS 2018, and the population estimates from the U.S. Census, the estimated numbers of youth who identify as gay, straight, bisexual, and something else are calculated. Table 1.20.3 shows that 92.8% of male youth in Cuyahoga County identify as straight. This is consistent with the result by the Gallop, with 8.2% of millennials identify as LGBT. There is an estimated 9,282 male youth in Cuyahoga County who identify as gay, bisexual,

<sup>51</sup> <https://williamsinstitute.law.ucla.edu/issues/demographics/>

something else, or “I don’t know.” The table shows that a slightly smaller prevalence (91.7%) of female youth in Cuyahoga County identify as straight, and an estimated 8,175 female youth in Cuyahoga County identify as gay, bisexual, something else, or “I don’t know.” Table 1.20.4 shows among the youth, the breakdowns, and estimated number of individuals who are transgender. Based on the data, about one-third of transgendered or gender non-conforming youth in Cuyahoga County reside in Cleveland.

Table 1.20.3 Estimated number of LGBTQ population among youth by gender, 2018

Gender	LGBTQ	U.S.	Ohio	<b>Cuyahoga</b>	Cleveland
Male youth	Total male youth	36,642,753	1,297,528	<b>128,739</b>	43,561
	Straight	34,000,810	1,203,976	<b>119,457</b>	40,420
	Gay	795,148	28,156	<b>2,794</b>	945
	Bisexual	575,291	20,371	<b>2,021</b>	684
	Something else	395,742	14,013	<b>1,390</b>	470
	I don't know	315,128	11,159	<b>1,107</b>	375
	Refusal	564,298	19,982	<b>1,983</b>	671
Female youth	Total female youth	36,642,753	1,297,528	<b>128,739</b>	43,561
	Straight	33,605,068	1,189,963	<b>118,067</b>	39,949
	Gay	465,363	16,479	<b>1,635</b>	553
	Bisexual	923,397	32,698	<b>3,244</b>	1,098
	Something else	439,713	15,570	<b>1,545</b>	523
	I don't know	498,341	17,646	<b>1,751</b>	592
	Refusal	710,869	25,172	<b>2,498</b>	845

Source: American Community Survey, 2018

Table 1.20.4 Estimates of transgender population among youth, 2018

LGBTQ	U.S.	Ohio	<b>Cuyahoga</b>	Cleveland
Not transgender	72,164,237	2,555,352	<b>253,539</b>	85,788
Yes, Male-to-Female	124,585	4,412	<b>438</b>	148
Yes, Female-to-Male	124,585	4,412	<b>438</b>	148
Yes, Gender Nonconforming	80,614	2,855	<b>283</b>	96
Not Sure	271,156	9,602	<b>953</b>	322
Refused	527,656	18,684	<b>1,854</b>	627

Source: American Community Survey, 2018

## 1.21 Homelessness

Homelessness data are collected by the U.S. Department of Housing and Urban Development. There are two types of homelessness information collected every year. First is the point-in-time (PIT) estimates of the homelessness collected on a single night in January, and another one is based on one-year data from October 1 through September 30. Since the most current data for one-year estimates are 2017, the estimates reported here are from the 2017 report based on the Annual Homeless Assessment Report (AHAR) that combines the two types of data. National data on homelessness is discussed first, then the state and county data on homelessness.

### 1.21.1 National data

On a single night in January in 2017, an estimated 550,996 people experienced homelessness in the U.S. Of those who experienced homelessness, 65.5% were sheltered, and 34.5% were unsheltered. The majority of people experienced homelessness as individuals (66.5%), while one-third of people who experienced homelessness were families with children (33.5%) on a single night in January in 2017.

An estimated 1.42 million people used an emergency shelter or transitional housing program at some point during the year in 2017 (see Table 1.21.1). This is about 1 in every 228 people in the U.S. Males comprised 62.1% of all adult sheltered persons in 2017. Gender was evenly distributed among children under age 18 years old.

Table 1.21.1 Prevalence of sheltered homeless by age and gender based on one-year estimates, 2017<sup>52</sup>

Age group		All sheltered persons	Sheltered Individuals	Sheltered persons in families
Total number of homeless persons		1,416,908	950,497	478,718 (in 150,630 family households)
Adult homeless	Total	77.5%	96.7%	39.2%
	% Female	37.2%	29.0%	77.9%
	% Male	62.1%	70.2%	22.0%
	% Other	0.7%	0.0%	0.0%
Child homeless	Total	22.4%	3.2%	60.7%
	% Female	49.7%	52.1%	49.4%
	% Male	50.1%	46.9%	50.5%
	% Other	0.2%	0.2%	0.0%

Source: U.S. Department of Housing and Urban Development, 2017

<sup>52</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>



Table 1.21.2 shows the estimated national prevalence of homelessness by age group and Tables 1.21.3 and 1.21.4 show the estimated national prevalence of homelessness by race and ethnicity. As Table 1.21.2 shows, the vast majority of homeless individuals are between 19 to 61 years old. On the other hand, the majority of persons in families who are homeless are under age 18 years old. About 1 in 4 sheltered individuals are under age 18.

Table 1.21.2 Prevalence of sheltered homelessness by age group based on one-year estimates, 2017<sup>53</sup>

Age group	All sheltered persons	Sheltered individuals	Sheltered persons in families
Total number	1,416,908	950,497	478,718
Under 1	2.2%	0.0%	6.6%
1 to 5	7.7%	0.0%	23.1%
6 to 12	7.6%	0.3%	22.1%
13 to 17	4.8%	2.8%	8.8%
18 to 24	10.1%	10.7%	8.9%
25 to 30	11.3%	11.6%	10.9%
31 to 50	32.9%	40.4%	17.7%
51 to 61	17.6%	25.6%	1.4%
62+	5.4%	7.9%	0.2%
Unknown	0.4%	0.6%	0.2%

Source: U.S. Department of Housing and Urban Development, 2017

<sup>53</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>

Table 1.21.3 shows that blacks or African Americans comprise a high percentage of all sheltered persons, individuals, and persons in families, as compared to the percentage of African Americans in the population (about 12.7%). Half of all individuals who experience homelessness as families with children are blacks or African Americans (50.0%). The table also shows that the percentage of Hispanics or Latinos among all sheltered persons (16.9%) is comparable to the percentage of this group in the population (17.6%) but is higher among persons in families in homelessness (25.1%).

Table 1.21.3 Prevalence of sheltered homelessness by race based on one-year estimates, 2017<sup>54</sup>

Race/ethnicity		All sheltered persons	Sheltered individuals	Sheltered persons in families
Total number		1,416,908	950,497	478,718
Race	White, non-Hispanic	35.3%	42.8%	20.3%
	Black or African American	41.7%	37.6%	50.0%
	Asian	0.8%	0.9%	0.7%
	American Indian or Alaska Native	2.4%	2.5%	2.2%
	Native Hawaiian or other Pacific Islander	1.1%	0.8%	1.8%
	Multiple Races	4.7%	3.9%	6.3%
	Unknown	3.1%	2.9%	3.5%
Ethnicity	Non-Hispanic/non-Latino	81.5%	85.5%	73.3%
	Hispanic/Latino	16.9%	12.8%	25.1%
	Unknown	1.6%	1.6%	1.7%

Source: U.S. Department of Housing and Urban Development, 2017

<sup>54</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>

As shown in Table 1.21.4, a higher percentage of homeless-sheltered adults are veterans (10.9%) nationally than the percentage of veterans in the population (7.1%), and almost half of all homeless individuals have a disability (45.8%).

Table 1.21.4 Prevalence of sheltered homeless veterans and people with a disability among adult sheltered homeless people based on one-year estimates, 2017<sup>55</sup>

Characteristics	All sheltered persons	Sheltered individuals	Sheltered persons in families
Total number	1,098,247	950,497	478,718
Veterans	10.9%	12.4%	0.7%
Disabled	43.0%	45.8%	8.3%

Source: U.S. Department of Housing and Urban Development, 2017

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<sup>55</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>

## 1.21.2 Ohio data

Table 1.21.5 shows the estimates of the number of homeless individuals on a night in January 2017 in Ohio. Of all the homeless persons in Ohio on the one night, 13.0% (or 1,309) were unsheltered. There were 6,688 homeless persons and 3,407 homeless persons in families. On a night in January in 2017, 3.4% of homeless persons in families, 44.9% of chronically homeless people, 8.9% of homeless veterans, 16.0% of homeless unaccompanied youth under age 25 were unsheltered in Ohio.

Table 1.21.5 PIT estimated number of homeless persons in Ohio, 2017<sup>56</sup>

Characteristics	All homeless persons	Sheltered	Unsheltered
Total number of homeless persons	10,095	87.0%	13.0%
Homeless individuals	6,688	82.1%	17.9%
Homeless people in families	3,407	96.6%	3.4%
Chronically homeless	772	55.1%	44.9%
Chronically homeless individuals	725	54.6%	45.3%
Chronically homeless people in families	47	61.7%	38.3%
Homeless veterans	862	91.1%	8.9%
Homeless unaccompanied youth (under 25)	695	84.0%	16.0%
Homeless unaccompanied children (under 18)	64	98.4%	1.6%
Homeless parenting youth (under 25)	160	96.3%	3.8%

Source: U.S. Department of Housing and Urban Development, 2017

Additional homeless information for Ohio and Cuyahoga County come from the 2019 Ohio Housing Needs Assessment study and 2018 Ohio Human Services Data Warehouse report by Ohio Housing Finance Agency<sup>57</sup>. Between 2016-2017, two school districts in Cuyahoga County ranked among the top 25 school districts in Ohio for the number of students experiencing homelessness with 1,463 students in Cleveland Municipal City (#3) and 251 students in Parma City (#14) experiencing homelessness during this time period. Statewide, a total of 20,083 students experienced homelessness between 2016-2017. This is about one in every 100 students (1.1%) enrolled in preschool through 12<sup>th</sup> grade in Ohio in fall 2017<sup>58</sup>.

<sup>56</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>

<sup>57</sup> <https://www.ohiohome.org/news/documents/2019-HousingNeedsAssessment.pdf>

<sup>58</sup> <http://education.ohio.gov/Topics/Data/Frequently-Requested-Data/Enrollment-Data>

Ohio experienced a steady increase in the number of people accessing homeless services between 2012 and 2017, with 70,123 people accessing homeless services in 2017. Table 1.21.6 shows that one night in January 2017, there were 10,095 homeless persons in shelters and on the streets statewide, of which 1,727 were in Cuyahoga County. Cuyahoga County had the largest number of homeless persons among all counties in Ohio (1,691 in Franklin and 1,162 in Hamilton Counties) on that night. One night in January 2017, there were 3,407 individuals in families in Ohio who were homeless, of which Cuyahoga County had 367 individuals in families. Cuyahoga County had 115 chronically homeless individuals and 172 homeless persons who are veterans on the one night in January.

Table 1.21.6 PIT estimated number of homeless persons, 2017<sup>59</sup>

Homeless population	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>
Beds in permanent supportive housing for homeless persons	16,770	2,732	2,342	<b>4,004</b>
Beds in year-round emergency shelters, safe heavens, and transitional housing	10,095	1,691	1,162	<b>1,727</b>
Homeless persons in shelters and on the street	3,407	449	273	<b>367</b>
Persons in families	725	226	90	<b>115</b>
Chronically homeless <sup>60</sup>	862	140	192	<b>172</b>

Source: U.S. Department of Housing and Urban Development, 2017

<sup>59</sup> <https://www.hudexchange.info/resource/5639/2017-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>

<sup>60</sup> Defined as “currently homeless and has experienced homelessness for more than a year or four times in the past three years.”

## 1.22 Criminal victimization and domestic violence

### 1.22.1 National data

Criminal victimization and domestic violence data come from the National Crime Victimization Survey (NCVS) 2018. The NCVS, sponsored by the Bureau of Justice Statistics (BJS) of the U.S. Department of Justice, is a national survey on the victimization of crime, collected annually by the U.S. Census Bureau since 1972. The NCVS is a nationally representative household survey that involved about 100,000 individuals age 12 or older residing in 49,000 households or group quarters like dormitories<sup>61</sup>. All individuals residing in selected households are eligible for an interview every six months for a three-year period about their criminal victimization experiences during the six months prior to each interview.

The NCVS collects individual victimization data on personal crimes, including rape, sexual assault, robbery aggravated assault, simple assault, and purse-snatching/pocket-picking, and household victimization data on property crimes, including household burglary, motor vehicle theft, and property theft. The NCVS does not collect data on murder (because murdered victims cannot take the survey), kidnapping, arson, and victimless crimes (including prostitution, gambling, and drug use).

According to the U.S. Department of Justice, overall, the rate of violent crime<sup>62</sup> victimization has been decreasing steadily in the U.S. since 1994. Table 1.22.1 shows the national data on victimization based on the NCVS 2018. In 2018, over six million people were victims of violent crime, which amounted to 23.2 per 1,000 people experiencing violent crime. This means that for every 1,000 people in the U.S. age 12 or older, 23.2 people experienced violent crime. The highest rate of violent crime was assault.

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<sup>61</sup> [https://www.icpsr.umich.edu/icpsrweb/NACJD/NCVS/index.jsp#NCVS\\_Data](https://www.icpsr.umich.edu/icpsrweb/NACJD/NCVS/index.jsp#NCVS_Data)

<sup>62</sup> Violent crime includes “rape or sexual assault, robbery, aggravated assault, and simple assault, and they include threatened, attempted, and completed occurrences of those crimes.”

Table 1.22.1 Estimated number of criminal victimizations among people age 12 and older in the U.S., 2018<sup>63</sup>

Violent crime	Number	6,385,520
	Rate per 1,000	23.2
Rape	Number	734,630
	Rate per 1,000	2.7
Assault	Number	5,077,790
	Rate per 1,000	18.4
Robbery	Number	573,100
	Rate per 1,000	2.1
Domestic violence	Number	1,333,050
	Rate per 1,000	4.8
Stranger violence	Number	2,493,750
	Rate per 1,000	9.1
Violent crime involving injury	Number	1,449,530
	Rate per 1,000	5.3
Violent crime involving a weapon	Number	1,329,700
	Rate per 1,000	4.8

Source: National Crime Victimization Survey, 2018

Overall, females are more likely than males, whites are more likely than other race/ethnic groups, younger age groups (i.e., 12 to 24 years old) are more likely than older age groups, and single individuals are more likely than married to be victims of violent crime. The likelihood of violent crime victimization is also positively related to income, such that the higher the household income, the less likely that one experiences violent crime victimization.

<sup>63</sup> <https://www.bjs.gov/index.cfm?ty=dcdetail&iid=245>

### 1.22.2 State data

Ohio data on crime victimization shown in Table 1.22.2 come from the Ohio Crime Victimization Survey 2016<sup>64</sup> conducted by the Ohio Department of Public Safety. The Ohio Crime Victimization Survey is based on a representative sample of respondents age 18 and older. The estimated number of victimizations for each crime was then calculated based on the rate and the population estimate from ACS 2016.

The rate of crime victimization, overall, is much higher in Ohio for all crimes compared to the national crime victimization rate, though caution is in order since data collected and the method of data collection are not comparable. Like the national data, Ohio victimization data also indicate that violent crime victimization is more likely among younger age groups, low-income individuals, and single individuals compared to their counterparts.

Table 1.22.2 Estimates of criminal victimizations among people age 18 and older in Ohio, 2016

Crime against persons	Number	1,512,908
	Rate per 1,000	168
Intimidation	Number	648,389
	Rate per 1,000	72
Simple assault	Number	558,335
	Rate per 1,000	62
Stalking	Number	351,211
	Rate per 1,000	39
Aggravated assault	Number	315,189
	Rate per 1,000	35
Robbery	Number	297,178
	Rate per 1,000	33
Rape	Number	27,016
	Rate per 1,000	3

Source: Ohio Crime Victimization Survey, 2016

<sup>64</sup> <https://publicsafety.ohio.gov/links/ocjs2016OhioCrimeVictimizationReport.pdf>



## 1.23 Sexual, physical, and emotional abuse and trauma

### 1.23.1 Intimate partner violence

The data on sexual, physical, and emotional abuse and trauma come from several different sources. First, estimates of intimate partner violence are based on the National Intimate Partner and Sexual Violence Survey (NISVS) conducted by the Centers for Disease Control and Prevention (CDC). The NISVS is a nationally representative survey on sexual violence, stalking, and intimate partner violence collected among people age 18 and older in the U.S. and calculates the estimates of lifetime intimate partner violence for the U.S. as a whole (using 2015 survey data) and for each state (using 2010-2012 survey data).

Table 1.23.1 shows the estimated lifetime prevalence of violent victimization perpetrated by an intimate partner. Over 1 in 6 women report experiencing sexual violence, 1 in 10 women report experiencing stalking, 1 in 3 women report physical violence, and almost half of women in Ohio and 1 in 3 women nationally report experiencing psychological aggression by an intimate partner in their lifetime. The prevalence of intimate partner violence victimization is lower among males, except for physical violence and psychological aggression, which males experienced at a similar rate as females in their lifetime. In fact, the prevalence of intimate partner violence victimization is higher among males in Ohio compared to national prevalence for all three types of violence shown in the table.

Table 1.23.1 Estimated number of lifetime prevalence of intimate partner violence (IPV) victimization among people age 18 and older<sup>65</sup>

IPV	U.S.		Ohio	
	Females	Males	Females	Males
	121,090,384	114,067,087	4,571,293	4,239,478
Sexual violence	21,897,000 (18.3%)	9,082,000 (8.2%)	755,000 (16.5%)	374,000 (8.8%)
Stalking	12,499,000 (10.4%)	2,485,000 (2.2%)	529,000 (11.5%)	-
Physical violence	36,632,000 (30.6%)	34,436,000 (31.0%)	1,580,000 (34.5%)	1,330,000 (31.3%)
Any psychological aggression	43,546,000 (36.4%)	38,068,000 (34.2%)	2,142,000 (46.8%)	2,075,000 (48.8%)

Source: National Intimate Partner and Sexual Violence Survey, 2015

<sup>65</sup> <https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf>

### 1.23.2 Child maltreatment

The second source of data on sexual, physical, and emotional abuse and trauma come from a report by the Children’s Bureau, an Office of the Administration for Children and Families on child maltreatment. The report includes information on child abuse and neglect cases known to agencies of child protective services throughout the U.S. in 2018.

Table 1.23.2 shows that there are 25,158 children in Ohio who experienced maltreatment. As the rate shows, Ohio children are more likely to be victims with substance abuse caregiver (5.07 per 1,000) than the national average (1.51 per 1,000). The likelihood of child fatalities due to maltreatment is also higher in Ohio (4.09 per ,1000) compared nationally (2.39 per 1,000).

Table 1.23.2 Estimated number of child maltreatment and rates per 1,000 among children under 18 years, 2018<sup>66</sup>

Child maltreatment		U.S.	Ohio
Total children under 18 years		73,352,242	2,590,436
Total child victims of maltreatment	Number	678,000	25,158
	Rate per 1,000	9.24	9.71
Child neglect only	Number	411,969	8,148
	Rate per 1,000	5.62	3.15
Child physical abuse only	Number	72,814	8,334
	Rate per 1,000	0.99	3.22
Child psychological maltreatment only	Number	15,605	750
	Rate per 1,000	0.21	0.29
Child sexual abuse only	Number	47,124	3,885
	Rate per 1,000	0.64	1.50
Child multiple maltreatment	Number	105,322	3,792
	Rate per 1,000	1.44	1.47
Child victims with alcohol abuse caregiver	Number	38,776	1,990
	Rate per 1,000	0.53	0.77
Child victims with substance abuse caregiver	Number	110,649	13,145
	Rate per 1,000	1.51	5.07
Child fatalities due to maltreatment	Number	1,738	106
	Rate per 100,000	2.39	4.09

Source: Children’s Bureau, 2018

<sup>66</sup> <https://www.acf.hhs.gov/cb/resource/child-maltreatment-2018>

The percentage of children under age six in Cuyahoga County who were investigated for maltreatment gradually increased from 2000 to 2008. While the rate declined slightly starting in 2009, anecdotal information suggests that the slight decline were the results of changes in the definitions of maltreatment, agency policies and the implementation of a new data system. Children in Cleveland are more likely to experience child maltreatment than children in the suburban areas of Cuyahoga County. A recent study found that children living in Cleveland are between two and three times more likely than children residing in the suburban areas of the County to be investigated for child maltreatment annually. Overall, 6.9% of children under age six in Cuyahoga County were involved with the Department of Children and Family Services, compared to 7.7% in 2008<sup>67</sup>.

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<sup>67</sup> Center on Urban Poverty and Community Development, March 2014, "Cuyahoga County Child Maltreatment: Early Childhood Data Brief

## 1.24 Criminal justice involvement

### 1.24.1 Crimes known to law enforcement

Estimates for the county residents' involvement in criminal justice and juvenile justice systems come from various sources. Table 1.24.1 shows crimes known to law enforcement and rates per 10,000 residents for eight specific types of crimes. The national data come from the Federal Bureau of Investigation's *Crime in the United States* report for 2017, and the state, county, and city data come from data collected by the Ohio Office of Criminal Justice Services for the same year.

Table 1.24.1 Crimes known to law enforcement and rate per 10,000, 2017<sup>68</sup>

Crime		U.S.	Ohio	Franklin County	Hamilton County	Cuyahoga County	Cleveland
Total population		325,719,178	10,829,974	1,255,106	780,910	385,351	<b>1,121,251</b>
Total crime	Number of incidents	8,977,306	292,030	47,788	29,834	<b>36,850</b>	24,943
	Rate	275.61	269.65	380.75	382.04	<b>328.65</b>	647.28
Violent crime	Number of incidents	1,283,220	32,872	4,910	3,622	<b>7,142</b>	5,999
	Rate	39.40	30.35	39.12	46.38	<b>63.70</b>	155.68
Property crime	Number of incidents	7,694,086	259,158	42,878	26,212	<b>29,708</b>	18,944
	Rate	236.22	239.30	341.63	335.66	<b>264.95</b>	491.60

Source: Crime in the United States, 2017

Cuyahoga County experienced many types of offenses at twice the national or state crime rates. This means that residents of Cuyahoga County are twice as likely to experience these types of crimes than the populations nationally or statewide are to experience these types of crimes. For instance, the rate of murder and nonnegligent manslaughter for Cuyahoga County (1.18) is twice that of the U.S. as a whole (0.53), indicating that Cuyahoga County residents are twice as likely to be victims of murder and nonnegligent manslaughter than the people nationally. Crime rates are even more staggering in Cleveland, where the rate of violent crime (155.68) is more than four times the national rate (39.40), indicating that residents of Cleveland are four times more likely than the national population to experience violent crimes.

<sup>68</sup> All data, except for the U.S., come from Ohio Office of Criminal Justice Services ([https://www.ocjs.ohio.gov/crime\\_stats\\_reports.stm](https://www.ocjs.ohio.gov/crime_stats_reports.stm)). The national data come from the 2017 Crime in the United States (<https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017>). The total population is from these two data sources and might be different from the U.S. Census estimates.

Table 1.24.2 shows crimes known to law enforcement and rates per 10,000 residents for eight specific types of crimes. The rates of all types of crimes are much higher for Cleveland compared to the national rates. For instance, the rate of murder and nonnegligent manslaughter for Cleveland (2.78) is more than five times the national rate (0.53).

Table 1.24.2 Crimes known to law enforcement and rate per 10,000, 2017<sup>69</sup>

Crime		U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Total population		325,719,178	10,829,974	1,255,106	780,910	<b>1,121,251</b>	385,351
Murder and nonnegligent manslaughter	Estimated incidents	17,284	686	151	84	<b>132</b>	107
	Rate	0.53	0.63	1.20	1.07	<b>1.18</b>	2.78
Rape	Estimated incidents	135,755	5,271	1,028	461	<b>640</b>	497
	Rate	4.17	4.87	8.19	5.90	<b>5.71</b>	12.90
Robbery	Estimated incidents	319,755	11,129	2,148	1,460	<b>3,209</b>	2,697
	Rate	9.8	10.28	17.11	18.70	<b>28.62</b>	70.00
Aggravated assault	Estimated incidents	810,825	15,786	1,583	1,617	<b>3,161</b>	2,698
	Rate	24.89	14.58	12.61	20.71	<b>28.19</b>	70.01
Burglary	Estimated incidents	1,401,840	54,716	8,140	5,073	<b>7,604</b>	5,853
	Rate	43.04	50.52	64.86	64.96	<b>67.82</b>	151.89
Larceny-theft	Estimated incidents	5,519,107	185,087	30,296	19,017	<b>17,807</b>	9,696
	Rate	169.44	170.90	241.38	243.52	<b>158.81</b>	251.61
Motor vehicle theft	Estimated incidents	773,139	19,355	4,442	2,122	<b>4,297</b>	3,395
	Rate	23.74	17.87	35.39	27.17	<b>38.32</b>	88.10
Arson	Estimated incidents	-	1,783	403	32	<b>278</b>	253
	Rate	-	1.65	3.21	0.41	<b>2.48</b>	6.57

Source: Ohio Office of Criminal Justice Services and the 2017 Crime in the United States

<sup>69</sup> All data, except for the U.S., come from Ohio Office of Criminal Justice Services ([https://www.ocjs.ohio.gov/crime\\_stats\\_reports.stm](https://www.ocjs.ohio.gov/crime_stats_reports.stm)). The national data come from the 2017 Crime in the United States (<https://ucr.fbi.gov/crime-in-the-u.s/2017/crime-in-the-u.s.-2017>). Total population are from these two data sources and might be different from the U.S. Census estimates.

### 1.24.2 Arrests

Table 1.24.3 shows the number of arrests for the U.S. and Ohio separately for adults and juveniles (age below 18), three counties, including Cuyahoga County, and Cleveland. The data on the table come from the Federal Bureau of Investigation's *Crime in the United States* report for 2018.

According to the FBI, a total of 238,446 arrests were made in Ohio in 2018, which amounted to about 20.4 arrests per every 1,000 residents in Ohio. This does not mean that 238,446 residents of Ohio were arrested that year because many offenders are arrested more than once in any given year. Drug use violation, which includes sales, manufacturing, and possession of illegal substances, constitutes 18.2% of all arrests in Ohio in 2018.

Table 1.24.3 Number of arrests from the Uniform Crime Reports, 2018<sup>70</sup>

Crime	U.S. (Adults)	U.S. (Juvenile)	Ohio (Adults)	Ohio (Juvenile)	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Aggravated Assault	324,056	17,746	6,637	502	425	702	<b>559</b>	395
All Other Offenses (Except Traffic)	2,708,654	92,668	63,713	5,685	-	-	-	355
Arson	7,541	1,204	283	119	12	4	<b>23</b>	9
Burglary	148,488	14,121	3,933	396	405	567	<b>342</b>	140
Curfew and Loitering Law Violations	17,605	11,445	396	382	238	27	<b>43</b>	-
Disorderly Conduct	271,253	38,148	10,480	1,722	781	600	<b>640</b>	57
Driving Under the Influence	793,552	3,468	14,479	61	1,866	401	<b>1,398</b>	187
Drug Use Violations - Grand Total	1,352,038	59,598	42,900	1,675	4,489	1,661	<b>3,838</b>	549
Drunkenness	269,022	2,263	6,009	41	536	99	<b>582</b>	-
Embezzlement	12,201	391	19	-	-	-	-	-
Forgery and Counterfeiting	42,208	730	879	14	171	104	<b>45</b>	2
Fraud	100,668	2,457	2,270	119	22	33	<b>30</b>	22
Gambling - Total	2,732	79	23	5	-	-	-	1
Larceny - Theft	747,142	65,521	28,673	2,351	-	-	-	107
Liquor Laws	141,314	18,263	4,976	409	1,056	268	<b>750</b>	4
Manslaughter by Negligence	974	-	13	-	-	-	-	-
Motor Vehicle Theft	74,285	8,547	957	199	320	205	<b>119</b>	23
Murder and Nonnegligent Manslaughter	10,166	526	271	17	63	37	<b>19</b>	16
Offenses Against the Family and Children	73,900	2,168	1,347	138	-	-	-	-
Prostitution and Commercialized Vice	24,944	120	807	5	471	15	<b>46</b>	29
Rape	20,659	2,600	545	79	68	49	<b>54</b>	33
Robbery	72,697	9,659	1,970	275	427	384	<b>227</b>	144
Sex Offenses (Except Rape, and Prostitution and Commercialized Vice)	38,204	4,992	487	92	-	-	-	22
Simple Assault	878,930	-	36,338	-	2,395	3,266	<b>2,023</b>	1,465
Stolen Property: Buying, Receiving, Possessing	78,788	5,971	2,944	337	-	-	-	63

<sup>70</sup> <https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/persons-arrested>

Crime	U.S. (Adults)	U.S. (Juvenile)	Ohio (Adults)	Ohio (Juvenile)	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
Suspicion	447	29	4	2	-	-	-	-
Vagrancy	18,581	468	20	1	-	-	-	-
Vandalism	148,826	20,602	3,924	760	599	1,021	<b>377</b>	41
Weapons: Carrying, Possessing, Etc.	137,808	10,298	4,294	327	1,145	223	<b>873</b>	170
<b>TOTAL</b>	<b>8,517,683</b>	<b>394,082</b>	<b>239,591</b>	<b>15,713</b>	<b>15,489</b>	<b>9,666</b>	<b>11,988</b>	<b>3,834</b>

Source: Crime in the United States, 2018



### 1.24.3 Corrections

The National Prisoner Statistics (NPS) program is conducted annually by the Bureau of Justice Statistics under the U.S. Department of Justice. The NPS collects information on prisoners from the state department of corrections and the Federal Bureau of Prisons. The Annual Probation Survey and Annual Parole Survey (ASPP) collects information on the population of U.S. adults who are supervised by the U.S. probation and parole agencies. Table 1.24.4 shows the number of people under the supervision of adult correctional system in the U.S. and Ohio.

According to the NPS<sup>71</sup>, 2,162,400 people were incarcerated in local jails or prisons in the U.S. at the end of 2016, of these, 34.3% of them were in local jails. More than 90% of those incarcerated in prison nationally are males (93%), and most inmates in prisons are sentenced to more than one year (97%). A disproportionately higher percentage of African Americans prisoners are sentenced more than one year (33.1%), while whites make up only 30.3%. African Americans were sentenced to prison (1,549 per 100,000) at more than five times the rate as whites (272 per 100,000). In Ohio, 71,000 people were incarcerated in local jails and prisons in 2016, of which 91.4% are males. An estimated 256,400 people were under parole or probation supervision in Ohio in 2016.

Table 1.24.4 Number of people under the supervision of adult correctional system, 2016

Correctional systems	U.S.	Ohio
Total correctional population	6,613,500	326,200
Local jail	740,700	71,000
Prison	1,505,400	
Probation	3,673,100	256,400
Parole	874,800	

Source: National Prisoner Statistics, 2016

Additional Ohio information on the correction population comes from the 2019 report by the Ohio Department of Rehabilitation and Correction (ODRC)<sup>72</sup>. According to the ODRC 2019 report, Cuyahoga County had the highest number of commitments with a total of 7,396 inmates and 15.2% of the total incarcerated offenders of Ohio. Of those, 95.5% are males, and a disproportionately high, 75.1% are African Americans. In Ohio, a total of 36,895 individuals were under adult parole authority supervision in 2019. Of these, the majority of them are under post-release control (53.9%), and drug offenses (24.2%) are the most prevalent offense type.

<sup>71</sup> <https://www.bjs.gov/content/pub/pdf/cpus16.pdf>

<sup>72</sup> <https://drc.ohio.gov/Portals/0/Annual%20report%20final%20ODRC.pdf>

## 1.25 Conclusion

- Cuyahoga County is the second-largest county by population in Ohio, with 1.2 million residents. Cleveland, the county's seat, is the second-largest city in Ohio, and about 30% of the county population resides in Cleveland.
- Cuyahoga County consists of slightly older people with a smaller proportion of those under 25 years of age and a larger percentage of those above 75 years old.
- A larger proportion of blacks or African Americans and a smaller proportion of Hispanics or Latinos makes the county uniquely different from the composition of race/ethnic groups nationally.
- Cuyahoga County residents are less likely to be married, and thus the county has more single-parent homes as compared nationally. This is problematic since marriage is significantly related to higher socioeconomic status (SES) and overall wellbeing mentally and physically.
- Cuyahoga County also has a consistently low SES compared nationally when measured by household income, unemployment rate, poverty, and educational attainment. The low SES of Cuyahoga County residents is, however, mainly explained by the low SES of residents in Cleveland.
- An estimated 50,426 residents in Cuyahoga County require help communicating in English.
- One measure of literacy indicates that 15% of the adults in Cuyahoga County and 31% of the adults in Cleveland are disadvantaged economically due to their lack of literacy skills.
- Cuyahoga County has a higher percentage of people with disabilities than the national percentage.
- Cuyahoga County had about 2,000 homeless persons one night in January in 2017, accounting for 20% of homeless people in Ohio.
- An estimated 42,816 adults who identify as LGBTQ reside in Cuyahoga County.
- Crime rates appear high in Cleveland and Ohio, where about 1.5 million people in Ohio experienced violence in one year.

- Rates of intimate partner violence and child maltreatment in Ohio are comparable to the national rates. There were 25,000 cases of child maltreatment in 2018. Ohio children are more likely to be victims with substance abuse caregivers than the national average, and the likelihood of child fatalities is also higher in Ohio than the likelihood nationally.
- In one year, Cuyahoga County had almost 37,000 incidents of crime known to the police. Most of them are property crimes.
- Cuyahoga County had about 12,000 arrests made in 2018. The offense with the highest arrests was drug use violations.
- There was a total of 326,200 adults under the supervision of the criminal justice system in Cuyahoga County in 2016.
- Cuyahoga County had the highest number of commitments with a total of 7,396 inmates and 15.2% of the total incarcerated offenders of Ohio. Of those, 95.5% are males, and a disproportionately high, 75.1% are African Americans.

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## **CHAPTER 2: CORRELATES AND RISK FACTORS FOR MENTAL ILLNESS AND SUBSTANCE USE**

### **2.1 Introduction**

Stress-process and life-course models (Elder 1995) help us understand risk factors and protective factors of mental illness and substance use. The combination of the two models, developed originally to understand disparities in health outcomes (e.g., outcome of cancer), provides a framework for understanding the multi-level sources and temporal growth of disparities in well-being. Personal life-course history reflects larger issues in the form of key social location factors such as family socioeconomic status; these in turn shape an individual's exposure to stressful occurrences and the resources available to manage them.

The stress-process model (Pearlin and Bierman 2013) connects such circumstances to the distress or well-being of those going through them. "Stress" is defined as the reaction that occurs when demands exceed resources, and over time, demands have come to be conceptualized as "stressors," which can come in the form of either discrete events or ongoing strains. Resources are what individuals use to respond to the "stress" caused by "stressors," in the form of coping strategies, social support, or psychological strengths. When the stress process works properly, as it does for most people most of the time, resources mediate or buffer the effects of stressors, preventing serious psychological distress and risks to mental health (Pearlin and Bierman 2013).

As Pearlin et al. (2005) have argued, living in conditions of low social and economic status makes a person susceptible to repeated hardships. Under such circumstances disadvantaged populations are more likely to be penalized for their disadvantage, and the consequences of such penalties are likely to be that much more devastating for those who are already struggling to get by (e.g., overdrafting checks and getting money from a check cashing place that incur a huge interest). This kind of event-instigated stress is conceptualized as stress proliferation (Pearlin and Bierman 2013).

Some groups, therefore, have higher rates of psychological morbidity and behavioral problems like substance use due primarily to the fact that, on average, they are subject to more stressful life conditions than are others without resources to cope with the increased stress (Pearlin et al. 2005; George, Lynch 2003). By this explanation, groups such as people with low socioeconomic status (SES) have lower quality of life because they have greater stress exposure, not because they are inherently more vulnerable individually. Indeed, research findings have consistently shown that personal economic disadvantage is the strongest predictor of elevated stress exposure (Turner and Avison 2003) and stress proliferation (Pearlin et al. 2005), with people of color being

overrepresented in lower SES populations and disproportionately affected (Williams, Costa, & Leavell 2017).

This chapter first reviews some of the correlates of substance use and mental illness, including gender, age, race/ethnicity, and living in urban/rural neighborhood. Then the chapter reviews risk factors for mental illness and substance use then includes both stressors and exacerbators that while increasing or exacerbating overall stress, decrease economical or psychological resiliency to handle stressful situations. Numerous studies have identified risk factors that relate to substance use and mental illness. One of the most important risk factors is chronic and severe poverty that, as found in Chapter 1, many Cuyahoga County residents experience, especially those who reside in Cleveland. Other factors discussed here include homelessness, domestic violence, exposure to violence, including physical, sexual, or emotional abuse or trauma experience, LGBTQ, single parenthood, school failure, and criminal justice involvement.

## **2.2 Gender**

According to the World Health Organization (WHO), gender is related to many of the risk factors for mental disorders and substance use discussed in this chapter. Though gender is not a cause of mental disorder, some researchers are examining the relationship between hormones and some forms of mental illness such as anxiety. The WHO (March 2, 2020) notes that mental health disorders affect almost half of the population over the course of their lifetime, though less than half of those with a mental health disorder have ever been diagnosed because most people do not seek treatment.

Though rates of mental disorder are similar between males and females, women are more likely than men to be diagnosed because women are more likely than men to seek treatment. The rates of common mental disorders, which affect 1 in every 3 people, including depression, anxiety, and somatic complaints, are higher among women than men, while men are more likely than women to be diagnosed with anti-personality disorder. There is no gender difference in the rates of severe mental disorders, including schizophrenia and bipolar disorder, which affect less than 2% of the population. Women are, however, more likely than men to suffer from comorbid disorders of three or more. (WHO, March 2, 2020).

Because alcohol use is pervasive, the gender difference in its prevalence is relatively small. According to the 2014 National Survey on Drug Use and Health (NSDUH), for instance, the percentage of lifetime alcohol use among people age 12 and older was 84.6% for males and 79.8% for females (Center for Behavioral Health Statistics and Quality 2015). The gender difference tends to be greater for more problematic drinking

behaviors, however, such as binge drinking (30.0% for males and 16.4% for females)<sup>73</sup>, heavy alcohol use (9.3% for males and 3.2% for female)<sup>74</sup>, and driving under the influence (13.7% for males and 7.4% for females)<sup>75</sup>, and, for its harmful consequences, such as the development of alcohol dependence or abuse (8.5% for males and 4.4% for females)<sup>76</sup> and receiving alcohol use treatment (1.4% for males and 0.7% for males)<sup>77</sup> (Center for Behavioral Health Statistics and Quality 2015).

Interestingly, the gender difference in substance use, including alcohol use, tends to be smaller among youth compared to older populations, reflecting the higher prevalence of deviance in general among youth, peaking around late teens to early twenties. The 2014 NSDUH, for instance, reports that the lifetime prevalence of drinking among people age 12 to 20 years old was 42.9% for males and 45.4% for females and the mean age of first alcohol use was 17.4 years old for males and 17.7 years old for females (Center for Behavioral Health Statistics and Quality 2015). Like the age of onset of drinking, the gender difference in alcohol use has possibly decreased over time. According to the Monitoring the Future Survey reports, for instance, there was a 23 percentage-point difference between male and female 12<sup>th</sup> graders in the prevalence of “having five or more drinks in a row” in 1975 and the gender difference shrunk to five percentage-point difference in 2014 (Johnston et al. 2015).

Males are more likely than females to use all type of illicit substances, though the gender difference in the use of marijuana is small like alcohol use, especially among youth. According to the NSDUH, the percentage of males age 12 and older who reported substance use disorder (SUD) in past year was almost twice (3.7%) of that for females (2.2%) in 2018. Much smaller percentage of both males (0.9%) and females (0.6%) age 12 and older, however, received treatment for illicit drug use in the past year (discussed more in Chapter 4).

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<sup>73</sup> The percentages are past-month prevalence among people age 12 or older.

<sup>74</sup> The percentages are past-month prevalence among people age 12 or older.

<sup>75</sup> The percentages are past-year prevalence among people age 12 or older.

<sup>76</sup> The percentages are past-year prevalence among people age 12 or older.

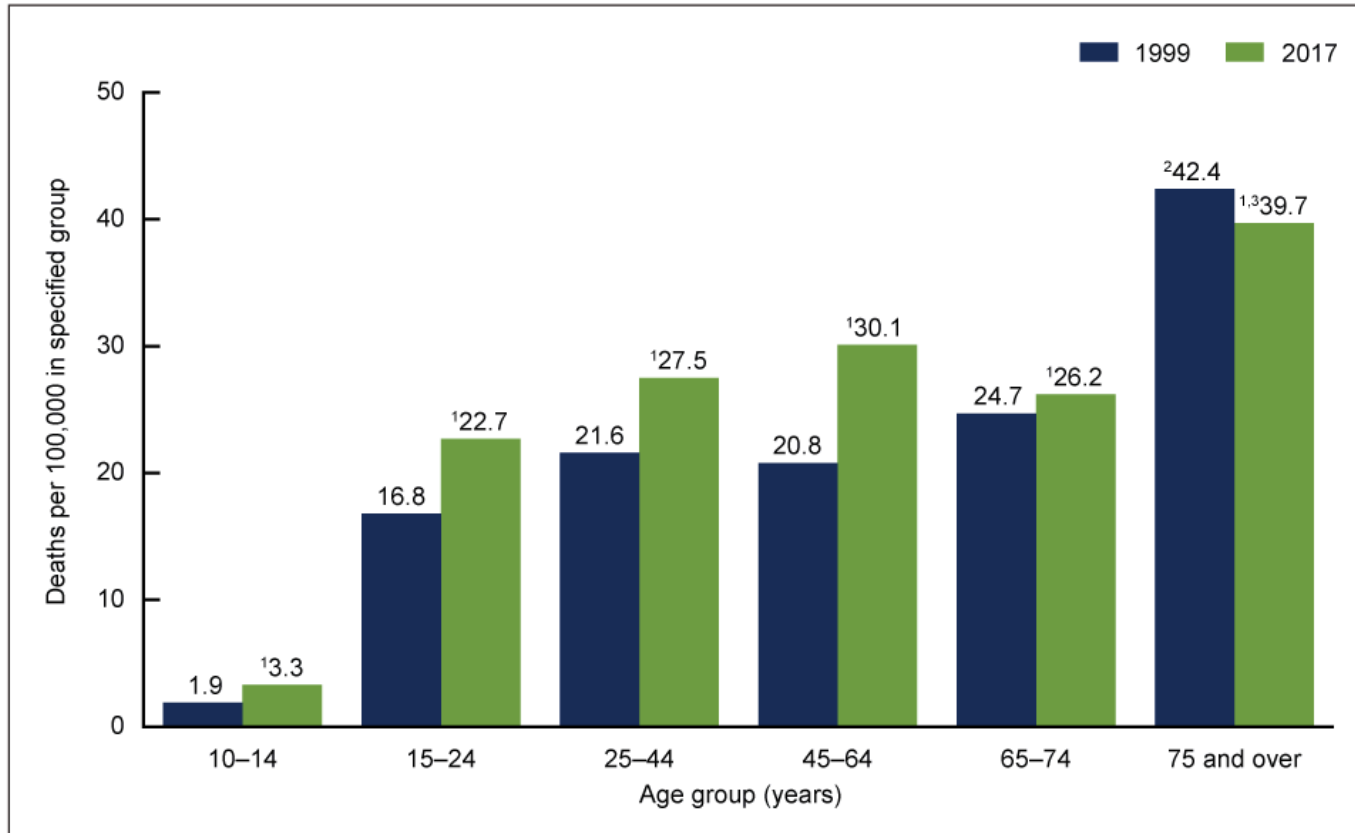
<sup>77</sup> The percentages are past-year prevalence among people age 12 or older.

## **2.3 Age**

The older age of Cuyahoga County population could potentially pose a number of problems as serious health issues are much more common among the older population. Suicide is often related to serious mental illness, and older men have the highest suicide rate among all age/gender groups. As Figure 2.3.1 shows, men over 85 years old have more than 4 times the higher rate of suicide death than the national average. Mental health disorders are, however, more prevalent overall among the younger population (See Figure 2.3.2), with almost half of adolescents age 13 to 18 experiencing at least one mental illness in their lifetime or 1 in 5 adolescents experiencing serious mental illness in their lifetime.



Figure 2.3.1 Suicide death rate by age, 1999 and 2017<sup>78</sup>



<sup>1</sup>Significantly different from 1999 rate,  $p < 0.05$ .

<sup>2</sup>Significantly higher than rates for all other age groups in 1999,  $p < 0.05$ .

<sup>3</sup>Significantly higher than rates for all other age groups in 2017,  $p < 0.05$ .

NOTES: Suicides are identified using *International Classification of Diseases, Tenth Revision* underlying cause-of-death codes U03, X60-X84, and Y87.0. Access data table for Figure 3 at: [https://www.cdc.gov/nchs/data/databriefs/db330\\_table-508.pdf#3](https://www.cdc.gov/nchs/data/databriefs/db330_table-508.pdf#3).

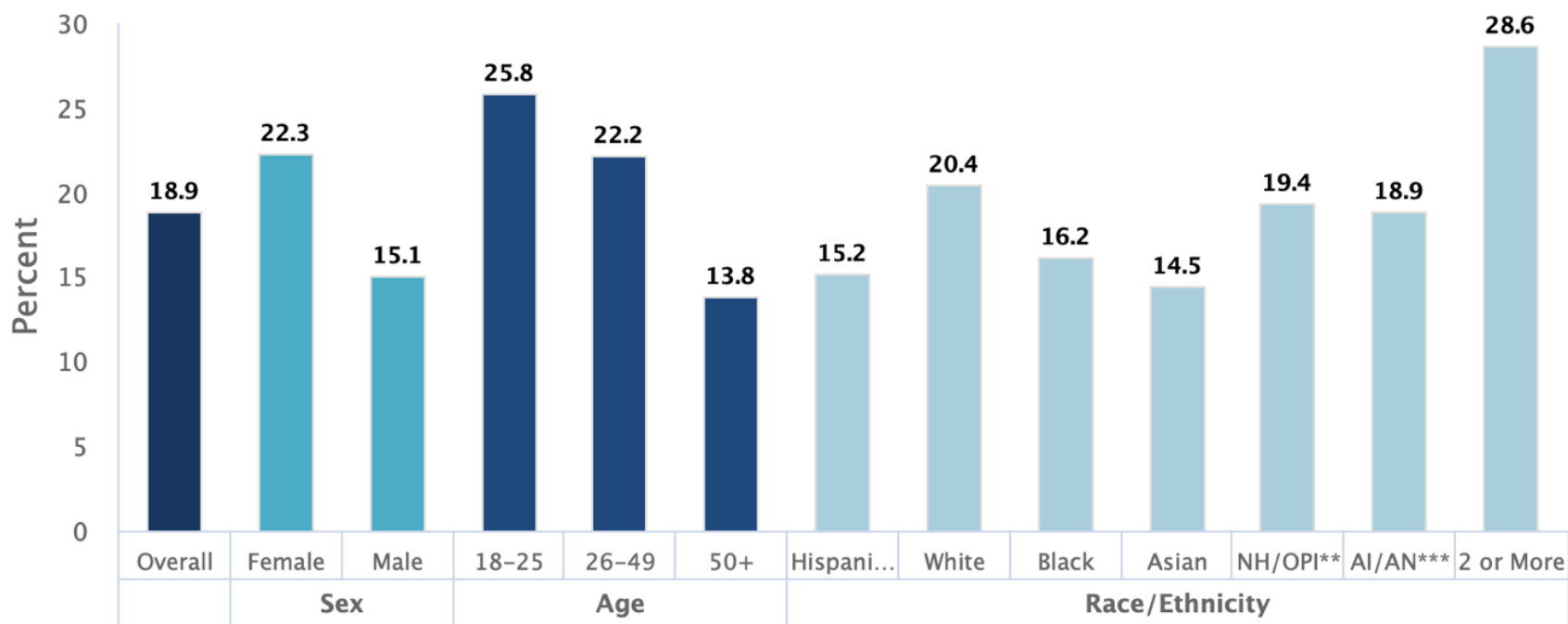
SOURCE: NCHS, National Vital Statistics System, Mortality.

Source: National Center for Health Statistics, 2018

<sup>78</sup> Hedegaard H, Curtin SC, Warner M. Suicide mortality in the United States, 1999–2017. NCHS Data Brief, no 330. Hyattsville, MD: National Center for Health Statistics. 2018.

<https://www.cdc.gov/nchs/products/databriefs/db330.htm>

Figure 2.3.2 Prevalence of mental illness among people age 18 and older, 2017<sup>79</sup>



Source: National Institute of Mental Health, 2017

<sup>79</sup> <https://www.nimh.nih.gov/health/statistics/mental-illness.shtml>

According to the NSDUH 2018, the age and past year use of illicit drugs has a curvilinear relationship, especially for past month use, with its peak around 18 to 25 years old (see Table 2.3.1 with peak age bolded). Past month use also peaks around 18 to 25 years old. This is similar to the age-crime curve, where crime and deviance tends to peak around late teen age to early 20s, and as people increase in the stake in conformity and responsibilities (e.g., work and family), the likelihood of engagement in crime and deviance generally decreases over time.

Overall, the more readily available the substance (e.g., cheaper price), the earlier the peak age of past year use/misuse. The past year use of marijuana peaks at 18-20 years old (35.2%), past year use of inhalants peaks at 12-13 years old (3.2%), the past year misuse of pain relievers peaks at 30-34 years old (5.6%), past year use of hallucinogen peaks at 21-25 years old (7.0%), past year use of methamphetamine peaks at 30-34 years old (1.6%), past year misuse of opioids peak at 30-34 years old (5.9%). The percentage of cocaine use is relatively small and the past year use of neither cocaine nor crack has a curvilinear relationship with 21-25 years old (6.6%) having the highest percentage of past year use of cocaine use and 60-64 years old (0.8%) having the highest past year use of crack.

Table 2.3.1 Lifetime, past year, and past month prevalence of Illicit substance use, 2018<sup>80</sup>

Age group	Lifetime use	Past year use	Past month use
12-13	11.3%	6.7%	2.1%
14-15	23.3%	15.3%	6.7%
16-17	36.0%	27.1%	14.8%
18-20	49.1%	<b>38.1%</b>	<b>23.6%</b>
21-25	<b>59.7%</b>	<b>40.2%</b>	<b>24.1%</b>
26-29	<b>62.8%</b>	31.1%	<b>21.2%</b>
30-34	<b>58.9%</b>	26.6%	17.1%
35-39	<b>57.5%</b>	21.7%	14.2%
40-44	52.1%	17.1%	12.1%
45-49	51.9%	15.9%	9.7%
50-54	57.3%	14.9%	8.4%
55-59	57.3%	15.1%	8.3%
60-64	58.4%	12.5%	8.1%
65+	32.5%	5.7%	3.2%

Source: National Survey on Drug Use and Health, 2018

<sup>80</sup> <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2018R2/NSDUHDetTabsSect1pe2018.htm>

## 2.4 Race/ethnicity

The NSDUH 2018<sup>81</sup> indicates that whites (20.4%) are more likely than blacks or African Americans (16.2%), Asian (14.7%) or Hispanics or Latinos (16.9%) to experience mental illness in the past year. Serious mental illness is also higher among whites (5.1%), compared to blacks or African Americans (3.6%), Asian (2.1%), or Hispanics or Latinos (3.6%). The race/ethnicity difference in the prevalence of co-occurring substance use disorder (SUD) and any mental illness in the past year was small: whites (3.9%), blacks or African Americans (3.6%), Asian (2.1%), and Hispanics or Latinos (3.3%).

Racial and ethnic minority populations are overall less likely to have access to mental health care and seek treatment compared to whites. The Agency for Healthcare Research and Quality (AHRQ) has been conducting the National Healthcare Quality and Disparities (QDR) study for over 16 years. Mandated by the U.S. Congress, the QDR reports on “national trends in the quality of health care provided to the American people” (42 U.S.C. 299b-2(b)(2)) and “prevailing disparities in health care delivery as it relates to racial factors and socioeconomic factors in priority populations” (42 U.S.C. 299a- 1(a)(6)). A SAMHSA report analyzing the NSDUHs 2008-2012 also found significant race difference in the utilization of mental health treatment by race, where white adults (16.6%) are significantly more likely than black (9.6%), Hispanic (7.3%) and Asian (4.9%) adults to utilize mental health services.

National Health Interview survey (NHIS) conducted by the Centers for Disease Control and Prevention (CDC)<sup>82</sup> indicates that non-Hispanic white males are more likely than non-Hispanic black males or Hispanic males to report experiencing feelings of anxiety and/or depression. Of the men who experienced anxiety or depression, 33% sought help through medications or talking to mental health professionals. Non-Hispanic white males are more likely than non-Hispanic black males or Hispanic males to take medication or talk to a mental health professional. The NHIS indicates, moreover, that the race/ethnicity differences in the prevalence of receiving mental health treatment are greater among men without health insurance than among men with health insurance.

Contrary to the popular belief based on the disproportionately higher arrest of blacks or African Americans for drug crimes, blacks or African Americans are not the group with the highest prevalence of substance use or SUD. Overall, American Indians or Alaskan

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<sup>81</sup> <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2018R2/NSDUHDetTabsSect1pe2018.htm>

<sup>82</sup> <https://www.cdc.gov/nchs/nhis/index.htm>

Natives and Native Hawaiians or Other Pacific Islanders tend to have the highest prevalence of substance use and substance use problems than other groups.

Among other groups, the NSDUH 2018<sup>83</sup> indicates that among persons age 12 and older, whites (54.6%) are more like than blacks or African Americans (45.9%), Asians (27.6%), or Hispanics or Latinos (37.7%) to ever use illicit drugs. The prevalence of illicit drug use is higher among whites compared to other groups (except for American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islanders) for every age group. The current illicit drug use, or the past month illicit drug use is, however, higher among blacks or African Americans (13.7%) compared to whites (12.0%), Asians (6.7%), and Hispanics or Latinos (9.7%). Contrary to the popular view, lifetime prevalence of crack use is not higher among blacks or African Americans (3.6%) compared to whites (3.8%).

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<sup>83</sup> <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2018R2/NSDUHDetTabsSect1pe2018.htm>

## 2.5 Urban vs. rural neighborhoods

The large prevalence of residents in the county residing in urban areas can pose problems for Cuyahoga County because not only are some mental illnesses more prevalent in urban areas compared to rural areas (Peen et al., 2010), urban areas also have higher risk factors for mental illness and substance use than rural areas (some of them discussed later in this chapter).

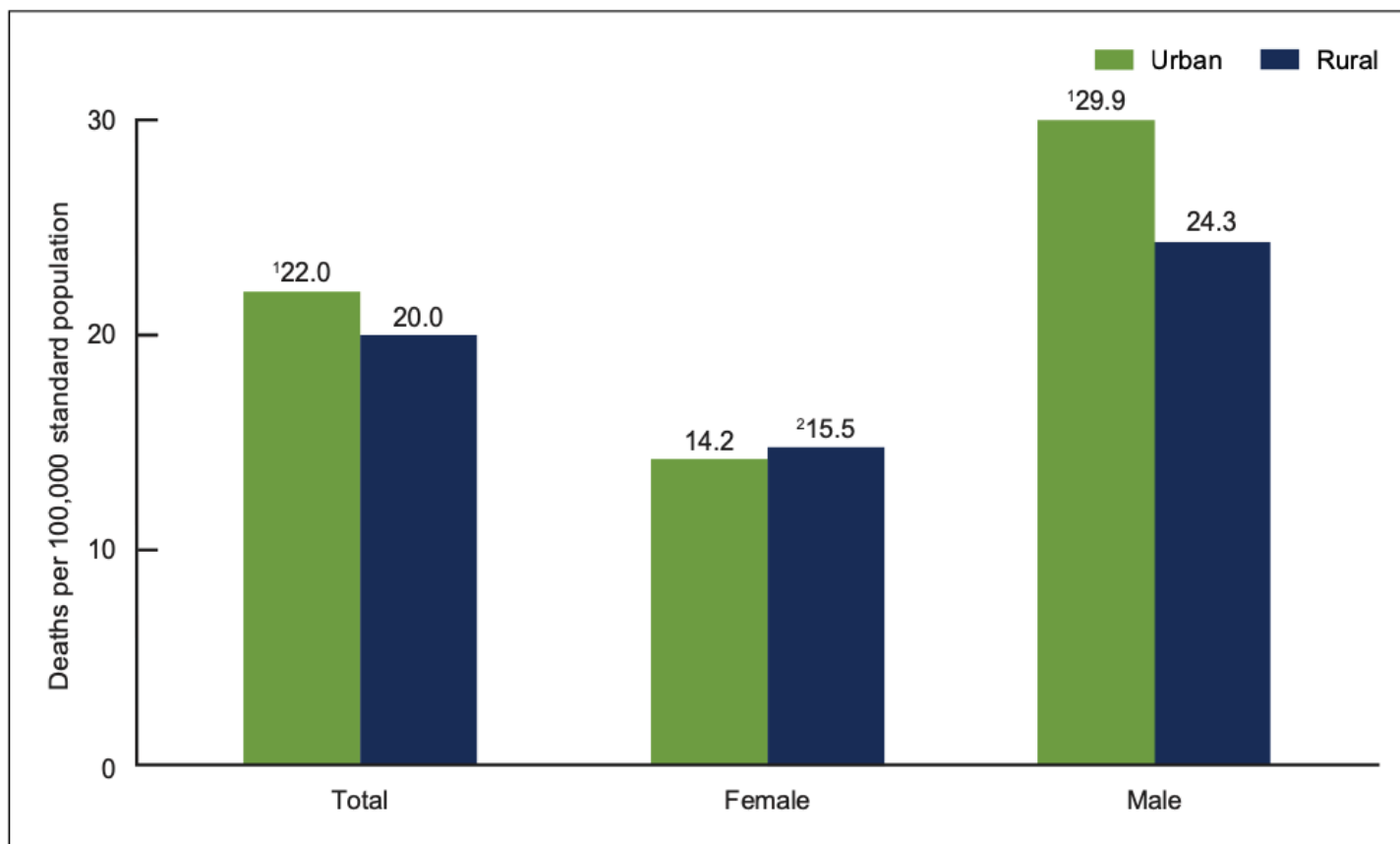
The NSDUH 2018 includes a question on the type of county respondents reside in, including large metro, small metro, and non-metro counties. There is no difference in mental illness prevalence between the three types of counties. About 15.3% of adults age 18 and older in large metro counties, 16.6% of adults age 18 and older in small metro counties, and 15.8% of adults age 18 and older in nonmetro countries indicate past year experiences with serious psychological distress.

Other mental illness measures also show no significant difference across the three types of counties. For instance, according to the NSDUH 2018, 11.5% of large metro, 12.8% of small metro, and 12.6% of non-metro county residents indicate that they had serious mental illness in the past year. Though the mental health differences in rural vs. urban areas of the U.S. are limited and inconclusive, some studies find a higher suicide rate in rural areas compared to urban areas, especially for firearm suicide (Nestadt et al. 2017).

According to the NSDUH 2018, the urbanized counties have a higher percentage of past year illicit drug use among people 12 years old or older: large metro counties (20.2%), small metro counties (19.8%), and non-metro counties (15.7%). Of the non-metro counties, the percentage of past year use of illicit drugs is: urbanized counties (17.1%), less urbanized counties (15.0%), and completely rural counties (12.5%).

The type of substance that is abused also varies between urban and rural areas with urban living associated with lower level of alcohol, marijuana, methamphetamine, and prescription drug abuse compared to rural areas (U.S. Department of Health and Human Services, 2012). Drug overdose deaths are overall higher in urban counties than rural counties for all age groups, however, only among males (see Figure 2.5.1). For females, on the other hand, drug overdose deaths are higher in rural counties than in urban counties (Hedegaard, Minino, and Warner, 2019).

Figure 2.5.1 Drug overdose death rates by gender, 2017<sup>84</sup>



<sup>1</sup>Significantly higher than rural rate,  $p < 0.05$ .

<sup>2</sup>Significantly higher than the urban rate,  $p < 0.05$ .

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying-cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Decedent’s county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Access data table for Figure 2 at:

[https://www.cdc.gov/nchs/data/databriefs/db345\\_tables-508.pdf#2](https://www.cdc.gov/nchs/data/databriefs/db345_tables-508.pdf#2).

SOURCE: NCHS, National Vital Statistics System, Mortality.

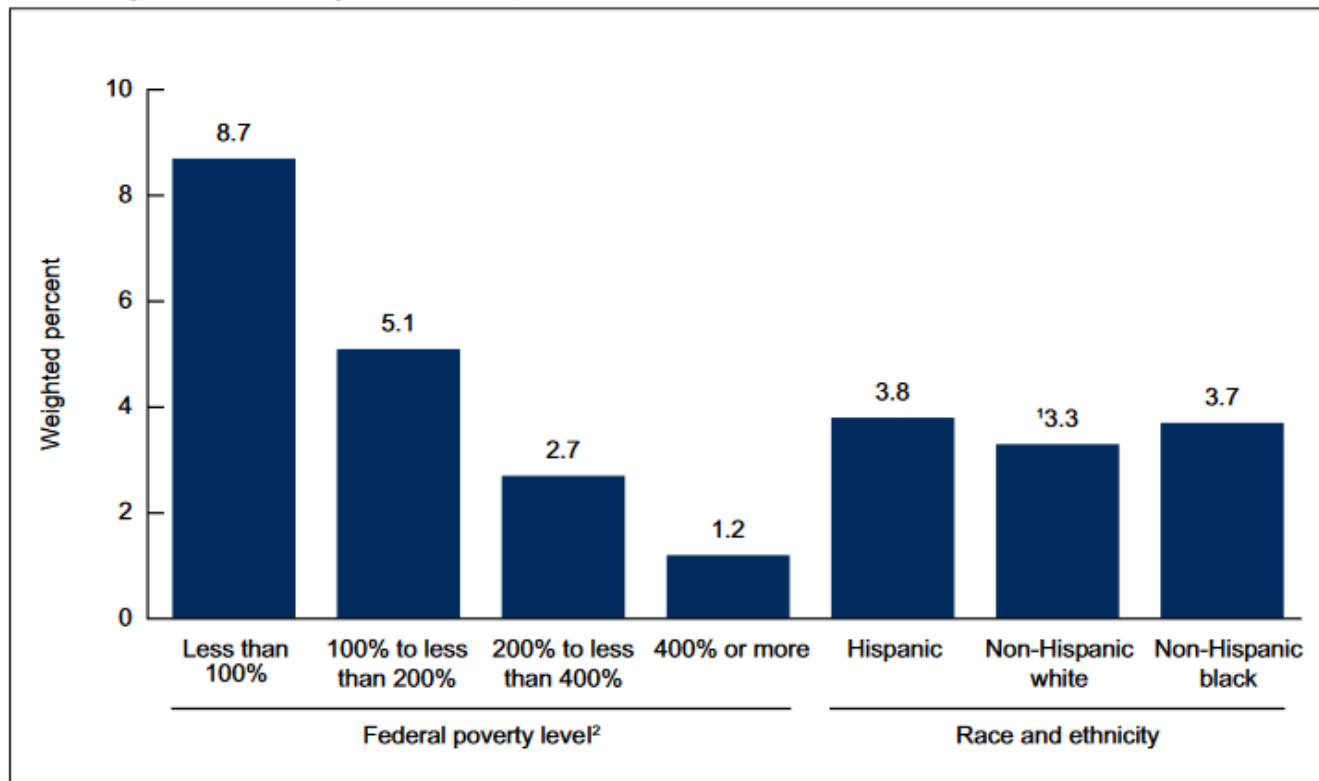
Source: National Center for Health Statistics, 2019

<sup>84</sup> Hedegaard H, Miniño AM, Warner M. Urban– rural differences in drug overdose death rates, by sex, age, and type of drugs involved, 2017. NCHS Data Brief, no 345. Hyattsville, MD: National Center for Health Statistics. 2019. <https://www.cdc.gov/nchs/data/databriefs/db345-h.pdf>

## 2.6 Poverty

Poverty, especially chronic poverty, is the most significant stressor or risk factor explaining negative health outcomes, including mental illness and substance use. Poverty is strongly related to mental illness, as shown in Figure 2.6.1, with an increase in poverty level related to an increasingly higher likelihood of experiencing serious psychological distress.

Figure 2.6.1 Percentage of adults with serious psychological distress by income relative to federal poverty level, 2009-2013<sup>85</sup>



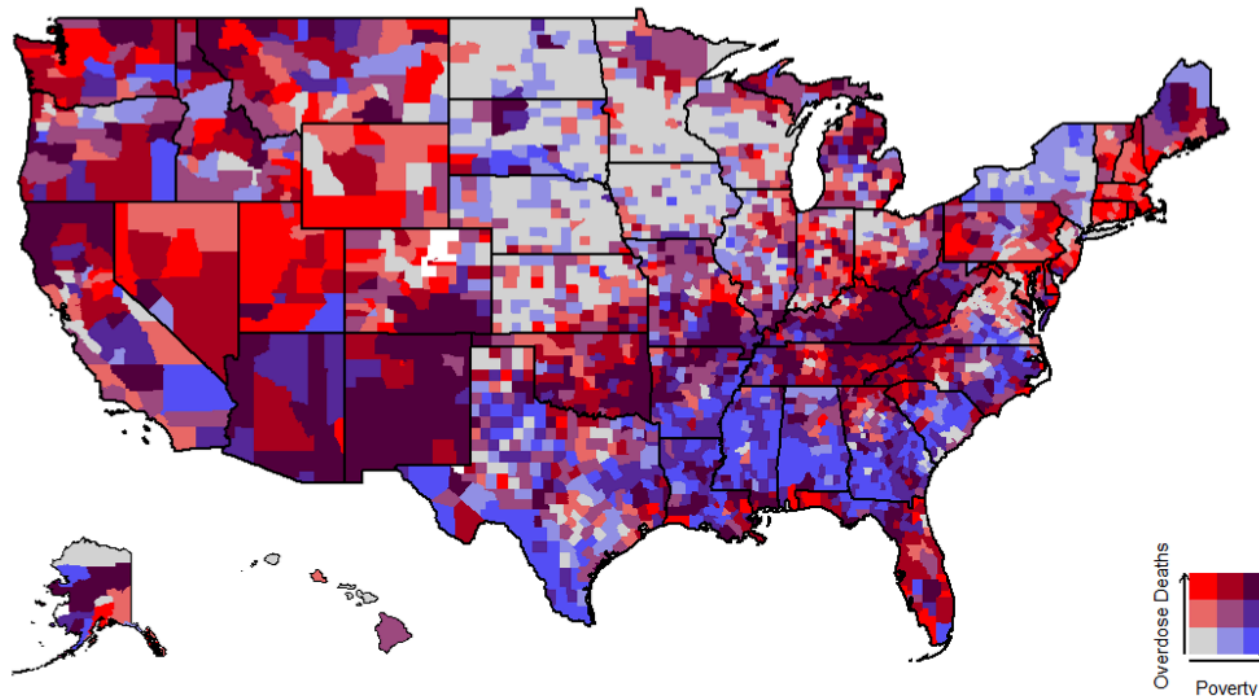
Source: National Health Interview Survey, 2009-2013

<sup>85</sup> <https://www.cdc.gov/nchs/products/databriefs/db203.htm>



Poverty is also significantly related to substance use as at the county level (see Figure 2.6.2), a high poverty rate is related to “higher rates of opioid prescriptions, opioid-related hospitalizations, and drug overdose deaths” (Ghertner and Groves, 2018). Another study also shows significantly strong relationship between poverty rates and per capita retail opioid sales and drug overdose death rates for some regions of the U.S.

Figure 2.6.2 Map showing the poverty rates and overdose death rates, 2016<sup>86</sup>



**Sources:** U.S. Census Bureau Small Area Income and Poverty Estimates, CDC Small Area Estimates of Drug Mortality.

**Note:** Each variable is split into tertiles.

Source: U.S. Department of Health and Human Services, 2018

<sup>86</sup> Ghertner and Groves (2018). The opioid crisis and economic opportunity: Geographic and economic trends. <https://aspe.hhs.gov/system/files/pdf/259261/ASPEconomicOpportunityOpioidCrisis.pdf>

## 2.7 Homelessness

According to the American Public Health Association (APHA), individuals experiencing homelessness have higher rates of chronic mental health conditions, co-occurring disorders, and experience greater barriers to health care. Twenty percent of individuals experiencing homelessness in 2016 reported a severe mental illness (APHA, November 7, 2017). Mental illness among individuals experiencing homelessness in the U.S. are twice the rate found for the general population according to the American Psychological Association (APA). People without homes also have higher rates of hospitalizations for mental illness compared to other populations. People with mental disorders experience greater barriers to accessible housing than those without mental health disorders (APA, April 24, 2020).

Homeless youths are also more likely than those not experiencing homelessness to have increased mental health issues. Children experiencing homelessness exhibit mental health symptoms requiring clinical evaluations two to four times more than children in low-income housing. Ninety percent of mothers experiencing homelessness have been exposed to severe traumatic stress (APHA, November 7, 2017). Forty-seven percent of women experiencing homelessness meet the criteria for a diagnosis of major depressive disorder, which is twice the rate of women in general (APA, April 24, 2020).

Lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) youths make up between 30% and 45% of the overall homeless youth population, compared to an estimated 5% to 10% of the overall youth population. LGBTQ youths experiencing homelessness are significantly more likely than heterosexual youths experiencing homelessness to have major depressive episodes, posttraumatic stress disorder, suicidal ideation, and at least one suicide attempt. (APHA, November 7, 2017).

According to the APHA, youths experiencing homelessness are more likely than those not experiencing homelessness to have increased substance abuse. Seventeen percent of individuals experiencing homelessness in 2016 reported a chronic substance use problem (APHA, November 7, 2017). People without homes also have higher rates of hospitalizations for substance abuse compared to other populations and people with substance use disorders experience greater barriers to accessible housing than those without substance disorders (APA, April 24, 2020).

According to the Substance Abuse and Mental Health Services Administration (SAMHSA) around 30% of people who are chronically homeless have mental health conditions and about 50% of those have co-occurring substance use problems. Mothers who are homeless have twice the rate of drug and alcohol dependence. When compared to housed peers or the general adolescent population, youth experiencing

homelessness have a higher risk of risk of alcohol or drug abuse or dependence. LGBTQ youth experiencing homelessness also have a higher risk for substance use (SAMHSA, July 2011).

## **2.8 Single parenthood**

As noted in Chapter 1, Cuyahoga County has a low proportion of residents who are married and a high proportion of residents who are single compared to the national prevalence. This is problematic because marital status is consistently found to be related to overall health, including mental health (Cotton 1999), and deviant behaviors like substance use (Barnes et al. 2014). Studies find that married individuals are overall healthier and live longer than never married, divorced, or widowed individuals (Lawrence et al. 2019). Suicide rate is higher among those who are single compared to those who are married (Luoma and Pearson 2002).

Marital status affects mental health in different ways. For instance, marriage increases the social network of support, which then increases the likelihood of detecting any problems and helping to find resources to solve the problems (Colten 1999). Overall, marriage can serve as a “protective barrier against the distressful consequences of external threats” and reduce the likelihood of experiencing mental distress (Perlin and Johnson 1977, 717).

Substance use is significantly related to marital status, where those who are married are less likely to use substances or experience substance use disorder than those who are not married (Blair and Menasco 2016). A study finds that the early onset of alcohol use significantly increases the risk of divorce and decreases the chance of marriage for women (but not for men), while the early onset of marijuana use significantly decreases the chance of marriage for both men and women (Menasco and Blair 2014).

Marriage generally fosters desistance from deviant behaviors like substance use, but the quality of the relationship matters. Just as the research finds that toxic relationships can increase mental illness (Colten 1999), studies find that marriage’s protection against substance use only works if the relationship is strong and healthy but could actually backfire if the relationship is unhealthy and stressful (Sinha 2018).

## 2.9 Veteran status

The research examining the mental illness among veterans is extensive. According to a study by the National Center for Health Statistics (MCHS), a national health statistics agency within the Centers for Disease Control and Prevention (CDC), the percentage reporting serious psychological distress, experience with chronic illness, and work limitations was higher among veterans than among nonveterans (Kramarow and Pastor, 2012).

In addition, veterans are uniquely more likely to suffer from a mental health condition called Posttraumatic Stress Disorder (PTSD). According to National Center for PTSD within U.S. Department of Veterans Affairs, about 10-30% of veterans experience PTSD in their lifetime (the percentage varies by service era) and “almost 1 out of every 3 veterans seeking treatment for SUD also have PTSD” and “more than 1 of every 4 veterans with PTSD also have SUD” (National center for PTSD, n.d.). Rough estimate based on the national studies suggest that Cuyahoga County has between 7,418 and 21,125 of veterans who have experienced PTSD in their lifetime.

Alcohol, illicit drug, and tobacco use has been common in the U.S. military, where alcohol is often ingrained as a part of its culture (Institute of Medicine 2013). In addition, deployments and exposures to combats often increase alcohol use and drinking problems (Spera 2011). Alcohol is often sold cheaper in military bases, which can fuel the problems with drinking.

Since the 1980s, most popularly consumed illicit drug among active duty personnel has been marijuana (Bray et al. 2009). Illicit drugs have been used by service members to cope with “pain, fatigue, and boredom and panic” that accompany the job (Institute of Medicine 2013). In recent years, the misuse of prescription pain medications among active duty members, resulting from the prescription of pain medications, had been a major problem, as the increase in the misuse of this medication was more rapid among service members than in the general public (Bray et al 2012). As many problematic behaviors like suicide are related to substance use, the rise in SUDs among military personnel has been a major problem for the nation (Teeters et al. 2017).

## **2.10 Disability**

According to the CDC, individuals who suffer from chronic illnesses are more likely to suffer from depression (October 2012). The World Health Organization (WHO) notes that while some chronic illnesses directly affect the brain, others may develop a psychological burden from the challenges of living with the chronic condition like needing to alter their lifestyle or coming to terms with the idea of a prolonged illness or premature death (WHO, August 27, 2012). Research suggests that individuals with a chronic illness and depression tend to have more severe symptoms of both illnesses (NIMH, April 16, 2020).

The number of individuals with physical disabilities and substance use disorder is difficult to estimate according to the Substance Abuse and Mental Health Services Administration (SAMHSA). Some studies suggest that individuals with disabilities have higher rates of substance use compared to the general population, but other studies show lower rates of substance use. Regardless, active substance use can harm the health and quality of life of those with disabilities. Active substance use can impact successful engagement in rehabilitation services, interact with prescribed medications, delay coordination and muscle control, impair cognition, reduce adherence to self-care regimens, aid in social isolation, poor communication, and domestic issues, lead to poor health, secondary disabling conditions, or speed up the effects of disabling diseases, hinder educational advancement, and contribute to job loss, underemployment, and housing instability (SAMHSA, August 2011).

## **2.11 LGBTQ**

Youth who identify as lesbian, gay, bisexual, transgender, or questioning (LGBTQ) are more likely to experience difficulties growing up, including homelessness and involvement in child welfare, compared to heterosexual youth (Forge et al. 2018). Studies consistently find a higher suicidality (e.g., thinking, attempting, or completing suicide) among sexual minority youth compared to heterosexual youth (Bostwick et al. 2014).

Deep ingrained structural discrimination against sexual minorities and stigma associated with LGBTQ partially explain the negative health outcomes, including mental health outcomes, among sexual minorities (Williams and Mann 2017). Poor social network among LGBT was also found to be related to poor mental health outcomes (Kim et al. 2017). Other mental health disparities across sexual orientation include distress, depression, and anxiety and mood disorders (Williams and Mann 2017).

Studies consistently find a higher likelihood of substance use and drinking and associated problems among sexually minority youth and adults compared to heterosexual individuals (Lock and Steiner 1999). Much research associates the higher prevalence of substance use problems among sexual minority population to the greater stress experienced by this population due to structural discrimination and stigma compared to heterosexual population (Brewster and Tillman 2012). The NSDUH 2018 shows that the past year prevalence of SUD or alcohol use disorder is higher among lesbian or gay (4.3%) and bisexual (3.5%) than among heterosexual (1.2%) respondents age 12 and older.

## **2.12 School failure**

Early onset of mental illness can adversely affect the ability to function in society later in life through its negative effect on educational attainment and thus socioeconomic status (SES). Research finds a significant relationship between early onset of mental illness and school drop out before elementary school graduation, high school graduation, college entry, and college graduation (Breslau 2008). One study estimates that almost half of all high school dropouts could be attributed to the long-term negative effect of mental illness (Vander Stoep et al. 2003). Lack of education, and thus the resulting low SES and earning capacity, can then lead to increased risk of developing mental illness in the future, creating a vicious cycle (Hudson 2005).

School dropout and disengagement are significantly associated with engagement in deviant behaviors, including substance use (Kirisci et al., 2007). Mental illness is also associated with substance use among youth (D'Amico, Edelen, Miles, & Morral, 2008). Like mental illness, early onset of substance use is significantly associated with subsequent poor social outcomes, including educational attainment (Flory, Lynam, Milich, Leukefeld, & Clayton, 2004). A study found a significant and direct relationship between early onset of alcohol and substance use and high school dropout among white and African American males (Perez et al. 2002).

## **2.13 Domestic violence**

Studies find that domestic violence is one of the major causes of mental illness, including suicidal behaviors, and substance use among women (World Health Organization 2013). Indeed, gender bias and gender injustice resulting from the larger structural gender inequality, can produce mental health problems for women. For instance, when women experience sexual harassment at school or work (Pathak and Mishra 2019). The prevalence of experiencing domestic violence is higher among homeless women because domestic violence often leads to homelessness for women.

Homelessness then increases the risk of further victimization for these women, many of whom resort to sex work and drug use to cope with the stressful situation. Women who experience domestic violence often resort to drug use to cope with the violence (Sales and Murphy 2000).

## **2.14 Exposure to violence and other adverse childhood experiences**

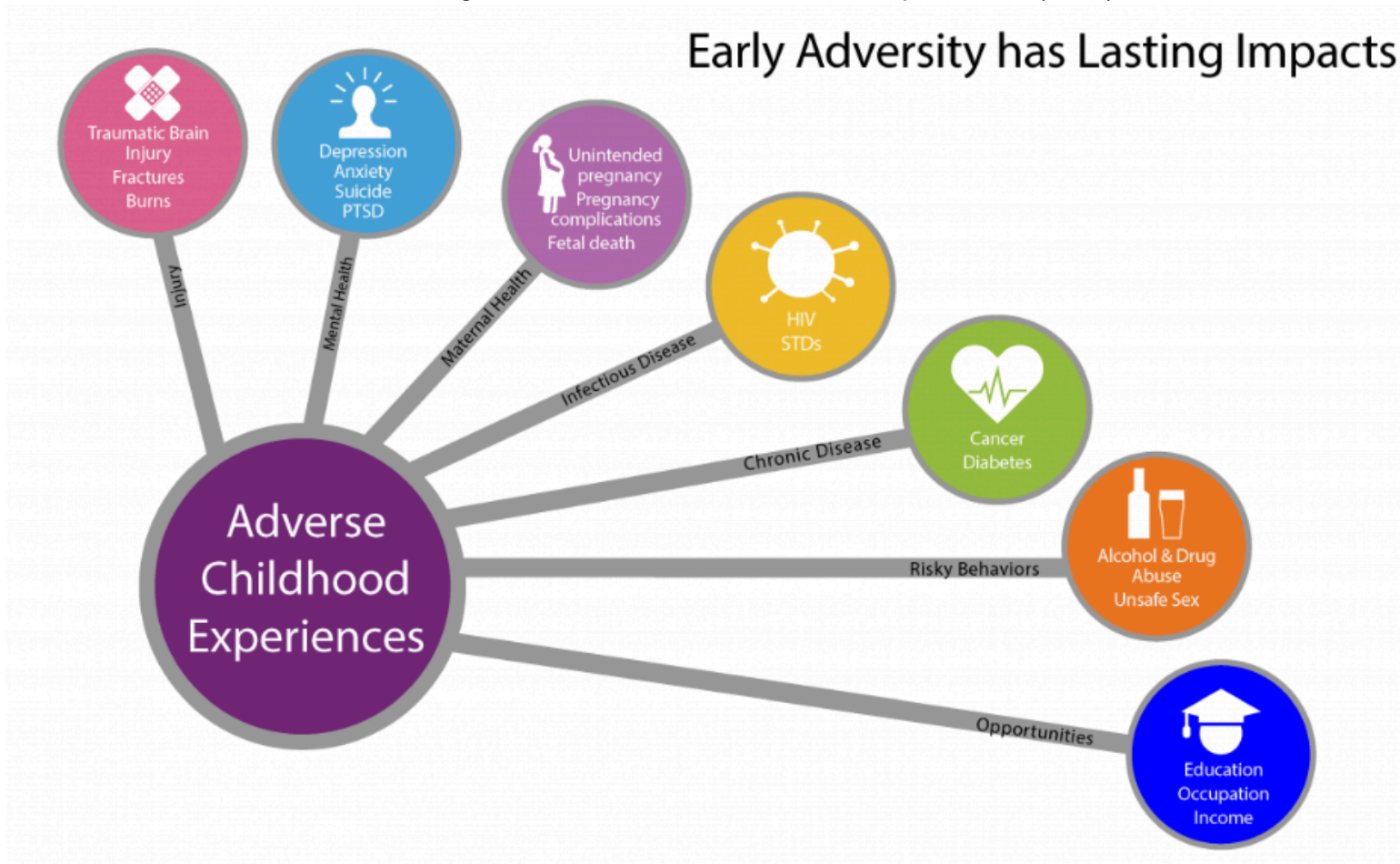
Exposure to violence in childhood, in the forms of experiencing psychological, physical or sexual abuse, witnessing violence against mother, living with household members who were substance abusers, mentally ill, or suicidal or ever imprisoned are significantly associated with health status in adulthood, including mental illness and developing a substance use disorder.

The original study of Adverse Childhood Experiences (ACE) by Felitti and colleagues (Felitti et al., 1998) found a graded relationship between the number of categories of childhood exposure to adverse experiences compared to those who had none. Persons who had experienced four or more categories of childhood exposure had a 4- to 12- fold increased health risks for alcoholism, drug abuse, depression, and suicide attempt, as well as a 2- to 4- fold increase in smoking, poor rated self-health, increases in sexual intercourse partners, and sexually transmitted disease, and a 1.4 to 1.6 fold increase in severe obesity.

The number of categories of adverse childhood experiences showed a graded relationship to the presence of adult diseases, including heart disease, cancer, lung disease, fractures, and liver disease (Felitti et al., 1998). Subsequent studies found a significant relationship between adverse childhood experiences (Dube et al., 2002) and depression in adulthood (Chapman et al., 2004).

As illustrated below, early adversity has lasting impacts, into adulthood, including mental health concerns, alcoholism, and drug abuse.

Figure 2.14.1 Adverse Childhood Experiences (ACE)<sup>87</sup>



Source: Center for Disease Control and Prevention

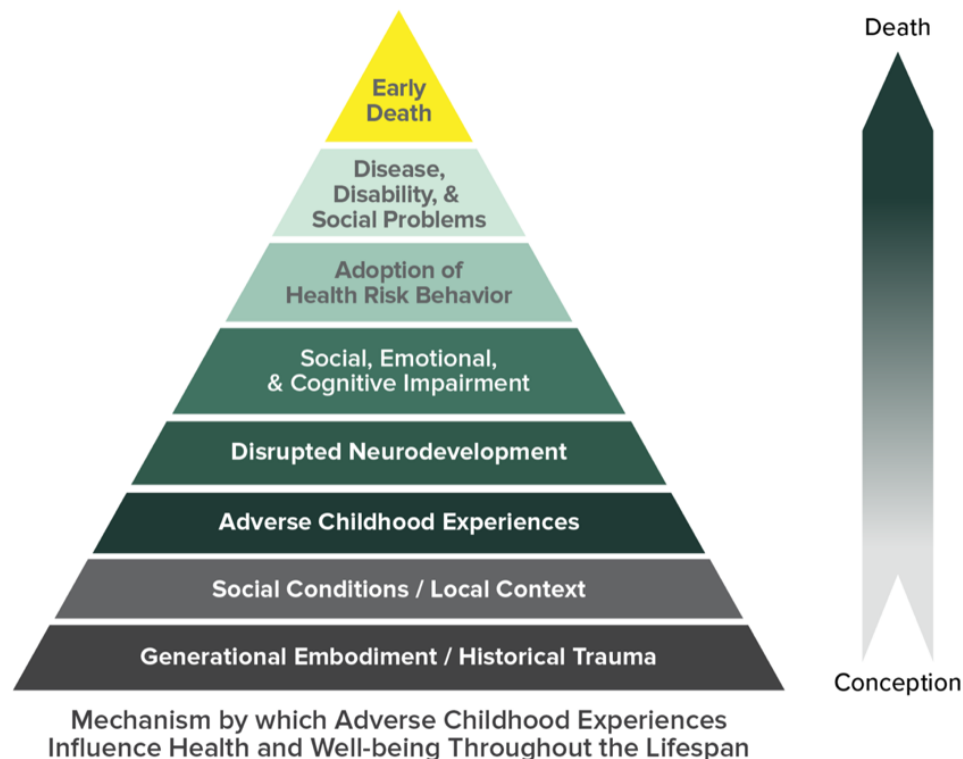
<sup>87</sup>

[https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/resources.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fchildabuseandneglect%2Facestudy%2Fjournal.html](https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/resources.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fchildabuseandneglect%2Facestudy%2Fjournal.html)



Figure 2.14.2 illustrates the relationship between historical trauma, health disparities found in the local context such as neighborhoods and community, adverse childhood experiences, individual adoption of health risk behaviors, development of disease and disability, and early death. The figure summarizes the relationship between risk factors included in this chapter, and mental illness and substance abuse, both of which if left untreated, can contribute to early death.

Figure 2.14.2 The ACE Pyramid<sup>88</sup>



Source: Center for Disease Control and Prevention

88

[https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/resources.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fchildabuseandneglect%2Ffacestudy%2Fjournal.html](https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/resources.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fchildabuseandneglect%2Ffacestudy%2Fjournal.html)

## 2.15 Criminal justice involvement

The movement to deinstitutionalize patients from state psychiatric institutions into the community that began in the 1950s through 1970s followed an increase in arrest and incarceration of psychiatric patients, especially those with criminal record (Monahan and Steadman 1983). Today, the National Institute of Corrections within the U.S. Department of Justice (2014) indicates "...the number of individuals with serious mental illness in prisons and jails now exceeds the number in state psychiatric hospitals tenfold," even though prisons and jails rarely provide adequate treatment for these psychiatric patients. It is not that mental illness causes people to commit crime, rather the high prevalence of mental illness among incarcerated population is the result of poorly implemented policy and state's failure to provide adequate treatment and protection for the vulnerable population. Police officers who frequently encounter individuals with mental illness and substance use problems on the street are trained to handle the encounters better (Hacker and Horan 2019).

The Drug Use Forecasting (DUF) and the original Arrestee Drug Abuse Monitoring (ADAM) Programs focused on urban areas and included Cleveland as one of the sites, though unfortunately, ADAM II included a much smaller number of sites and Cleveland was not one of them. With the ADAM 1997, the most current data that include Cleveland, randomly selected arrestees are interviewed about their drug use within 48 hours when they were booked, corroborated with urine specimens over a two-week period, four times per year. The program included ten categories of drugs: amphetamines, barbiturates, valium, cocaine, opiates, PCP, methadone, marijuana, propoxyphene, and methaqualone. Data were collected by trained interviewers and corroboration by urine sample.

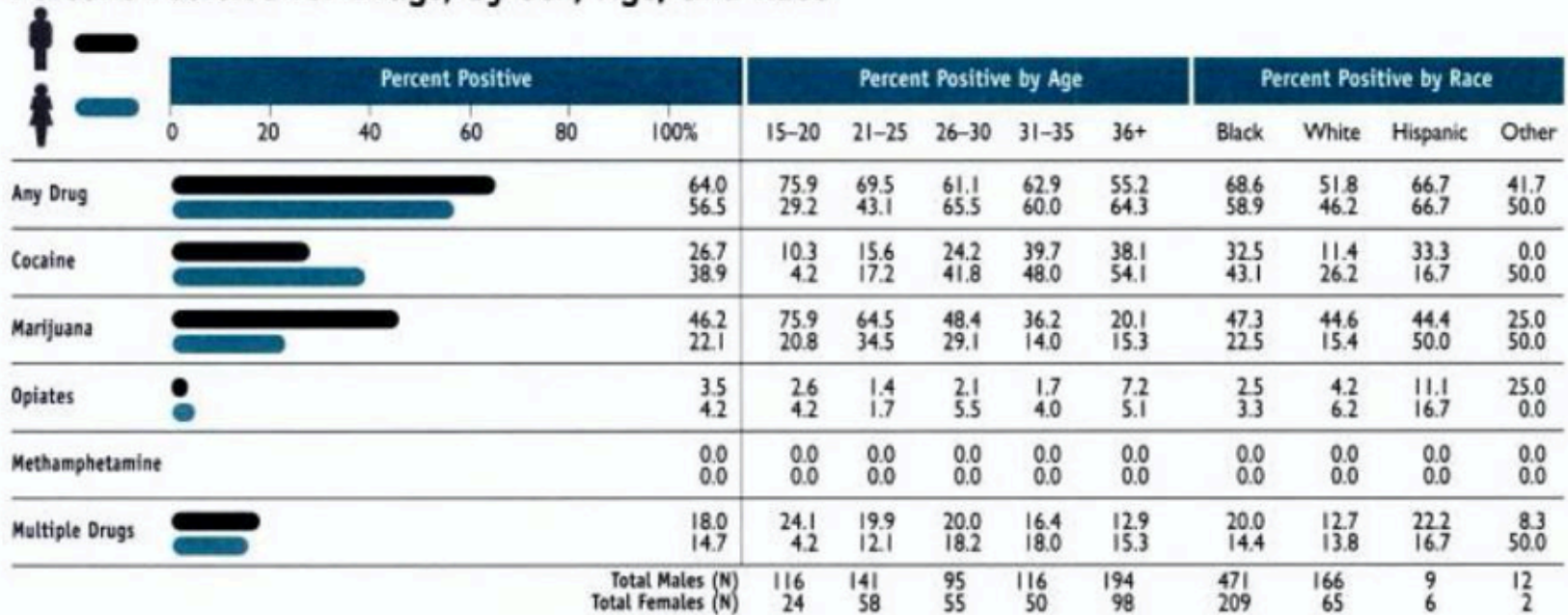
According to the ADAM 1997, a disproportionately high percentage of those who are arrested are African Americans among both male arrestees (72%) and female arrestees (74%). As shown in Figure 2.15.1, of those who are arrested in Cleveland, 64% of male and 57% of female arrestees were tested positive for a drug, of which the most common drug was marijuana (45% for male and 22% female arrestees). 18% of male and 15% of female arrestees tested positive for multiple drugs in Cleveland. The percentage tested positive for a drug was higher for African American arrestees (69% of males and 59% of females) than white arrestees (52% of males and 46% of females) in Cleveland.

Quite a high percentage of arrestees for both violent offense (59% for males and 35% for females) and property crimes (59% for males and 42% for females) were tested positive for a drug in Cleveland. The high prevalence of substance use prior to the property crime arrest, however, strongly question the argument that drug use is related

to crime because drugs make people violent. It is instead more likely the case that people commit crimes to support their drug use.

Figure 2.15.1 ADAM 1997, Cleveland, Percentage tested positive for drug use<sup>89</sup>

### Percent Positive for Drugs, by Sex, Age, and Race



Source: Drug Use Forecasting, 1997

<sup>89</sup> Source: 1997 Drug Use Forecasting: Annual Report on Adult and Juvenile Arrestees. <http://www.ncjrs.gov/app/Search/Abstracts.aspx?id=171672>

## 2.16 Conclusion

This chapter reviewed risk factors for mental illness and substance use, including both stressors and exacerbators that while increasing or exacerbating overall stress, decrease economical or psychological resiliency to handle stressful situations.

- The older age of Cuyahoga County population could potentially pose a number of problems as serious health and mental health issues are much more common among older population, including suicide. Substance use is more prevalent among young adults than older adults.
- Racial and ethnic minority populations are less likely to have access to mental health care and seek treatment compared to whites, and the race/ethnicity differences in the likelihood of receiving mental health treatment are greater among men without health insurance than among men with health insurance.
- The large prevalence of residents in Cuyahoga County residing in urban areas can pose problems for the county because not only are some mental illness more prevalent in urban areas compared to rural areas, urban areas also have higher risk factors for mental illness and substance use than rural areas.
- One of the most important risk factors for mental illness and substance use is the chronic and severe poverty that, as found in Chapter 1, many Cuyahoga County residents experience, especially those who reside in Cleveland.
- Cuyahoga County has a low proportion of residents who are married and a high proportion of residents who are single (including single parents) compared to the national prevalence. This is problematic because marital status is consistently found to be related to overall health. Married people overall have better mental health and are more likely to abstain from substance use.
- The percentage reporting serious psychological distress, experience with chronic illness, and work limitations is higher among veterans than among nonveterans. In addition, veterans are uniquely more likely to suffer from a mental health condition called PTSD. The misuse of prescription pain medications among active duty members is a major problem today, as the increase in the misuse of this medication was more rapid among service members than in the general public.
- Individuals who suffer from chronic illnesses are more likely to suffer from depression, and individuals with a chronic illness and depression tend to have

more severe symptoms of both illnesses. Substance use can pose unique problems for individuals with a disability as it could interfere with medications and other treatment for the disability.

- Youth who identify as lesbian, gay, bisexual, transgender, or questioning (LGBTQ) are more likely to experience difficulties growing up and a higher rate of mental illness and substance use.
- Early onset of mental illness can adversely affect the ability to function in society through its negative effect on educational attainment and thus SES. One study estimates that almost half of all high school dropouts could be attributed to the long-term negative effect of mental illness. School dropout and disengagement are significantly associated with substance use.
- Domestic violence is one of the major causes of mental illness, including suicidal behaviors, and substance use among women.
- The population that most likely falls through the cracks of mental health and substance use treatment is the chronically homeless individuals with dual diagnosis for mental illness and substance use problems because mental health providers often refuse to provide service to those who are on drugs or using alcohol (Pardeck 2004). The same group of individuals are often arrested and incarcerated instead of getting treated for mental illness or substance use. These are individuals who are also most likely to have experienced a high number of adverse childhood experiences and trauma.
- Overall, there is a graded relationship between the number of adverse childhood experiences and development of mental illness and substance use disorders, as well as other physical health conditions (Feletti et al, 1998), suggesting the importance of early intervention for high-risk youth. Early onset of mental illness and substance use can have long-term negative consequences by disruption in education and thus a decrease in employability and earning potential.
- The movement to deinstitutionalize patients from state psychiatric institutions into the community followed an increase in arrest and incarceration of psychiatric patients. The number of individuals with serious mental illness in prisons and jails exceeds the number in state psychiatric hospitals tenfold.
- Criminal and justice populations are more likely to engage in substance use than the general public. In Cleveland, 59% for male and 35% for female arrestees for

violent offense 59% for male and 42% for female arrestees for property offense were tested positive for a drug.

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## **CHAPTER 3: NATIONAL AND COUNTY ESTIMATES OF MENTAL ILLNESS AND SUBSTANCE USE**

### **3.1 Introduction**

This chapter reviews the national and state prevalence of mental illness and substance use using the 2018 National Survey on Drug Use and Health (NSDUH). This chapter also reviews two of the major studies based on a nationally representative sample of youth, Monitoring the Future (MTF) and Youth Risk Behavior Surveillance System (YRBSS), and National Survey of Children's Health (NSCH), National Health Interview Survey (NHIS), overdose data, several data collected among criminal justice populations, and Uniform Crime Reports (UCR). Additionally, this chapter provides estimations of mental illness and substance use prevalence for Cuyahoga County and Cleveland based on the national and state data and the population estimate of Cuyahoga County and Cleveland from the U.S. Census's American Community Survey (ACS).

### **3.2 National Survey on Drug Use and Health (NSDUH)**

One of the major data sources of substance use and mental health is the National Survey on Drug Use and Health (NSDUH), a study by the Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA is an agency within the U.S. Department of Health and Human Services established by Congress in 1992. The NSDUH is authorized by federal law, Public Health Service Act, to collect information on the drug use and mental health of the population of the U.S.

The NSDUH is conducted in every state annually since 1971 and collects information from a representative sample of 70,000 people age 12 and older. A random sample of households is selected, and one or two members of each household are asked to participate in the NSDUH. The NSDUH 2018 uses a nationally representative sample to estimate the prevalence of illicit drug and alcohol use and mental illness among people aged 12 and older. In addition, the NSDUH 2018 also collects information on substance abuse and dependence.

For each substance, the NSDUH 2018 asked several questions to measure dependence or abuse, consistent with the definition of substance use disorder (SUD) in the Diagnostic and Statistical Manual of Mental Disorders (DSM)-5. For instance, for alcohol use, the NSDUH 2018 asked questions regarding experiences "cutting down on drinking," "withdrawal symptoms," "drinking causing emotional problems," and so on. As

an example, a list of 22 questions to measure heroin use disorder is found at the end of this chapter in the endnote<sup>1</sup>.

None of the data sources are perfect and pose some limitations, and the NSDUH is not an exception. Two of the major limitations of the NSDUH are the exclusion of the population under 12 years old and the people who are not included at the household level. In particular, the NSDUH's exclusion of homeless and institutionalized populations (such as in prisons or mental institutions) is problematic given the high prevalence of substance use and mental illness among these populations.

Unless otherwise noted, the results discussed in this section are from the latest NSDUH conducted in 2018 or from the combined NSDUHs 2017 and 2018. Respondents were answering the questions based on their experiences, perceptions in the previous year, which would roughly be 2017 for the NSDUH 2018.

Because the mathematics student who was working on calculating estimates using the NSDUHs had to leave the project abruptly, we ended up using two different methods to calculate estimates for Cuyahoga County in this section. For some tables, census region estimates, along with 95% Bayesian confidence (credible) intervals (not shown in tables), were calculated based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates are given. These tables have the percentage distribution that is different across census regions. For other tables, a much simpler method was used to calculate Cuyahoga County estimates based on national estimates. For these tables, therefore, the percentage distribution is the same across census regions. The latter, the simpler method is also used to calculate estimates in the remainder of this report in Chapters 4 and 5. 95% confidence intervals were calculated for all estimates but are not shown in tables.

Note that the NSDUH 2018 asked a different set of questions about mental illness for adults (age 18 and older) and youth (age 12 to 17), thus the results are shown separately for the two age groups.

### 3.2.1 Overall substance use<sup>90</sup>

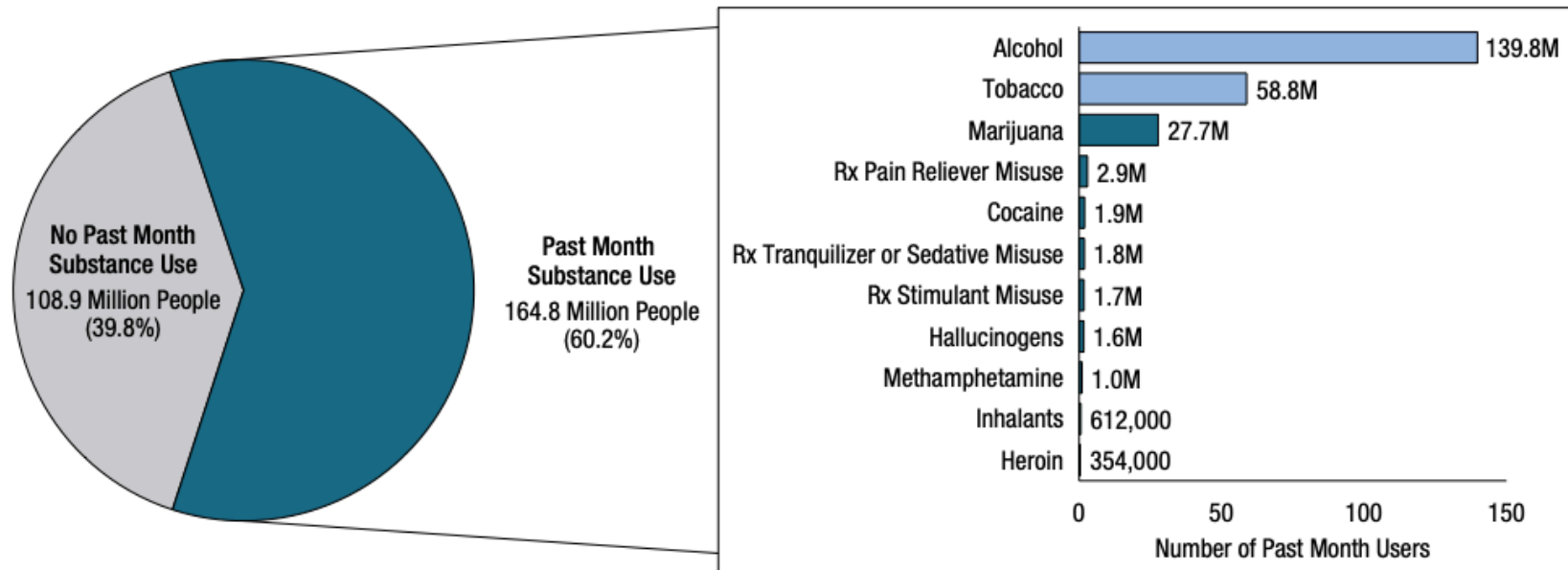
The estimates of past month substance use among the U.S. population age 12 and older are shown in Figure 3.2.1. An estimated 164.8 million people (60.2%) used a substance in the past month. The most popular substance was alcohol; more than half of the population (51.1% or 139.8 million people) drank alcohol. The second popular substance was tobacco; 1 in 5 people (21.5% or 58.8 million) used tobacco products.

A much smaller number of people used illicit drugs compared to licit drugs. About 11.7% of the U.S. population used an illicit drug in the past month; of these, the most popular “illicit drug” was marijuana with about 10.1% of the population (27.7 million) using marijuana.

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<sup>90</sup> According to NSDUH, “Past month tobacco use includes any use of the four tobacco products in NSDUH: cigarettes, smokeless tobacco (such as snuff, dip, chewing tobacco, or snus), cigars, and pipe tobacco. Alcohol use in the past month refers to having more than a sip or two from any type of alcoholic drink (e.g., can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it). In NSDUH, illicit drug use in the past month includes any use of marijuana, cocaine (including crack), heroin, hallucinogens, inhalants, or methamphetamine, as well as misuse of prescription stimulants, tranquilizers or sedatives (including benzodiazepines), or pain relievers.”

Figure 3.2.1 Past month use of any substance among people age 12 and older in the U.S., 2018<sup>91</sup>



Rx = prescription.

Note: The estimated numbers of current users of different substances are not mutually exclusive because people could have used more than one type of substance in the past month.

Source: National Survey on Drug Use and Health, 2018

<sup>91</sup> <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf>

### 3.2.2 Heavy alcohol use

The NSDUH 2018 (2019, p10) defines heavy alcohol use as “binge drinking on five or more days in the past 30 days,” binge drinking for males as “drinking five or more drinks on the same occasion,” and binge drinking for females as “drinking four or more drinks on the same occasion.”

Table 3.2.1 shows the estimates of past month heavy alcohol use among people age 12 and older. The prevalence of past month heavy alcohol use was the highest among young adults age 18 to 25, with 9.0% of this age group engaging in heavy alcohol use. The past month prevalence of heavy alcohol use was 6.2% for people age 26 and older and 0.5% for people age 12 to 17.

In Cuyahoga County, an estimated 67,258 people age 12 and older engaged in heavy alcohol use in the past month.

Table 3.2.1 Estimated number and prevalence of past month heavy alcohol use among people age 12 and older<sup>92</sup>, 2018<sup>93</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	303,950 (0.5%)	10,855 (0.5%)	<b>1,152</b> <b>(0.5%)</b>	356 (0.5%)
18 to 25	6,919,607 (9.0%)	247,208 (9.0%)	<b>26,288</b> <b>(9.0%)</b>	8,113 (9.0%)
26+	10,457,363 (6.2%)	373,709 (6.2%)	<b>39,818</b> <b>(6.2%)</b>	12,280 (6.2%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>92</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

<sup>93</sup> Estimates, along with the 95 percent confidence intervals. Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health 2018. Local projections are based on national estimates



### 3.2.3 Alcohol use disorder

The NSDUH (2019) defines alcohol use disorder (AUD) as meeting criteria for alcohol dependence or abuse, and dependence or abuse is based on definitions given in the DSM-IV.

Table 3.2.2 shows the estimates of past year AUD among people age 12 and older. The prevalence of past month AUD was the highest among young adults age 18 to 25 (10.1%) and the lowest among youth age 12 to 17 (1.7%). The prevalence for adults age 26 and older was in between the two age groups at 5.1%.

In Cuyahoga County, an estimated 64,741 people age 12 and older fit the definition of AUD in the past year, and almost half of them (47.0%) were young adults age 18 to 25.

Table 3.2.2 Estimated number and prevalence of past year AUD among people age 12 and older, 2017-2018<sup>94</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	1,071,625 (1.7%)	37,610 (1.7%)	<b>3,991 (1.4%)</b>	1,233 (1.7%)
18 to 25	7,717,566 (10.1%)	286,378 (10.4%)	<b>30,454 (10.4%)</b>	9,399 (10.4%)
26+	8,508,866 (5.1%)	284,338 (4.7%)	<b>30,296 (4.8%)</b>	9,343 (4.7%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

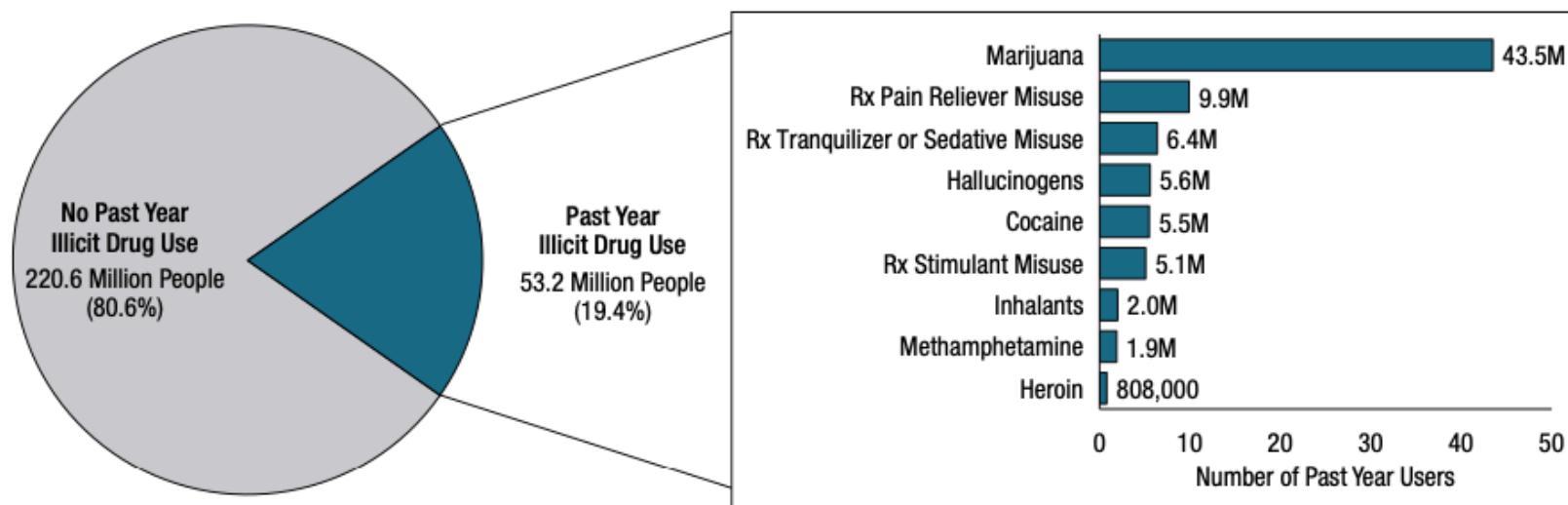
<sup>94</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.4 Illicit drugs

To increase the precision of estimates, the NSDUH reports the prevalence of past-year use for illicit drug<sup>95</sup> (since the prevalence of illicit drug use is much lower than the prevalence of licit drug use).

As Figure 3.2.2 shows, 19.4% of the U.S. population age 12 and older (53.2 million people) used an illicit drug in the past year.

Figure 3.2.2 Number of past year use of illicit drugs among people age 18 and older in the U.S., 2018



Rx = prescription.

Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.

Source: National Survey on Drug Use and Health, 2018

<sup>95</sup> According to the NSDUH 2018, illicit drug use includes “the misuse of prescription psychotherapeutics or the use of marijuana, cocaine (including crack), heroin, hallucinogens, inhalants, or methamphetamine. Misuse of prescription psychotherapeutics is defined as use in any way not directed by a doctor, including use without a prescription of one’s own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutics do not include over-the-counter drugs.”

Table 3.2.3 shows the estimates of past year illicit drug use among people age 12 and older. Young adults age 18 to 25 had the highest prevalence of past year illicit drug use; more than 1 in 3 young adults (38.8%) used illicit drugs. The prevalence of past year illicit drug use among youth age 12 to 17 and adults age 26 and older was about the same at about 17%, about half of the prevalence for young adults.

In Cuyahoga County, an estimated 261,125 people age 12 and older used illicit drug in the past year.

Table 3.2.3 Estimated number and prevalence of past year use of illicit drug among people age 12 and older, 2017-2018<sup>96</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	10,522,743 (16.6%)	375,811 (16.6%)	<b>39,880</b> <b>(16.6%)</b>	12,318 (16.6%)
18 to 25	29,826,898 (38.8%)	1,065,589 (38.8%)	<b>113,316</b> <b>(38.8%)</b>	34,972 (38.8%)
26+	28,344,865 (16.8%)	1,012,946 (16.8%)	<b>107,929</b> <b>(16.8%)</b>	33,285 (16.8%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>96</sup> State region estimates, along with the 95 percent Bayesian confidence (credible) intervals. percent confidence intervals are given. For the "Total U.S." row, design-based (direct) estimates and corresponding 95% confidence intervals. Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. SAMHSA Survey-weighted hierarchical Bayes estimation Model Output. <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.5 Illicit drug use disorder

The NSDUH (2019<sup>97</sup>, p.33) defines illicit drug disorder based on the DSM-IV as either dependence or abuse for one of the following illicit drugs: “marijuana, cocaine, heroin, hallucinogens, inhalants, methamphetamine, or prescription psychotherapeutic drugs that were misused.”

Table 3.2.4 shows the estimates of past year illicit drug use disorder among people age 12 and older. The past year prevalence of illicit drug use disorder was the highest among young adults age 18 to 25 with 7.5% having an illicit drug use disorder and much smaller for youth age 12 to 17 (2.9%) and adults age 26 and older (2.1%).

In Cuyahoga County, an estimated 47,706 people age 12 and older had illicit drug use disorder in the past year, the majority of whom were young adults age 18 to 25.

Table 3.2.4 Estimated number and prevalence of past year illicit drug use disorder among people age 12 and older, 2017-2018<sup>98</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	1,808,074 (2.9%)	72,587 (3.2%)	<b>7,703</b> <b>(3.2%)</b>	2,379 (3.2%)
18 to 25	5,742,667 (7.5%)	226,790 (8.3%)	<b>24,117</b> <b>(8.3%)</b>	7,443 (8.3%)
26+	3,584,964 (2.1%)	149,092 (2.5%)	<b>15,886</b> <b>(2.5%)</b>	4,899 (2.5%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>97</sup> <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHNationalFindingsReport2018/NSDUHNationalFindingsReport2018.pdf>

<sup>98</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.

<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.6 Marijuana use

As noted, marijuana, among “illicit” drugs, had the highest prevalence of past year use.

Table 3.2.5 shows the estimates of past year marijuana use among people age 12 and older. The prevalence of the past year use of marijuana was the highest among young adults age 18 to 25 with 1 in 3 (34.8%) young adults having used marijuana. About 1 in 8 youth age 12 to 17 (12.5%) and about 1 in 8 adults age 26 and older (12.7%) used marijuana in the past year.

In Cuyahoga County, an estimated 198,070 people age 12 and older used marijuana in the past year, more than half of whom are young adults age 18 to 25.

Table 3.2.5 Estimated number and prevalence of past year marijuana use among people age 12 and older, 2017-2018<sup>99</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	7,884,060 (12.5%)	265,170 (11.7%)	<b>28,139</b> <b>(11.7%)</b>	8,691 (11.7%)
18 to 25	26,726,266 (34.8%)	953,333 (34.8%)	<b>101,379</b> <b>(34.8%)</b>	31,288 (34.8%)
26+	21,431,323 (12.7%)	643,385 (10.7%)	<b>68,552</b> <b>(10.7%)</b>	21,141 (10.7%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>99</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.7 Marijuana use disorder

The NSDUH 2018 classifies an individual as having marijuana use disorder if he/she used marijuana on six or more days in the past year and met the DSM-IV criteria for dependence or abuse for marijuana.

Table 3.2.6 shows the estimates of past year marijuana use disorder among people age 12 and older. About 4.5% of young adults age 18 to 25, 1.0% of youth age 12 to 17, and 0.6% of adults age 26 and older had marijuana use disorder in the past year.

In Cuyahoga County, an estimated 19,622 people age 12 and older had marijuana use disorder in the past year.

Table 3.2.6 Estimated number and prevalence of past year marijuana use disorder among people age 12 and older, 2017-2018<sup>100</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	649,335 (1.0%)	23,190 (1.0%)	<b>2,461</b> <b>(1.0%)</b>	760 (1.0%)
18 to 25	3,435,416 (4.5%)	122,733 (4.5%)	<b>13,052</b> <b>(4.5%)</b>	4,028 (4.5%)
26+	1,079,092 (0.6%)	38,563 (0.6%)	<b>4,109</b> <b>(0.6%)</b>	1,267 (0.6%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>100</sup> State region estimates, along with the 95 percent Bayesian confidence (credible) intervals. percent confidence intervals are given. For the "Total U.S." row, design-based (direct) estimates and corresponding 95% confidence intervals. Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. SAMHSA Survey-weighted hierarchical Bayes estimation Model Output. <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.8 Cocaine use

Table 3.2.7 shows the estimates of past year cocaine use among people age 12 and older. Among youth age 12 to 17, 0.5% used cocaine and 0.1% used crack cocaine; among young adults age 18 to 25, 6.0% used cocaine and 0.3% used crack cocaine; and among adults age 26 and older, 1.7% used cocaine or 0.3% used crack cocaine in the past year.

In Cuyahoga County, an estimated 23,212 people age 12 and older used cocaine in the past year, and 78.2% of cocaine users in the county were young adults age 18 to 25.

Table 3.2.7 Estimated number and prevalence of past year cocaine use among people age 12 and older, 2017-2018<sup>101</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	303,685 (0.5%)	9,997 (0.4%)	<b>1,061</b> <b>(0.4%)</b>	328 (0.4%)
18 to 25	4,600,873 (6.0%)	136,849 (5.0%)	<b>14,553</b> <b>(5.0%)</b>	4,491 (5.0%)
26+	2,810,695 (1.7%)	71,311 (1.2%)	<b>7,598</b> <b>(1.2%)</b>	2,343 (1.2%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>101</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.9 Cocaine use disorder

The NSDUH (2019) classifies an individual as having cocaine use disorder if he/she used cocaine in the past year and met the DSM-IV criteria for dependence or abuse for cocaine.

Table 3.2.8 shows the estimates of past year cocaine use disorder among people age 12 and older. About 0.02% of youth age 12 to 17, 0.6% of young adults age 18 to 26, and 0.3% of adults age 26 and older had cocaine use disorder.

In Cuyahoga County, an estimated 4,000 people age 12 and older had cocaine use disorder in the past year.

Table 3.2.8 Estimated number and prevalence of past year cocaine use disorder among people age 12 and older, 2018<sup>102</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	14,415 (0.02%)	515 (0.02%)	<b>55</b> <b>(0.02%)</b>	17 (0.02%)
18 to 25	462,311 (0.6%)	16,516 (0.6%)	<b>1,756</b> <b>(0.6%)</b>	542 (0.6%)
26+	574,971 (0.3%)	20,547 (0.3%)	<b>2,189</b> <b>(0.3%)</b>	675 (0.3%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>102</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>



### 3.2.10 Heroin use

Table 3.2.9 shows the estimates of past year heroin use among people age 12 and older. About 0.1% of youth age 12 to 17, 0.5% of young adults age 18 to 25, and 0.3% of adults age 26 and older used heroin in the past year.

In Cuyahoga County, an estimated 5,747 people age 12 and older used heroin in the past year.

Table 3.2.9 Estimated number and prevalence of past year heroin use among people age 12 and older, 2018<sup>103</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	29,953 (0.1%)	1,556 (0.1%)	<b>165</b> <b>(0.1%)</b>	51 (0.1%)
18 to 25	417,285 (0.5%)	20,054 (0.7%)	<b>2,133</b> <b>(0.7%)</b>	658 (0.7%)
26+	511,343 (0.3%)	30,153 (0.5%)	<b>3,213</b> <b>(0.5%)</b>	991 (0.5%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>103</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.11 Heroin use disorder

The NSDUH (2019) classifies an individual as having heroin use disorder if he/she used heroin in the past year and met the DSM-IV criteria for dependence or abuse for heroin.

Table 3.2.10 shows the estimates of past year heroin use disorder among people age 12 and older. About 0.02% of youth age 12 to 17, 0.3% of young adults age 18 to 26, and 0.2% of adults age 26 and older had heroin use disorder.

In Cuyahoga County, an estimated 2,270 people age 12 and older had heroin use disorder in the past year.

Table 3.2.10 Estimated number and prevalence of past year heroin use disorder among people age 12 and older, 2018<sup>104</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	10,265 (0.03%)	367 (0.03%)	<b>39 (0.03%)</b>	12 (0.03%)
18 to 25	232,618 (0.3%)	8,310 (0.3%)	<b>884 (0.3%)</b>	273 (0.3%)
26+	353,724 (0.2%)	12,641 (0.2%)	<b>1,347 (0.2%)</b>	415 (0.2%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>104</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.12 Methamphetamine use

Table 3.2.11 shows the estimates of past year methamphetamine use among people age 12 and older. About 0.2% of youth age 12 to 17, 1.0% of young adults age 18 to 25, and 0.7% of adults age 26 and older used methamphetamine in the past year.

An estimated 5,388 people age 12 and older in Cuyahoga County used methamphetamine in the past year.

Table 3.2.11 Estimated number and prevalence of past year methamphetamine use among people age 12 and older, 2017-2018<sup>105</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	115,462 (0.2%)	5,019 (0.2%)	<b>533</b> <b>(0.2%)</b>	164 (0.2%)
18 to 25	728,378 (1.0%)	19,532 (0.7%)	<b>2,077</b> <b>(0.7%)</b>	641 (0.7%)
26+	1,086,929 (0.7%)	26,915 (0.5%)	<b>2,868</b> <b>(0.5%)</b>	884 (0.5%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>105</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.13 Methamphetamine use disorder

The NSDUH (2019) classifies an individual as having methamphetamine use disorder if he/she used methamphetamine in the past year and met the DSM-IV criteria for dependence or abuse for heroin.

Table 3.2.12 shows the estimates of past year methamphetamine use disorder among people age 12 and older. About 0.1% of youth age 12 to 17, 0.4% of young adults age 18 to 26, and 0.4% of adults age 26 and older had methamphetamine use disorder in the past year.

In Cuyahoga County, an estimated 4,114 people age 12 and older had methamphetamine use disorder in the past year.

Table 3.2.12 Estimated number and prevalence of methamphetamine use disorder among people age 12 and older, 2018<sup>106</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	38,448 (0.1%)	1,373 (0.1%)	<b>146</b> <b>(0.1%)</b>	45 (0.1%)
18 to 25	316,389 (0.4%)	11,303 (0.4%)	<b>1,202</b> <b>(0.4%)</b>	371 (0.4%)
26+	726,351 (0.4%)	25,957 (0.4%)	<b>2,766</b> <b>(0.4%)</b>	853 (0.4%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>106</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.14 Hallucinogen use

The NSDUH (2019) includes LSD, PCP, peyote, mescaline, psilocybin mushrooms, “Ecstasy” (MDMA or “Molly”), ketamine, DMT/AMT/“Foxy,” and *Salvia divinorum* in hallucinogens.

Table 3.2.13 shows the estimates of past year hallucinogen use among people age 12 and older. About 1.5% of youth age 12 to 17, 6.9% of young adults age 18 to 25, and 1.3% of adults age 26 and older used hallucinogens in the past year.

In Cuyahoga County, an estimated 31,000 people age 12 and older used hallucinogen in the past year, more than 61.9% of whom were young adults age 18 to 25.

Table 3.2.13 Estimated number and prevalence of past year hallucinogen use among people age 12 and older, 2017-2018<sup>107</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	910,320 (1.40%)	32,511 (1.40%)	<b>3,450</b> <b>(1.40%)</b>	1,066 (1.40%)
18 to 25	5,158,484 (6.70%)	184,291 (6.70%)	<b>19,598</b> <b>(6.70%)</b>	6,048 (6.70%)
26+	2,262,782 (1.30%)	80,864 (1.30%)	<b>8,616</b> <b>(1.30%)</b>	2,657 (1.30%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>107</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. Estimates along with the 95% confidence intervals. Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health 2018. Local predictions are based on national estimates. <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### **3.2.15 Inhalant use**

Inhalants include a variety of substances readily available in most households (such as nitrous oxide, amyl nitrite, cleaning fluids, gasoline, spray paint, computer keyboard cleaner, other aerosol sprays, felt-tip pens, and glue), thus this is most popularly used substance among young people worldwide (NSDUH 2019).

A table is not available for inhalant use.

The NSDUH 2018 indicates that an estimated 2.0 million people age 12 and older in the U.S. (0.7%) used an inhalant in the past year. This amounts to an estimated 8,211 Cuyahoga County population age 12 and older.

### 3.2.16 Misuse of psychotherapeutic drugs

The NSDUH (2019) collects information on the misuse of psychotherapeutic drugs available by prescription, including stimulants, tranquilizers or sedatives (including benzodiazepines), and pain relievers. The NSDUH (2019, p.17) defines misuse of psychotherapeutic drugs as “use in any way not directed by a doctor, including use without a prescription of one’s own; use in greater amounts, more often, or longer than told to take a drug; or use in any other way not directed by a doctor.”

Table 3.2.14 shows the estimates of past year misuse of psychotherapeutic drugs among people age 12 and older. About 4.7% of youth, 12.3% of young adults, and 5.4% of adults misused psychotherapeutic drugs in the past year.

In Cuyahoga County, an estimated 81,981 people age 12 and older misused psychotherapeutic drugs in the past year. Among them, about 1 in 8 young adults age 18 to 25 in Cuyahoga County misused psychotherapeutic drugs.

Table 3.2.14 Estimated number and prevalence of past year misuse of psychotherapeutic drugs among people age 12 and older, 2018<sup>108</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	2,982,364 (4.7%)	106,513 (4.7%)	<b>11,303 (4.7%)</b>	3,491 (4.7%)
18 to 25	9,471,437 (12.3%)	338,374 (12.3%)	<b>35,983 (12.3%)</b>	11,105 (12.3%)
26+	9,111,705 (5.4%)	325,620 (5.4%)	<b>34,695 (5.4%)</b>	10,700 (5.4%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>108</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.17 Stimulant misuse

The NSDUH (2019) includes amphetamine products, methylphenidate products, anorectic (weight-loss) stimulants, Provigil®, or any other prescription stimulant when examining stimulant misuse.

Table 3.2.15 shows the estimates of past year misuse of stimulant among people age 12 and older. About 1.5% of youth age 12 to 17, 6.5% of young adults age 18 to 25, and 1.2% of adults age 26 and older misused stimulants in the past year.

In Cuyahoga County, an estimated 29,861 people age 12 and older misused stimulants in the past year. More than half (63.4%) of those who misused stimulants in the county were young adults age 18 to 25.

Table 3.2.15 Estimated number and prevalence of past year misuse of stimulant among people age 12 and older, 2018<sup>109</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	909,535 (1.4%)	32,483 (1.4%)	<b>3,447 (1.4%)</b>	1,065 (1.4%)
18 to 25	4,979,186 (6.5%)	177,885 (6.5%)	<b>18,917 (6.5%)</b>	5,838 (6.5%)
26+	1,968,949 (1.2%)	70,363 (1.2%)	<b>7,497 (1.2%)</b>	2,312 (1.2%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>109</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>



### 3.2.18 Stimulant use disorder

The NSDUH (2019) classifies an individual as having stimulant use disorder if he/she used stimulant in the past year and met the DSM-IV criteria for dependence or abuse for stimulant.

Table 3.2.16 shows the estimates of past year stimulant use disorder among people age 12 and older. About 0.2% of youth age 12 to 17, 0.5% of young adults age 18 to 26, and 0.2% of adults age 26 and older had stimulant use disorder.

In Cuyahoga County, an estimated 3,119 people age 12 and older had stimulant use disorder in the past year. Almost half of people in the county who had stimulant use disorder were young adults age 18 to 25.

Table 3.2.16 Estimated number and prevalence of stimulant use disorder among people age 12 and older, 2018<sup>110</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	129,577 (0.2%)	4,628 (0.2%)	<b>491</b> <b>(0.2%)</b>	152 (0.2%)
18 to 25	445,972 (0.6%)	15,933 (0.6%)	<b>1,694</b> <b>(0.6%)</b>	523 (0.6%)
26+	245,309 (0.2%)	8,766 (0.2%)	<b>934</b> <b>(0.2%)</b>	288 (0.2%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>110</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### **3.2.19 Tranquilizer or sedative misuse**

The NSDUH (2019, p.19) includes “benzodiazepine tranquilizers (e.g., as alprazolam, lorazepam, clonazepam, or diazepam products), muscle relaxants, or any other prescription tranquilizer as prescription tranquilizers and zolpidem products, eszopiclone products, zaleplon products, benzodiazepine sedatives (e.g., as flurazepam and temazepam products or triazolam products), barbiturates, or any other prescription sedative” as prescription sedatives.

A table is not included for tranquilizer or sedative misuse.

An estimated 6.4 million people age 12 and older in the U.S. (2.4%) misused prescription tranquilizers or sedatives in the past year. About 1.8% of youth age 12 to 17, 4.9% of young adults age 18 to 25, and 2.0% of adults age 26 or older misused prescription tranquilizers or sedatives in the past year. An estimated 28,151 people age 12 and older in Cuyahoga County missed prescription tranquilizers or sedatives in the past year.

### 3.2.20 Tranquilizer use disorder or sedative use disorder

The NSDUH (2019) classifies an individual as having tranquilizer use disorder or sedative use disorder if he/she used tranquilizer or sedative in the past year and met the DSM-IV criteria for dependence or abuse for tranquilizers or sedatives.

Table 3.2.17 shows the estimates of past year tranquilizer use disorder among people age 12 and older. About 0.3% of youth age 12 to 17, 0.7% of young adults age 18 to 26, and 0.2% of adults age 26 and older had past year tranquilizer use disorder or sedative use disorder.

In Cuyahoga County, an estimated 3,899 people age 12 and older had tranquilizer or sedative use disorder in the past year, almost half of whom were young adults age 18 to 25.

Table 3.2.17 Estimated number and prevalence of tranquilizer use disorder or sedative use disorder among people age 12 and older, 2018<sup>111</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	178,700 (0.3%)	6,382 (0.3%)	<b>677</b> <b>(0.3%)</b>	209 (0.3%)
18 to 25	482,334 (0.6%)	17,232 (0.6%)	<b>1,832</b> <b>(0.6%)</b>	566 (0.6%)
26+	365,068 (0.2%)	13,046 (0.2%)	<b>1,390</b> <b>(0.2%)</b>	429 (0.2%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>111</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.21 Benzodiazepine misuse

Table 3.2.18 shows the estimates of past year misuse of benzodiazepine among people age 12 and older. About 1.6% of youth age 12 to 17, 4.5% of young adults age 18 to 25, and 1.6% of adults age 26 and older misused prescription benzodiazepine.

In Cuyahoga County, an estimated 27,623 people age 12 and older misused prescription benzodiazepines in the past year.

Table 3.2.18 Estimated number and prevalence of past year misuse of benzodiazepine among people age 12 and older, 2018<sup>112</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	1,039,042 (1.6%)	37,108 (1.6%)	<b>3,938 (1.6%)</b>	1,216 (1.6%)
18 to 25	3,433,764 (4.5%)	122,674 (4.5%)	<b>13,045 (4.5%)</b>	4,026 (4.5%)
26+	2,794,349 (1.7%)	99,860 (1.7%)	<b>10,640 (1.7%)</b>	3,281 (1.7%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>112</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.22 Pain reliever misuse<sup>113</sup>

The NSDUH (2019, p.20) includes products containing “hydrocodone, oxycodone, tramadol, codeine, morphine, prescription fentanyl,31 buprenorphine, oxymorphone, and hydromorphone, as well as Demerol®, methadone, or any other prescription pain reliever” as prescription pain relievers.

Table 3.2.19 shows the estimates of past year misuse of pain reliever among people age 12 and older. About 2.9% of youth age 12 to 17, 6.3% of young adults age 18 to 25, and 3.6% of adults age 26 and older misused prescription pain relievers in the past year.

An estimated 49,320 people in Cuyahoga County misused a pain reliever in the past year.

Table 3.2.19 Estimated number and prevalence of past year pain reliever misuse among people age 12 and older, 2017-2018<sup>114</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	1,857,803 (2.90%)	65,017 (2.90%)	<b>6,899</b> <b>(2.90%)</b>	2,131 -2.90%
18 to 25	4,852,441 (6.30%)	182,633 (6.70%)	<b>19,421</b> <b>(6.70%)</b>	5,994 -6.70%
26+	6,002,222 (3.60%)	239,134 (4.00%)	<b>25,480</b> <b>(4.00%)</b>	7,858 -4.00%

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>113</sup> According to the NSDUH 2018, Misuse of prescription psychotherapeutics is defined as use in any way not directed by a doctor, including use without a prescription of one’s own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutics do not include over-the-counter drugs.

<sup>114</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.

<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.23 Pain reliever use disorder

The NSDUH (2019) classifies an individual as having pain reliever use disorder if he/she used pain reliever in the past year and met the DSM-IV criteria for dependence or abuse for pain relievers.

Table 3.2.20 shows the estimates of past year pain reliever use disorder among people age 12 and older. About 0.4% of youth age 12 to 17, 0.9% of young adults age 18 to 26, and 0.6% of adults age 26 and older had past year pain reliever use disorder.

An estimated 10,517 people age 12 and older in Cuyahoga County had pain reliever user disorder.

Table 3.2.20 Estimated number and prevalence of past year pain reliever use disorder among people age 12 and older, 2017-2018<sup>115</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
12 to 17	257,419 (0.4%)	10,449 (0.5%)	<b>1,109</b> <b>(0.5%)</b>	342 (0.5%)
18 to 25	659,465 (0.9%)	29,490 (1.1%)	<b>3,136</b> <b>(1.1%)</b>	968 (1.1%)
26+	1,016,826 (0.6%)	55,315 (0.9%)	<b>5,894</b> <b>(0.9%)</b>	1,818 (0.9%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

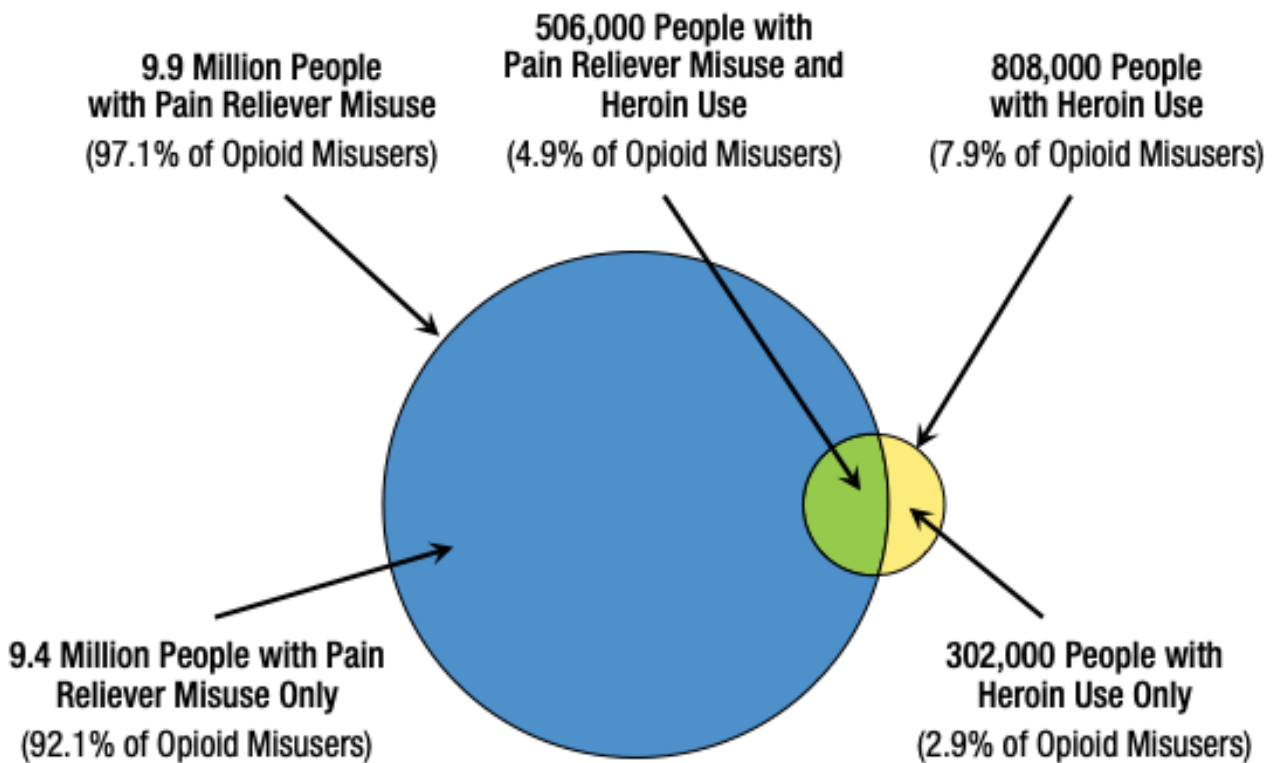
<sup>115</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.24 Opioid misuse

Opioids include “heroin and prescription pain relievers, such as hydrocodone (e.g., Vicodin®), oxycodone (e.g., OxyContin®), and morphine” (NSDUH 2019, p. 23).

Figure 3.2.3 shows that an estimated 10.3 million people age 12 and older in the U.S. (3.7%) misused opioids in the past year.

Figure 3.2.3 Past year opioid misuse among people aged 12 and older in the U.S. in 2018<sup>116</sup>



### 10.3 Million People Aged 12 or Older with Past Year Opioid Misuse

Note: The percentages do not add to 100 percent due to rounding.

Source: National Survey on Drug Use and Health, 2018

<sup>116</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

Table 3.2.21 shows the estimates of past year misuse of opioid among people age 12 and older. About 2.8% of youth age 12 to 17, 5.6% of young adults age 18 to 25, and 3.6% of adults age 26 and older misused opioids in the past year. Of the people who misused opioids, the majority of them misused a pain reliever.

In Cuyahoga County, an estimated 46,033 people age 12 and older misused opioid in the past year.

Table 3.2.21 Estimated number and prevalence of past year misuse of opioid among people age 12 and older, 2018<sup>117</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	1,756,092 (2.8%)	62,717 (2.8%)	<b>6,655</b> <b>(2.8%)</b>	2,056 (2.8%)
18 to 25	4,325,636 (5.6%)	154,537 (5.6%)	<b>16,434</b> <b>(5.6%)</b>	5,072 (5.6%)
26+	6,052,041 (3.6%)	216,279 (3.6%)	<b>23,044</b> <b>(3.6%)</b>	7,107 (3.6%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>117</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>



### 3.2.25 Opioid/sedative use disorder

The NSDUH (2019) classifies an individual as having opioid use disorder if he/she used opioid in the past year and met the DSM-IV criteria for dependence or abuse for opioid.

Table 3.2.22 shows the estimates of past year opioid use disorder among people age 12 and older. About 0.4% of youth age 12 to 17, 0.9% of young adults age 18 to 26, and 0.7% of adults age 26 and older had past year opioid/sedative use disorder.

An estimated 8,535 people age 12 and older in Cuyahoga County had opioid use disorder.

Table 3.2.22 Estimated number of past year opioid use disorder among people age 12 and older, 2018<sup>118</sup>

	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	281,005 (0.4%)	10,036 (0.4%)	<b>1,065 (0.4%)</b>	329 (0.4%)
18 to 25	685,370 (0.9%)	24,485 (0.9%)	<b>2,604 (0.9%)</b>	804 (0.9%)
26+	1,277,854 (0.8%)	45,666 (0.8%)	<b>4,866 (0.8%)</b>	1,501 (0.8%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

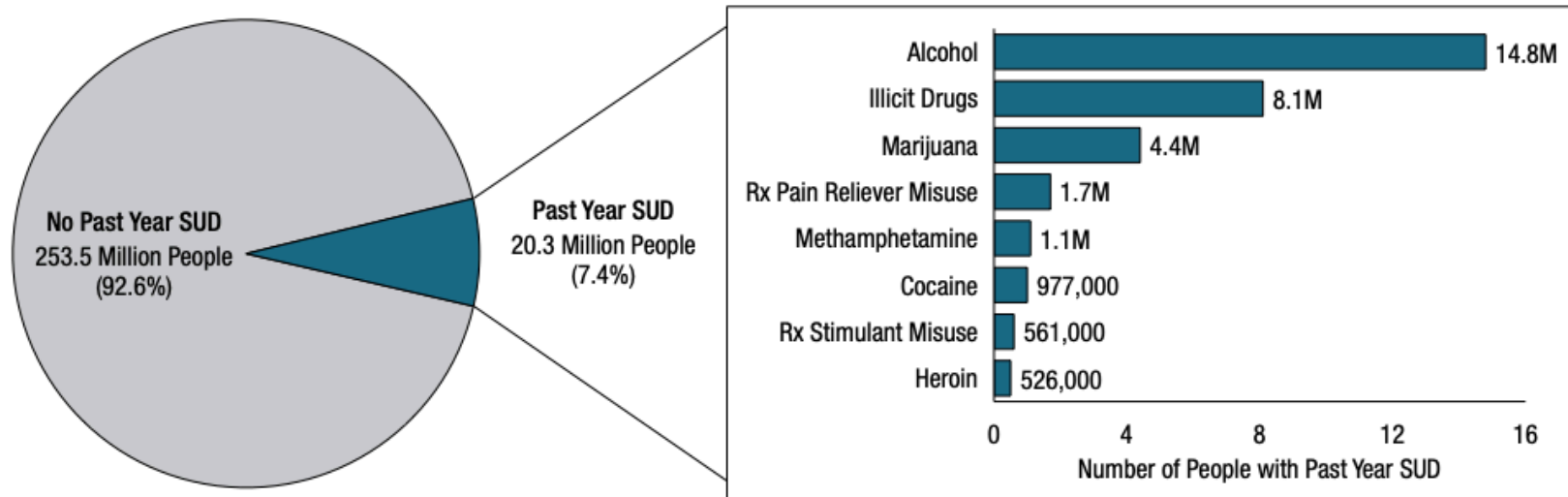
<sup>118</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.26 Substance use disorder (SUD)

The NSDUH (2019) classifies an individual as having substance use disorder (SUD) if he/she used alcohol or illicit drugs in the past year and met the DSM-IV criteria for dependence or abuse for alcohol or illicit drugs.

Figure 3.2.4 shows that an estimated 7.4% of population (20.3 million people) in the U.S. had SUD in the past year. Of these, an estimated 14.8 million people had alcohol use disorder and 8.1 million people had illicit drug use disorder.

Figure 3.2.4 Past year substance use disorder and type of substance among population age 12 and older in the U.S., 2018<sup>119</sup>



Rx = prescription.

Note: The estimated numbers of people with substance use disorders are not mutually exclusive because people could have use disorders for more than one substance.

Source: National Survey on Drug Use and Health, 2018

<sup>119</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

Table 3.2.23 shows the estimates of past year substance use disorder (SUD) among people age 12 and older. About 3.8% of youth age 12 to 17, 14.9% of young adults age 18 to 26, and 6.5% of adults age 26 and older had SUD in the past year.

In Cuyahoga County, an estimated 95,486 people age 12 and older had past year SUD. More than half of the people with past year SUD in the county were young adults age 18 to 25.

Table 3.2.23 Estimated number and prevalence of past year substance use disorder among people age 12 and older, 2017-2018<sup>120</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
12 to 17	2,424,240 (3.8%)	89,841 (4.0%%)	<b>9,534 (4.0%)</b>	2,945 (4.0%)
18 to 25	11,455,510 (14.9%)	420,579 (15.3%)	<b>44,725 (15.3%)</b>	13,803 (15.3%)
26+	10,967,767 (6.5%)	386,926 (6.4%)	<b>41,227 (6.4%)</b>	12,714 (6.4%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>120</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.27 Mental illness among adults age 18 and older

#### 3.2.27.1 Major depressive episodes (MDE)

The NSDUH (2019) defines major depressive episodes (MDE) using the DSM-5 criteria. People are classified as having a MDE if they had “at least one period of two weeks or longer in the past year when they experienced a depressed mood or loss of interest or pleasure in daily activities, accompanied by problems with sleeping, eating, energy, concentration, or self-worth” (NSDUH 2019, p.43).

Table 3.2.24 shows the estimates of past year experience with a major depressive episode (MDE) among people age 18 and older. Young adults age 18 to 25 had a higher prevalence of MDE (13.4%) than adults age 26 and older (6.1%).

In Cuyahoga County, an estimated 76,222 adults age 18 and older had a MDE in the past year.

Table 3.2.24 Estimated number and prevalence of past year MDE among people age 18 and older, 2017-2018<sup>121</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
18 to 25	8,767,820 (13.4%)	310,615 (14.8%)	<b>32,961</b> <b>(11.3%)</b>	10,181 (11.3%)
26+	10,293,230 (6.1%)	406,816 (6.9%)	<b>43,261</b> <b>(6.7%)</b>	13,352 (6.8%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

Adults who had a MDE with severe impairment experienced “severe problems with their ability to manage at home or work, have relationships with others, or have a social life” (NSDUH 2019, p. 41). In the U.S., an estimated 8.0 million people age 26 to 49 (8.0%) had a MDE and an estimated 5.3 million people age 26 to 49 (5.3%) had a MDE with severe impairment in the past year. In the U.S., an estimated 5.1 million people age 50 and older (4.5%) had a MDE and an estimated 3.2 million people age 50 and older (2.9%) had a MDE with severe impairment in the past year.

<sup>121</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.27.2 Any mental illness (AMI)

The NSDUH (2019, p. 2) defines people age 18 and older with AMI as “having any mental, behavioral, or emotional disorder in the past year that met DSM-IV criteria (excluding developmental disorders and SUDs).”

Table 3.2.25 shows the estimates of past year experience with any mental illness among people age 18 and older. An estimated 16.5 million young adults age 18 to 25 (26.0%) and 13.7 million adults age 26 and older (17.9%) had AMI in the past year.

An estimated 126,602 adults age 18 and older in Cuyahoga County had AMI in the past year.

Table 3.2.25 Estimated number and prevalence of past year AMI among people age 18 and older, 2017-2018<sup>122</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
18 to 25	16,490,432 (26.0%)	633,278 (28.0%)	<b>67,201</b> <b>(23.0%)</b>	20,757 (23.1%)
26+	13,731,839 (17.9%)	558,592 (20.4%)	<b>59,401</b> <b>(9.3%)</b>	18,333 (9.3%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>122</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.27.3 Serious mental illness (SMI)

The NSDUH (2019, p. 2) defines people age 18 and older with serious mental illness (SMI) “if they had any diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, that substantially interfered with or limited one or more major life activities.”

Table 3.2.26 shows the estimates of past year experience with serious mental illness among people age 18 and older. An estimated 4.8 million young adults age 18 to 25 (7.6%) and 3.1 million adults age 26 and older (4.1%) had SMI.

An estimated 34,425 adults age 18 and older in Cuyahoga County had SMI in the past year.

Table 3.2.26 Estimated number and prevalence of past year SMI among people age 18 and older, 2017-2018<sup>123</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
18 to 25	4,804,736 (7.6%)	189,891 (8.4%)	<b>20,151 (6.9%)</b>	6,224 (6.9%)
26+	3,120,691 (4.1%)	134,225 (4.9%)	<b>14,274 (2.2%)</b>	4,405 (2.2%)

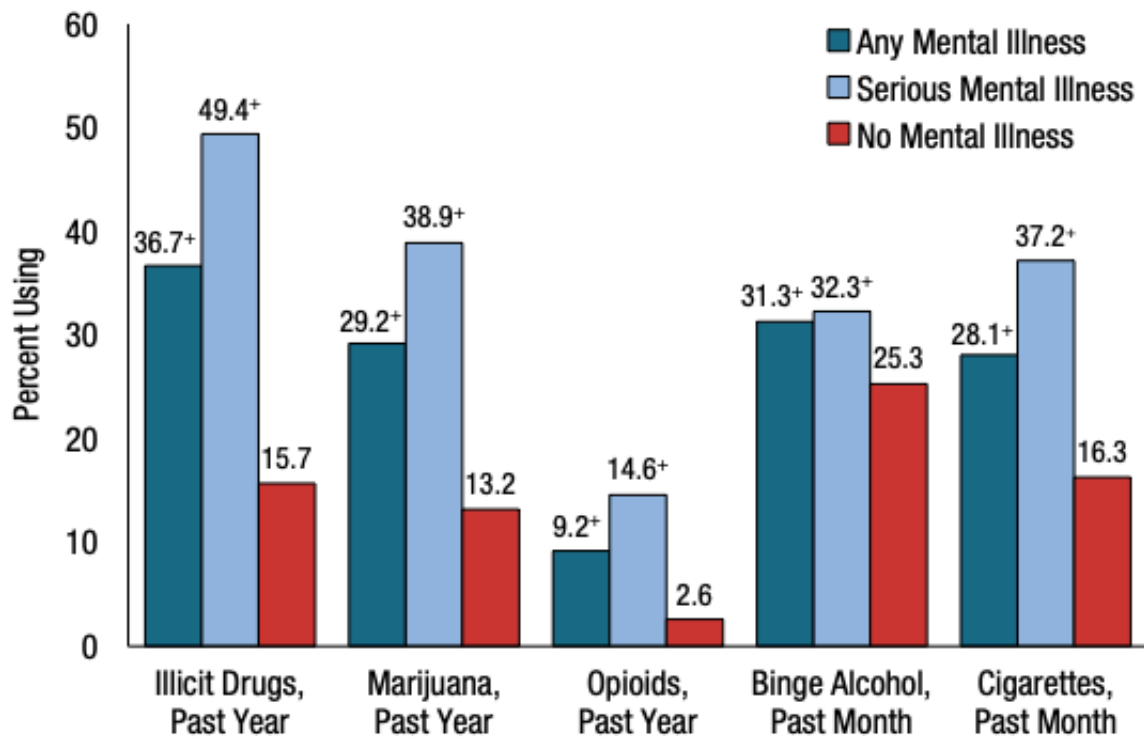
Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>123</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.27.4 Co-occurring MDE and SUD

The NSDUH (2019) defines anyone with a past year experience with a MDE and a SUD as having co-occurring MDE and SUD. Among adults age 18 and older, the prevalence of substance use is higher for those who have mental illness, especially a serious mental illness (see Figure 3.2.5).

Figure 3.2.5 Prevalence of past year and past month substance use among adults age 18 and older by mental illness in the U.S., 2018<sup>124</sup>



<sup>+</sup> Difference between this estimate and the estimate for adults without mental illness is statistically significant at the .05 level.

Source: National Survey on Drug Use and Health, 2018

<sup>124</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

Table 3.2.27 shows the estimates of past year co-occurrence of MDE and SUD among people age 18 and older. In the U.S., an estimated 1.96 million young adults age 18 to 25 (2.5%) and an estimated 1.78 million adults age 26 and older had co-occurring MDE and SUD in the past year.

In Cuyahoga County, an estimated 14,241 people age 18 and older had co-occurring MDE and SUD in the past year.

Table 3.2.27 Estimated number and prevalence of past year co-occurring MDE and SUD among people age 12 and older, 2017-2018<sup>125</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
18 to 25	1,960,384 (2.5%)	70,036 (2.5%)	<b>7,448</b> <b>(2.6%)</b>	2,299 (2.6%)
26+	1,784,079 (1.1%)	63,757 (1.1%)	<b>6,793</b> <b>(1.1%)</b>	2,095 (1.1%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>125</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>



### 3.2.27.5 Suicidal thoughts and behaviors

A considerably higher number of people attempt suicide which does not result in death, but about 1 out of every 31 adults who attempt suicide in the past month die by suicide (NSDUH 2018).

Table 3.2.28 shows the estimates of past year suicidal thoughts and behaviors among people age 18 and older. Among young adults age 18 to 25 in the U.S., 10.7% (6.8 million people) had serious thoughts of suicide, 3.4% (2.7 million people) made suicide plans, and 1.9% (1.4 million people) attempted suicide. Among adults age 26 and older in the U.S., 3.2% (2.6 million people) had serious thoughts of suicide, 1.0% (1.7 million people) made suicide plans, and 0.4% (0.6 million people) attempted suicide.

In Cuyahoga County, among adults age 18 and older, an estimated 40,766 had suicidal thoughts, 16,555 made suicide plans, and 7,833 attempted suicide in the past year.

Table 3.2.28 Estimated number and prevalence of past year suicidal thoughts and behaviors among people age 18 and older, 2017-2018<sup>126</sup>

	Age	U.S.	Ohio	Cuyahoga County	Cleveland
Suicidal thoughts	18 to 25	6,799,088 (10.7%)	271,183 (12.0%)	<b>28,777</b> <b>(9.9%)</b>	8,889 (9.9%)
	26+	2,550,558 (3.2%)	112,738 (3.4%)	<b>11,989</b> <b>(6.1%)</b>	3,700 (1.9%)
Suicide plans	18 to 25	2,687,643 (3.4%)	96,018 (3.4%)	<b>10,211</b> <b>(3.5%)</b>	3,151 (3.5%)
	26+	1,666,021 (1.0%)	59,538 (1.0%)	<b>6,344</b> <b>(1.0%)</b>	1,956 (1.0%)
Suicide attempts	18 to 25	1,440,859 (1.9%)	51,476 (1.9%)	<b>5,474</b> <b>(1.9%)</b>	1,689 (1.9%)
	26+	1,689 (1.9%)	22,144 (0.4%)	<b>2,359</b> <b>(0.4%)</b>	728 (0.4%)

Source: National Survey on Drug Use and Health, 2017-2018 and American Community Survey, 2018

<sup>126</sup> Sources: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2017 and 2018. State and census region estimates along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques. For the "Total U.S." row, design-based (direct) estimates and corresponding 95 percent confidence intervals are given.  
<https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.28 Mental illness among youth age 12 to 17

#### 3.2.28.1 Major depressive episode (MDE)

Table 3.2.29 shows the estimates of lifetime and past year experience with a major depressive episode among youth age 12 to 17.

About 20.7% of the U.S. population age 12 to 17 (13.1 million youth) had a MDE in the lifetime. About 14.6% of the U.S. population age 12 to 17 (9.2 million youth) had a MDE in the past year.

In Cuyahoga County, an estimated 49,690 youth age 12 to 17 had a MDE in the lifetime and an estimated 35,047 youth age 12 to 17 had a MDE in the past year.

Table 3.2.29 Estimated number and prevalence of major depressive episode among people age 12 to 17, 2018<sup>127</sup>

Age	U.S.	Ohio	Cuyahoga County	Cleveland
Lifetime	13,111,261 (20.7%)	468,257 (20.7%)	<b>49,690</b> <b>(20.7%)</b>	15,348 (20.7%)
Past year	9,247,556 (14.6%)	330,268 (14.6%)	<b>35,047</b> <b>(14.6%)</b>	10,825 (14.6%)

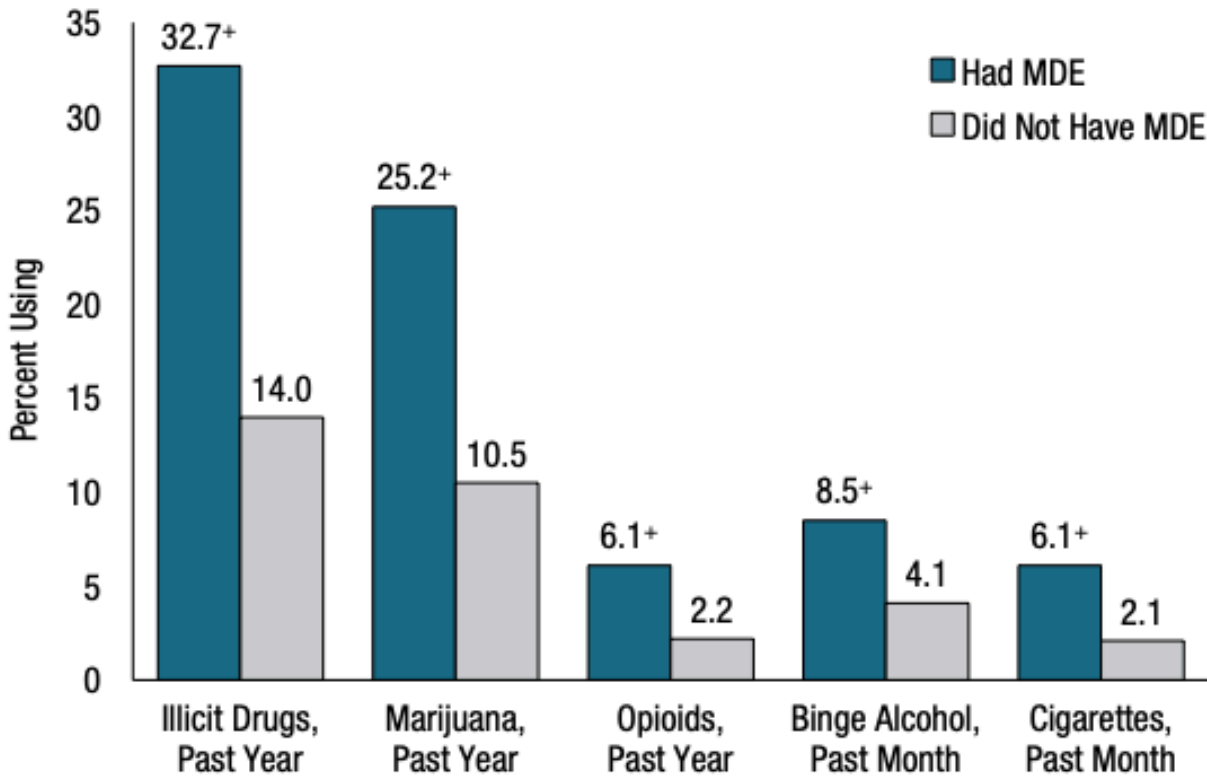
Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>127</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.2.28.2 Co-occurring MDE and substance use

Like adults, the prevalence of drug use, especially the illicit drug use, is higher among youth age 12 to 17 who had a MDE than among youth age 12 to 17 who did not have a MDE (see Figure 3.2.6).

Figure 3.2.6 Prevalence of past year and past month substance use among youth age 12 to 17 by MDE in the U.S., 2018<sup>128</sup>



+ Difference between this estimate and the estimate for youths without MDE is statistically significant at the .05 level.

Note: Youth respondents with unknown MDE data were excluded.

Source: National Survey on Drug Use and Health, 2018

<sup>128</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

Table 3.2.30 shows the estimates of past year co-occurrence of a major depressive episode and various substance use disorders among youth age 12 to 17.

About 0.8% of the U.S. population age 12 to 17 (506,715 youth) had co-occurring MDE and alcohol use disorder (AUD) in the past month. About 1.3% of the U.S. population age 12 to 17 (823,413 youth) had co-occurring MDE and illicit drug use disorder in the past year. About 1.7% of the U.S. population age 12 to 17 (1.1 million youth) had co-occurring MDE and substance use disorder (SUD) in the past year.

In Cuyahoga County, an estimated 1,920 youth age 12 to 17 had co-occurring MDE and AUD in the past year, an estimated 3,121 youth age 12 to 17 had co-occurring MDE and illicit drug use disorder in the past year, and an estimated 4,081 youth age 12 to 17 had co-occurring MDE and SUD in the past year.

Table 3.2.30 Estimated number and prevalence of past year co-occurring MDE and AUD, IUD, and SUD among people age 12 to 17, 2018<sup>129</sup>

Age	U.S.	Ohio	<b>Cuyahoga County</b>	Cleveland
MDE and AUD	506,715 (0.8%)	18,097 (0.8%)	<b>1,920 (0.8%)</b>	593 (0.8%)
MDE and IDUD	823,413 (1.3%)	29,407 (1.3%)	<b>3,121 (1.3%)</b>	964 (1.3%)
MDE and SUD	1,076,770 (1.7%)	38,456 (1.7%)	<b>4,081 (1.7%)</b>	1,260 (1.7%)

Source: National Survey on Drug Use and Health, 2018 and American Community Survey, 2018

<sup>129</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>

### 3.3 Monitoring the Future (MTF)

The University of Michigan Survey Research Center with grants from the National Institute on Drug Abuse (NIDA) of the National Institute of Health (NIH) has been conducting the Monitoring the Future (MTF) project annually since 1975 to collect data on drug use among young people. The original project included 12th-grade students only, and 8th grade and 10th-grade students were added to the project starting in 1991; it surveys approximately 50,000 students in about 420 public and private middle and high schools each year. The MTF project has been expanded to include college students and young adults. In addition to the cross-sectional data collected from these age groups, the MTF has also been collecting longitudinal data biennially from a representative sample of each of the 12th-grade samples of students since 1976 until they turn age 55.

The MTF is a school-based survey given in students' classrooms, although the longitudinal data are collected via questionnaire sent by mail. Detailed and extensive data on the following four issues are collected on each drug examined: (1) lifetime, past 12 months, and last 30 days use; (2) perceived risk of using; (3) the level of disapproval of the use; and (4) perceived availability. Both legal and illicit drugs are examined by the MTF survey, including marijuana/hashish, inhalants, hallucinogens, LSD, ecstasy, cocaine, crack, other cocaine, heroin (with a needle and without a needle), narcotics other than heroin, amphetamines, methamphetamines, crystal methamphetamine, sedatives, tranquilizers, any prescription drug (without a prescription), Rohypnol, alcohol, cigarettes, smokeless tobacco, electronic vaporizers, steroids, nitrites, PCP, and methaqualone<sup>130</sup>.

One of the most significant limitations of MTF (as well as YRBSS discussed next) is the potential exclusion of at-risk youth because self-report surveys are often given at school. This excludes those who skipped, dropped out, or were expelled from school and those who are in mental health/substance abuse residential facilities or correctional institutions.

This section summarizes the results of the 2019 MTF survey separately for 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in the U.S., but results discussed in the following focus on 12<sup>th</sup> graders. The estimates for Cuyahoga County are not calculated but rough estimates can be calculated by multiplying with the enrollment data for 2019 found at Ohio Department of Education website<sup>131</sup>.

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<sup>130</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>

<sup>131</sup> <http://education.ohio.gov/Topics/Data/Frequently-Requested-Data/Enrollment-Data>

Table 3.3.1 shows the prevalence of various licit drug use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders. As the table shows, more than half of 12<sup>th</sup> graders indicate that they drank alcohol in their lifetime or in the past month. Almost 1 in 3 12<sup>th</sup> graders are current users of alcohol with 29.3% indicating that they drunk alcohol in the past month. 1.7% of 12<sup>th</sup> graders indicate that they drink alcohol daily. The remaining table shows cigarette use, including vaping and JUUL. Overall, the lifetime prevalence of vaping is more than twice the lifetime prevalence of cigarette use among 12<sup>th</sup> graders.

Table 3.3.1 Prevalence of various licit drug use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students in the U.S., 2019<sup>132</sup>

Type of licit drug		8th grades	10th grades	12th grades
Alcohol	Lifetime	24.5%	43.1%	<b>58.5%</b>
	Past Year	19.3%	37.7%	<b>52.1%</b>
	Past Month	7.9%	18.4%	<b>29.3%</b>
	Daily	0.2%	0.6%	<b>1.7%</b>
Cigarettes (any use)	Lifetime	10%	14.2%	<b>22.3%</b>
	Past Month	2.3%	3.4%	<b>5.7%</b>
	Daily	0.8%	1.3%	<b>2.4%</b>
	1/2-pack+/day	0.2%	0.5%	<b>0.9%</b>
Any Vaping	Lifetime	24.3%	41.0%	<b>45.6%</b>
	Past Year	20.1%	35.7%	<b>40.6%</b>
	Past Month	12.2%	25.0%	<b>30.9%</b>
Smokeless Tobacco	Lifetime	7.1%	9.2%	<b>9.8%</b>
	Past Month	2.5%	3.2%	<b>3.5%</b>
	Daily	0.5%	0.9%	<b>1.1%</b>
JUUL	Lifetime	18.9%	32.8%	-
	Past Year	14.7%	28.7%	-
	Past Month	8.5%	18.5%	<b>16.3%</b>

Source: Monitoring the Future, 2019

Table 3.3.2 shows the prevalence of various illicit drug use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders in the U.S. in 2019. Almost half (47.4%) of 12<sup>th</sup> graders used an illicit drug in their lifetime. Most commonly, 43.7% of youth in 12<sup>th</sup> grade used marijuana and 18.4% of 12<sup>th</sup> graders used an illicit drug other than marijuana in their lifetime<sup>133</sup>.

Among other illicit drugs, prescription drug misuse is the second most prevalent among 12<sup>th</sup> graders with 14.6% indicating that they have misused prescription drug in their

<sup>132</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>

<sup>133</sup> This result is not shown in the table but can be found here:  
<http://monitoringthefuture.org/data/19data/19drtbl1.pdf>

lifetime. Usually among the youth, the more easily accessible the drug (e.g., marijuana, alcohol, inhalants, prescription medications), the more popularly used.

Other popularly used illicit drug among 12<sup>th</sup> graders include hallucinogens (6.9% lifetime use), LSD (5.6% lifetime use), Amphetamine (7.7% lifetime use), narcotics other than heroin (5.3% lifetime use), and tranquilizers (6.1% lifetime use). Though more expensive drugs like heroin and cocaine are not popularly used among youth, about 0.4% of 12<sup>th</sup> graders have used heroin with a needle in their lifetime<sup>134</sup>.

Drug use has declined among youth since its peak in the 1970s (see Graph 3.2), however, with the increase in tolerance, the use of marijuana has increased slightly over time since 1990s.

Table 3.3.2 Prevalence of various illicit drug use among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade students in the U.S., 2019<sup>135</sup>

Type illicit drug		8 <sup>th</sup> grades	10 <sup>th</sup> grades	12 <sup>th</sup> grades
Illicit Drugs	Lifetime	20.4%	37.5%	<b>47.4%</b>
	Past Year	14.8%	31.0%	<b>38.0%</b>
	Past Month	8.5%	19.8%	<b>23.7%</b>
Cocaine	Lifetime	1.2%	2.5%	<b>3.8%</b>
	Past Year	0.7%	1.5%	<b>2.2%</b>
	Past Month	0.3%	0.6%	<b>1.0%</b>
Crack Cocaine	Lifetime	0.9%	0.9%	<b>1.7%</b>
	Past Year	0.4%	0.6%	<b>1.0%</b>
	Past Month	0.2%	0.3%	<b>0.7%</b>
Hallucinogens	Lifetime	2.4%	4.7%	<b>6.9%</b>
	Past Year	1.3%	3.1%	<b>4.6%</b>
	Past Month	0.6%	1.3%	<b>1.8%</b>
Heroin	Lifetime	0.7%	0.4%	<b>0.6%</b>
	Past Year	0.3%	0.3%	<b>0.4%</b>
	Past Month	0.1%	0.2%	<b>0.3%</b>
Inhalants	Lifetime	9.5%	6.8%	<b>5.3%</b>
	Past Year	4.7%	2.8%	<b>1.9%</b>
	Past Month	2.1%	1.1%	<b>0.9%</b>
K2/Spice (Synthetic Marijuana)	Past Year	2.7%	2.6%	<b>3.3%</b>
Ketamine	Past Year	-	-	<b>0.7%</b>

<sup>134</sup> This result is not shown in the table but can be found here:  
<http://monitoringthefuture.org/data/19data/19drtbl1.pdf>

<sup>135</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>

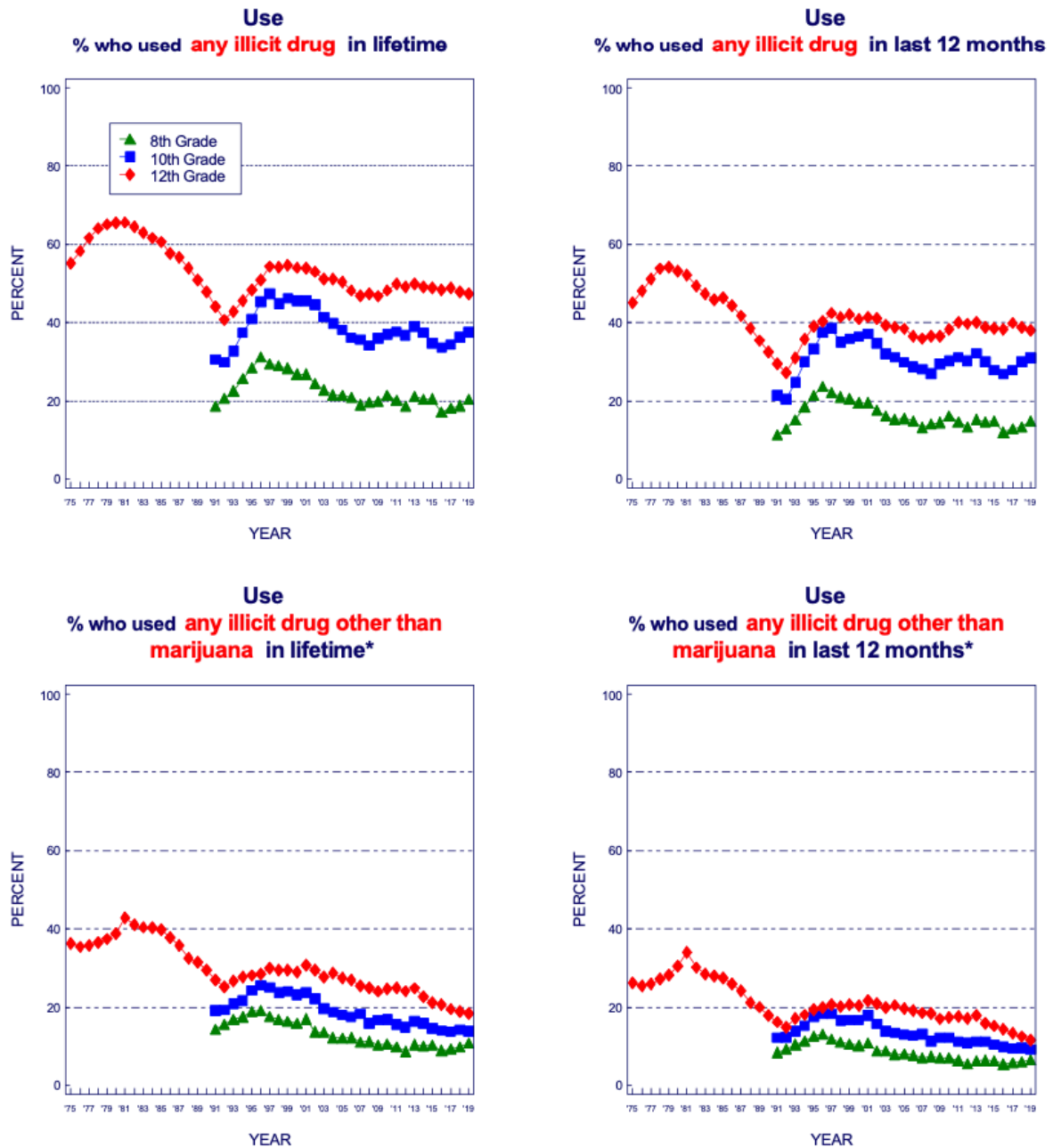
Type of illicit drug		8 <sup>th</sup> grades	10 <sup>th</sup> grades	12 <sup>th</sup> grades
LSD	Lifetime	1.6%	3.6%	<b>5.6%</b>
	Past Year	0.9%	2.3%	<b>3.6%</b>
	Past Month	0.4%	1.1%	<b>1.4%</b>
Marijuana/ Hashish	Lifetime	15.2%	34.0%	<b>43.7%</b>
	Past Year	11.8%	28.8%	<b>35.7%</b>
	Past Month	6.6%	18.4%	<b>22.3%</b>
	Daily	1.3%	4.8%	<b>6.4%</b>
MDMA	Lifetime	1.7%	3.2%	<b>3.3%</b>
	Past Year	1.1%	1.7%	<b>2.2%</b>
	Past Month	0.5%	0.7%	<b>0.7%</b>
Methamphetamine	Lifetime	0.9%	0.7%	<b>0.8%</b>
	Past Year	0.5%	0.5%	<b>0.5%</b>
	Past Month	0.1%	0.3%	<b>0.3%</b>
	Past Year	-	-	<b>1.1%</b>
Rohypnol	Lifetime	0.6%	0.9%	-
	Past Year	0.4%	0.6%	<b>0.5%</b>
	Past Month	0.4%	0.2%	-
Salvia	Past Year	0.8%	0.9%	<b>0.7%</b>
Any Prescription Drug	Lifetime	-	-	<b>14.6%</b>
	Past Year	-	-	<b>8.6%</b>
	Past Month	-	-	<b>3.6%</b>
Adderall	Past Year	2.5%	3.1%	<b>3.9%</b>
Amphetamine	Lifetime	6.8%	8.2%	<b>7.7%</b>
	Past Year	4.1%	5.2%	<b>4.5%</b>
	Past Month	2.2%	2.4%	<b>2.0%</b>
Cough Medicine (non-prescription)	Past Year	3.2%	2.6%	<b>2.5%</b>
Narcotics other than Heroin	Lifetime	-	-	<b>5.3%</b>
	Past Year	-	-	<b>2.7%</b>
	Past Month	-	-	<b>1.0%</b>
OxyContin	Past Year	1.2%	2.0%	<b>1.7%</b>
Ritalin	Past Year	1.0%	0.7%	<b>1.1%</b>
Steroids	Lifetime	1.5%	1.6%	<b>1.6%</b>
	Past Year	0.8%	0.8%	<b>1.0%</b>
	Past Month	0.3%	0.4%	<b>0.7%</b>
Tranquilizers	Lifetime	4.0%	5.7%	<b>6.1%</b>
	Past Year	2.4%	3.4%	<b>3.4%</b>
	Past Month	1.2%	1.3%	<b>1.3%</b>
Vicodin	Past Year	0.9%	1.1%	<b>1.1%</b>

Source: Monitoring the Future, 2019



Figure 3.3.1 Trends in lifetime and annual use of drugs among 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> graders, 2019

**Any Illicit Drug and Any Illicit Drug Other than Marijuana : Trends in Lifetime and Annual Use**  
 Grades 8, 10, 12



Source. The Monitoring the Future study, the University of Michigan.

\*In 2001, a revised set of questions on other hallucinogen use and tranquilizer use were introduced. In 2013, a revised set of questions on amphetamine use was introduced. Data for any illicit drug other than marijuana were affected by these changes.

Source: Monitoring the Future 2019

The MTF also asks youth their perceptions of the harmfulness, disapproval, and availability<sup>136</sup> of each drug. Only the 12<sup>th</sup> grade results are shown in Table 3.3.3 and discussed here.

As the table shows, the majority of 12<sup>th</sup> graders do not perceive trying marijuana once or twice as harmful (88.4%) nor as difficult to obtain (78.4%). However, majority of 12<sup>th</sup> graders disapproved smoking marijuana regularly (65.1%) and almost half disapproved smoking marijuana even occasionally (44.1%).

Moreover, though less than half of 12<sup>th</sup> graders think illicit drugs are harmful, the majority of them disapprove of using illicit drugs nonetheless.

Interestingly, 12<sup>th</sup> graders perceive licit drugs more harmful than illicit drugs. In fact, the drug that 12<sup>th</sup> graders disapprove most strongly is cigarettes (75.5% indicating that smoking one pack of cigarettes per day is harmful), followed by alcohol (63.2% indicating that taking four or five drinks nearly every day as harmful).

Among illicit drugs, 61.0% of 12<sup>th</sup> graders perceive heroin, or more specifically, trying heroin once or twice to be harmful.

Table 3.3.3 Prevalence of perceived harmful effects, disapproval, and availability of various illicit drug use among 12<sup>th</sup> grade students in the U.S., 2019<sup>137</sup>

Try marijuana once or twice	Harmful	11.60%
	Disapproval	37.00%
	Availability	78.40%
Smoke marijuana occasionally	Harmful	14.50%
	Disapproval	44.10%
	Availability	78.40%
Smoke marijuana regularly	Harmful	30.30%
	Disapproval	65.10%
	Availability	78.40%
Try synthetic marijuana once or twice	Harmful	30.80%
	Disapproval	-
	Availability	-

<sup>136</sup> Availability was measured with the following question: "How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?" (Johnston et al. 2019, p. 113): <http://www.monitoringthefuture.org/pubs/monographs/mtf-overview2019.pdf>

<sup>137</sup> <https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>

Try LSD once or twice	Harmful	31.30%
	Disapproval	76.90%
	Availability	28.70%
Try PCP once or twice	Harmful	52.80%
	Disapproval	-
	Availability	9.90%
Try MDMA once or twice	Harmful	49.30%
	Disapproval	88.70%
	Availability	23.90%
Try salvia once or twice	Harmful	11.60%
	Disapproval	-
	Availability	-
Try cocaine once or twice	Harmful	48.00%
	Disapproval	88.70%
	Availability	26.50%
Try heroin once or twice	Harmful	61.00%
	Disapproval	94.70%
	Availability	17.20%
Try any narcotic other than heroin once or twice	Harmful	44.00%
	Disapproval	-
	Availability	31.00%
Try amphetamine once or twice	Harmful	34.40%
	Disapproval	82.00%
	Availability	37.80%
Try Adderall once or twice	Harmful	34.40%
	Disapproval	-
	Availability	-
Try sedatives once or twice	Harmful	31.40%
	Disapproval	85.90%
	Availability	23.80%
Try one or two drinks of alcoholic beverage	Harmful	10.30%
	Disapproval	28.30%
	Availability	82.90%
Take one or two drinks nearly every day	Harmful	22.50%
	Disapproval	73.80%
	Availability	82.90%
Take four or five drinks nearly every day	Harmful	63.20%
	Disapproval	91.70%
	Availability	82.90%

Take five or more drinks once or twice each weekend	Harmful	40.90%
	Disapproval	72.50%
	Availability	82.90%
Smoke one or more packs of cigarettes per day	Harmful	75.50%
	Disapproval	87.80%
	Availability	72.70%
Vape an e-liquid with nicotine occasionally	Harmful	21.40%
	Disapproval	58.80%
	Availability	80.40%
Vape an e-liquid with nicotine regularly	Harmful	38.00%
	Disapproval	70.40%
	Availability	80.40%
Use JUUL occasionally	Harmful	18.10%
	Disapproval	58.10%
	Availability	-
Use JUUL regularly	Harmful	34.40%
	Disapproval	69.20%
	Availability	-
Smoke little cigars or cigarillos regularly	Harmful	43.80%
	Disapproval	-
	Availability	-
Use smokeless tobacco regularly	Harmful	42.10%
	Disapproval	-
	Availability	-
Take steroids	Harmful	54.80%
	Disapproval	89.50%
	Availability	16.30%

Source: Monitoring the Future, 2019

### 3.4 Youth Risk Behavior Surveillance System (YRBSS)

The Youth Risk Behavior Surveillance System (YRBSS) has been conducted biennially since 1990 to track health risk behaviors and their consequences, such as death and disability, among young people. Health risk behaviors examined include law-breaking behaviors in terms of both victimization and offending, drinking and driving, texting and driving, drug, tobacco, and alcohol use, carrying a weapon to school, getting into a physical fight, rape, and other inappropriate sexual behaviors.

The YRBSS is a school-based survey that encompasses both national and local surveys involving representative samples of 9th- through 12th-grade students, and since its inception more than 3.8 million students have participated. The national survey is conducted by the Centers for Disease Control and Prevention (CDC) among a nationally representative sample of students in both public and private schools<sup>138</sup>, and local surveys are conducted by the Departments of Health and Education using a representative sample of students at each local level.

Unfortunately, 2017 YRBSS does not include Ohio data, but Cleveland data are included as an example of urban districts.

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<sup>138</sup> According to the CDC, “The sampling frame for the 2017 national YRBS consisted of all regular public (including charter schools), Catholic, and other non-public schools with students in at least one of grades 9–12 in the 50 states and the District of Columbia. Alternative schools, special education schools, schools operated by the Department of Defense, Bureau of Indian Education schools, and vocational schools serving only pull-out populations were excluded.”  
<https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf>

### 3.4.1 Mental health

Table 3.4.1 shows the prevalence of hopelessness and suicidal thoughts among youth in 9<sup>th</sup> grade through 12<sup>th</sup> grade in the U.S. in 2017.

Though some of the data for Cleveland are not available, the available data suggests that the prevalence of mental illness is higher in Cleveland compared to the national prevalence. The table shows that almost half of girls (44.8%) and more than a quarter of boys (26.5%) in 9<sup>th</sup> through 12 grades in Cleveland felt sad or hopeless. A large proportion of these youth in Cleveland also considered suicide (23.1% of females and 14.4% of boys) and even attempted suicide (20.0% of girls and 17.0% of boys), and these percentages are much higher than the national percentages.

Table 3.4.1 Past year prevalence of hopelessness and suicide among youth grades 9<sup>th</sup> through 12<sup>th</sup>, 2017<sup>139</sup>

	U.S.		Cleveland	
	Boys	Girls	Boys	Girls
Sad or hopeless	21.4%	41.1%	26.5%	44.8%
Considered suicide	11.9%	22.1%	14.4%	23.1%
Made a suicide plan	9.7%	17.1%	-	-
Attempted suicide	5.1%	9.3%	17.0%	20.0%
Injurious suicide attempt	1.5%	3.1%	-	-

Source: Youth Risk Behavior Surveillance System, 2017

<sup>139</sup> <https://www.cdc.gov/healthyyouth/data/yrbs/results.htm>

### 3.4.2 Substance use

The prevalence of various drug use found in the YRBSS is consistently higher than the prevalence of drug use found in the MTF 2019, but this is expected because the sample of the YRBSS includes older kids (9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades) than the sample of the MTF (8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades).

Table 3.4.2 shows that girls in Cleveland are more likely to have ever used cigarettes, alcohol, and marijuana (29.5%, 65.3%, 50.7%, respectively) than boys in Cleveland (21.2%, 45.9%, and 40.4%, respectively). A quite large percentage of Cleveland youth indicated that they have been offered, sold, or given illegal drugs on school premises: 21.0% of boys and 18.4% of girls.

Table 3.4.2 Prevalence of substance use among youth grades 9<sup>th</sup> through 12<sup>th</sup>, 2017<sup>140</sup>

	U.S.		Cleveland	
	Boys	Girls	Boys	Girls
Ever cigarette use	30.7%	27.3%	21.2%	29.5%
Current use of cigarettes	9.8%	7.8%	7.0%	5.7%
Ever alcohol use	58.1%	62.6%	45.9%	65.3%
Had alcohol before age 13	18.2%	12.8%	18.6%	18.9%
Current alcohol use	27.6%	31.8%	21.0%	31.4%
Current binge drinking	12.8%	14.1%	11.0%	14.7%
Ever marijuana use	35.2%	35.9%	40.4%	50.7%
Tried marijuana before age 13	8.3%	5.3%	15.5%	12.0%
Current marijuana use	20.0%	19.6%	22.5%	28.5%
Ever used synthetic marijuana	7.3%	6.3%	-	-
Ever cocaine use	6.1%	3.5%	-	-
Ever inhalant use	6.0%	6.4%	-	-
Ever heroin use	2.4%	0.9%	-	-
Ever methamphetamine use	3.4%	1.4%	-	-
Ever used ecstasy	5.0%	2.9%	-	-
Ever used hallucinogens	7.6%	5.5%	-	-
Ever took steroids without RX	3.3%	2.4%	-	-
Ever took prescription pain medicine without RX	13.4%	14.4%	18.8%	16.8%
Ever injected any illegal drugs	2.0%	0.8%	-	-
Offered, sold, or given illegal drug at school	20.9%	18.7%	21.0%	18.4%

Source: Youth Risk Behavior Surveillance System, 2017

<sup>140</sup> <https://www.cdc.gov/healthyyouth/data/yrbs/results.htm>

### 3.5 National Survey of Children's Health (NSCH)

The National Survey of Children's Health (NSCH) is funded by the Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau (MSHB). The NSCH is administered online and by mail to a randomly selected households in the U.S. One child from each household is selected for the main topical questionnaire. The most current surveys in 2016, 2017, and 2018 were collected by the U.S. Census Bureau. In 2018, 176,052 households were involved in the survey with 6,976 topical questionnaires completed.

Table 3.5.1 shows the prevalence of attention deficit disorder/attention-deficit/hyperactivity disorder (ADD/ADHD), autism or autism spectrum disorder (ASD), and other mental health information about children age 3 to 17 collected from parents or other caregivers.

Some information on Ohio was also available from the NSCH 2018. All data are shown by gender.

As the table shows, boys are more likely than girls to have ADD/ADHD or autism or ASD in the U.S. and Ohio. The table also shows that parents of 5.5% of children age 3 to 17 indicated that their child has a condition for ADD/ADHD but did not receive behavioral treatment. Parents of about 10% of children age 3 to 17 indicated that their child currently has ADD/ADHD. The prevalence of autism or ASD is much lower than the prevalence of ADD/ADHD.

Parents of almost 10% of children age 3 to 17 indicated that the child is currently taking medication for ADD/ADHD, autism/ASD, or difficulties with emotions, concentration, or behavior, and parents of more than 1 in 5 children indicated that the child has one or more reported mental, emotional, developmental, or behavioral problems, and/or qualifies on Children with Special health Care Needs (CSHCN) screener emotional, behavioral, or developmental criteria.

28.7% of parents in the U.S. and 22.1% of parents in Ohio indicated that they have adequate insurance coverage for mental health and behavioral needs for their child only sometimes or never. Almost 2.5% of parents indicated that their child did not receive any treatment or counseling from mental health professionals in the past year even though he/she needed one.



Table 3.5.1 Prevalence of mental illness and mental health treatment use among children age 3 to 17 years, 2018<sup>141</sup>

Mental illness and mental health treatment use		U.S.			Ohio		
		Boys	Girls	Total	Boys	Girls	Total
ADD/ADHD	Ever told but do not currently have	1.2%	0.5%	0.8%	1.0%	1.5%	1.3%
	Currently have	11.5%	5.8%	8.7%	11.1%	7.7%	9.3%
	Currently has condition and taking medications	7.3%	3.6%	5.5%	-	-	5.4%
	Currently has condition but not taking medications	4.3%	2.1%	3.2%	-	-	2.4%
	Rated by parents as mild	4.6%	2.3%	3.4%	3.2%	4.2%	3.7%
	Rated by parents as severe	6.8%	3.4%	5.1%	7.9%	3.5%	5.6%
	Currently has condition and received behavioral treatment	5.6%	2.2%	3.9%	4.9%	2.7%	3.7%
	Currently has condition and did not received behavioral treatment	5.9%	3.5%	4.7%	6.2%	4.9%	5.5%
Autism or autism spectrum disorder (ASD) including Asperger's disorder, pervasive developmental disorder	Ever told but do not currently have one	0.2%	0.0%	0.1%	-	-	0.1%
	Currently have	4.5%	1.3%	2.9%	-	-	2.6%
	Rated by parents mild	1.8%	0.7%	1.3%	-	-	-
	Rated by parents as severe	2.4%	0.7%	1.6%	-	-	-
	Currently has condition and taking medication	1.0%	0.3%	0.6%	-	-	-
	Currently has condition but not taking medication	3.1%	1.1%	2.1%	-	-	-
	Currently has condition and received behavioral treatment	2.6%	0.6%	1.6%	-	-	-
	Currently has condition but did not receive behavioral treatment	1.5%	0.8%	1.1%	-	-	-

<sup>141</sup> <https://www.childhealthdata.org/browse/survey>

Mental illness and mental health treatment use		U.S.			Ohio		
		Boys	Girls	Total	Boys	Girls	Total
Taking medication for ADD/ADHD, autism/ASD, or difficulties with emotions, concentration, or behavior		10.2%	6.6%	8.4%	12.0%	7.8%	9.9%
Child has one or more reported MEDB problems, and/or qualifies on CSHCN Screener emotional, behavioral or developmental criteria		25.6%	18.1%	21.9%	21.9%	21.3%	21.6%
Adequate insurance coverage for mental health and behavioral needs	Always	45.2%	44.5%	44.9%	45.6%	52.2%	48.9%
	Usually	26.9%	25.9%	26.5%	30.3%	27.8%	29.0%
	Sometimes or never	27.9%	29.5%	28.7%	24.1%	20.0%	22.1%
Received any treatment or counseling from mental health professionals in the past year	Yes	10.2%	8.9%	9.6%	12.3%	8.9%	10.6%
	No, but needed to see a mental health professional	2.4%	2.5%	2.4%	0.8%	3.7%	2.3%
Difficulty getting mental health treatment or counseling that child needed	Received or needed mental health care and did not have difficulty getting it	58.2%	62.4%	60.2%	-	-	-
	Received or needed mental health care but it was somewhat difficult to get it	23.2%	22.8%	23.0%	-	-	-
	Received or needed mental health care but it was very difficult to get it	13.5%	11.9%	12.8%	-	-	-
	It was not possible to obtain care	5.0%	2.9%	4.0%	-	-	-

Source: National Survey of Children's Health, 2018

### **3.6 National Health Interview Survey (NHIS)**

The National Health Interview Survey (NHIS) has been conducted by the National Center for Health Statistics (NCHS) which is part of the Centers for Disease Control and Prevention (CDC). The NHIS collects information on various topics related to health of noninstitutionalized population in the U.S. since 1957. The random sampling method is used to assure nationally representative households and noninstitutional group quarters like college dormitories. The sample of the NHIS in 2018 includes people age 18 and older.

Table 3.6.1 reports on the prevalence of negative feeling and psychological distress by gender and age<sup>142</sup>. The table indicates that 3.9% of adults age 18 and older in the U.S. had serious psychological distress last year. Serious psychological distress is more prevalent among women than men and among people age 45 to 64 compared to other age groups. Females are overall more likely than males to experience negative emotions in the past year. The relationship between age and negative emotions is not consistent, but people age 45 to 64 followed by people age 18 to 44 appear to be more likely than other groups to experience negative emotions in the past year.

Table 3.6.1 Prevalence of feeling various negative emotions in the past year among adults age 18 and older by gender and age, 2018<sup>143</sup>

Selected characteristic	Total	Gender		Age			
		Male	Female	18–44	45–64	65–74	75+
Sad all or most of the time	3.0%	2.3%	3.6%	2.5%	3.8%	3.2%	3.6%
Sad some of the time	8.8%	7.3%	10.1%	8.1%	9.5%	9.2%	10.0%
Hopeless all or most of the time	2.3%	2.0%	2.6%	2.1%	2.7%	2.1%	2.1%
Hopeless some of the time	5.0%	4.1%	6.0%	5.2%	5.2%	4.8%	3.8%
Worthless all or most of the time	2.3%	1.8%	2.8%	2.2%	2.5%	2.1%	2.7%
Worthless some of the time	3.9%	3.3%	4.5%	4.0%	3.9%	3.9%	3.7%
That everything is an effort all or most of the time	7.3%	6.6%	7.9%	7.5%	7.6%	5.7%	7.1%
That everything is an effort some of the time	11.6%	10.5%	12.7%	12.7%	10.9%	9.8%	9.7%
Nervous all or most of the time	6.0%	4.5%	7.3%	6.7%	5.6%	4.7%	3.8%
Nervous some of the time	14.9%	12.6%	17.1%	17.0%	13.6%	11.2%	10.5%
Restless all or most of the time	7.7%	6.8%	8.5%	8.5%	7.6%	5.7%	4.3%
Restless some of the time	14.2%	13.4%	14.9%	15.3%	14.1%	10.7%	11.4%
Serious psychological distress	3.9%	2.9%	4.8%	3.8%	4.5%	3.2%	3.1%

Source: National Health Interview Survey, 2018

<sup>142</sup> [https://www.cdc.gov/nchs/nhis/nhis\\_products.htm](https://www.cdc.gov/nchs/nhis/nhis_products.htm)

<sup>143</sup> [https://www.cdc.gov/nchs/nhis/nhis\\_products.htm](https://www.cdc.gov/nchs/nhis/nhis_products.htm)

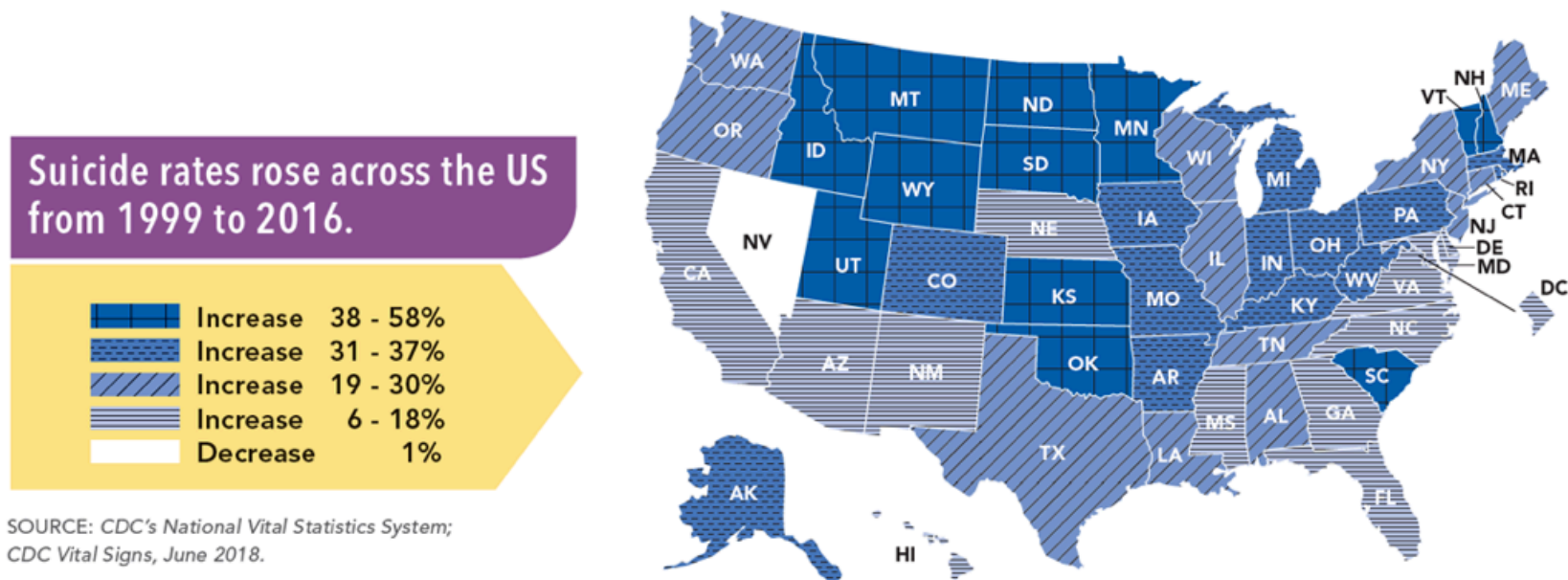
### 3.7 Suicide rate

More than 48,000 people in the U.S. died from suicide in 2018 (CDC, May 28, 2020<sup>144</sup>), and the rate of suicide has been increasing since 1999 (see Figure 3.7.1).

Figure 3.7.1 Percentage increase in suicide rates across the U.S. from 1999 to 2016 by state

## Suicide rising across the US

More than a mental health concern



Source: Centers for Disease Control and Prevention

<sup>144</sup> <https://www.cdc.gov/nchs/products/databriefs/db362.htm>

Suicide rates for 2018 shown in Table 3.7.1 come from various sources. The national and state data come from the CDC’s National Center for Health Statics<sup>145 146</sup> that compiles the National Vital Statistics, and Cuyahoga County’s data come from Cuyahoga County Medical Examiner’s report<sup>147</sup>.

Ohio had the 28<sup>th</sup> highest suicide rate among 50 states and Washington D.C. Cuyahoga County had a higher suicide rate (17.2) overall compared to the national rate (14.2). Within Cuyahoga County, Cleveland had the highest number of suicide death than any other regions in 2018 (see Figure 3.7.2).

Table 3.7.1 Suicide rates of various regions, 2018<sup>148</sup>

	U.S.	Ohio	Cuyahoga County
Suicide deaths per 100,000	14.2	15.3	17.2

Source: CDC’s National Center for Health Statics and Cuyahoga County Medical Examiner’s report, 2018

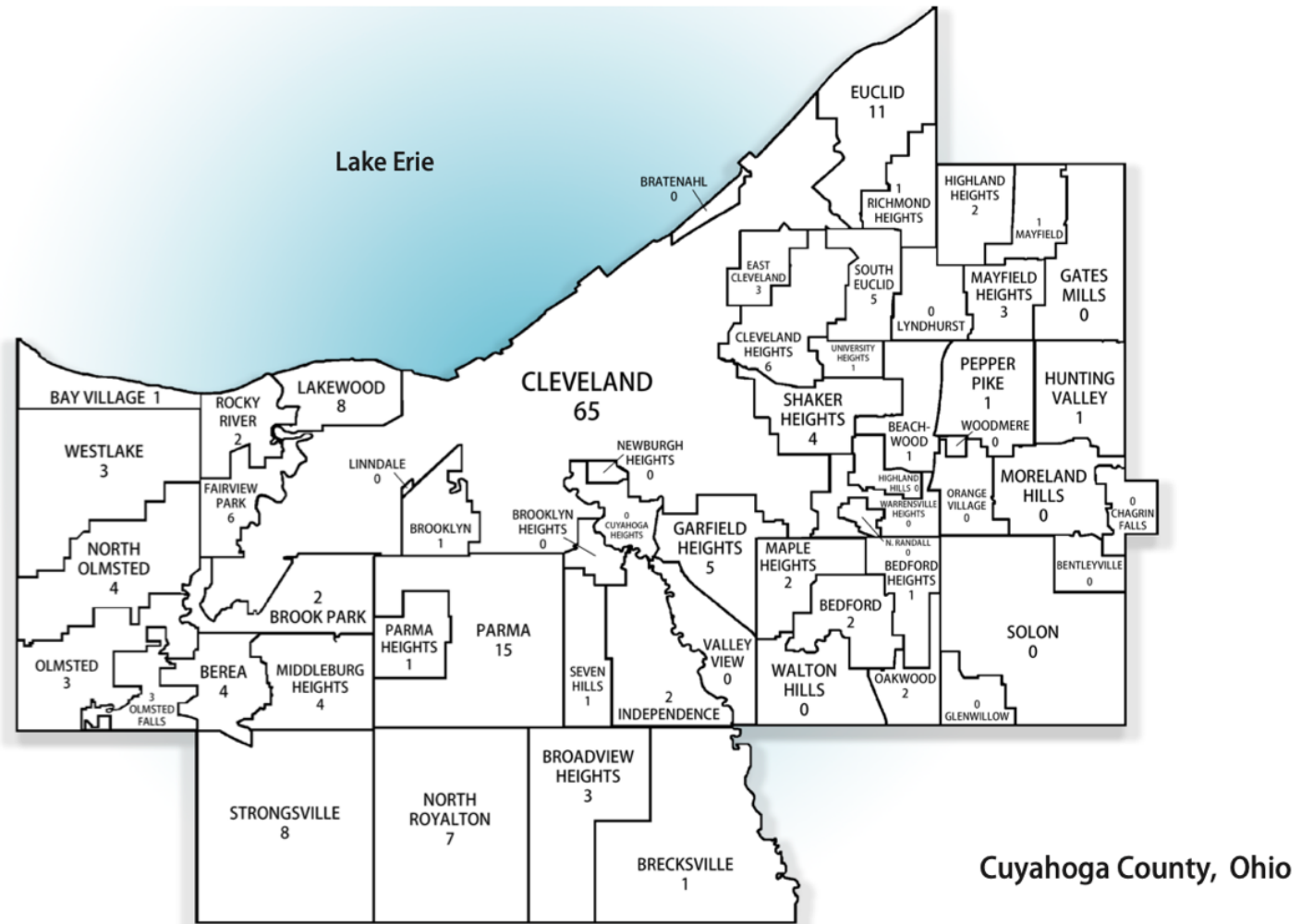
<sup>145</sup> <https://www.cdc.gov/nchs/data/databriefs/db309.pdf>

<sup>146</sup> <https://www.cdc.gov/nchs/pressroom/sosmap/suicide-mortality/suicide.htm>

<sup>147</sup> <http://medicalexaminer.cuyahogacounty.us/en-US/Statistical-Reports.aspx>

<sup>148</sup> <http://medicalexaminer.cuyahogacounty.us/en-US/Statistical-Reports.aspx>

Figure 3.7.2 Number of suicides by different regions of Cuyahoga County, 2018<sup>149</sup>



\*18 cases are from outside of Cuyahoga County.

Source: Cuyahoga County Medical Examiner's report

<sup>149</sup> [http://medicalexaminer.cuyahogacounty.us/pdf\\_medicalexaminer/en-US/StatisticalRpts/2018StatisticalReport.pdf](http://medicalexaminer.cuyahogacounty.us/pdf_medicalexaminer/en-US/StatisticalRpts/2018StatisticalReport.pdf)

### 3.8 The Opioid Epidemic

The Centers for Disease Control and Prevention (CDC) notes three major waves of the opioid epidemic or the rise in overdose death resulting from opioids based on the type of opioid that was mainly responsible for the rise in overdose death (see Figure 3.8.1).

The Wave 1 of the opioid epidemic, which is ongoing and growing until 2017, resulted from the increase in prescription overdose deaths following the rise in the prescription of opioids in the 1990s. The most common drugs involved in the prescription opioid overdose deaths are Methadone, Oxycodone, and Hydrocodone.

In 2017, over 191 million opioid prescriptions were dispensed (see Figure 3.8.2 for the data on Ohio). A study finds that as many as one in four people who are prescribed long-term use of opioids in the primary care setting experience problems with opioids (Boscarino, Rukstalis, and Hoffman 2010).

The second wave of the opioid epidemic began in 2010 with the rise in heroin use that resulted from the increased scrutiny and decrease in prescriptions for opioids following increased awareness of the danger of prescribing opioids. The National Institute on Drug Abuse (May 15, 2020) notes that the availability of heroin increased and the price of heroin decreased while the prescriptions for opioid decreased at the same time. The second wave continued until 2016 when the overdose deaths resulting from heroin use began to decline.

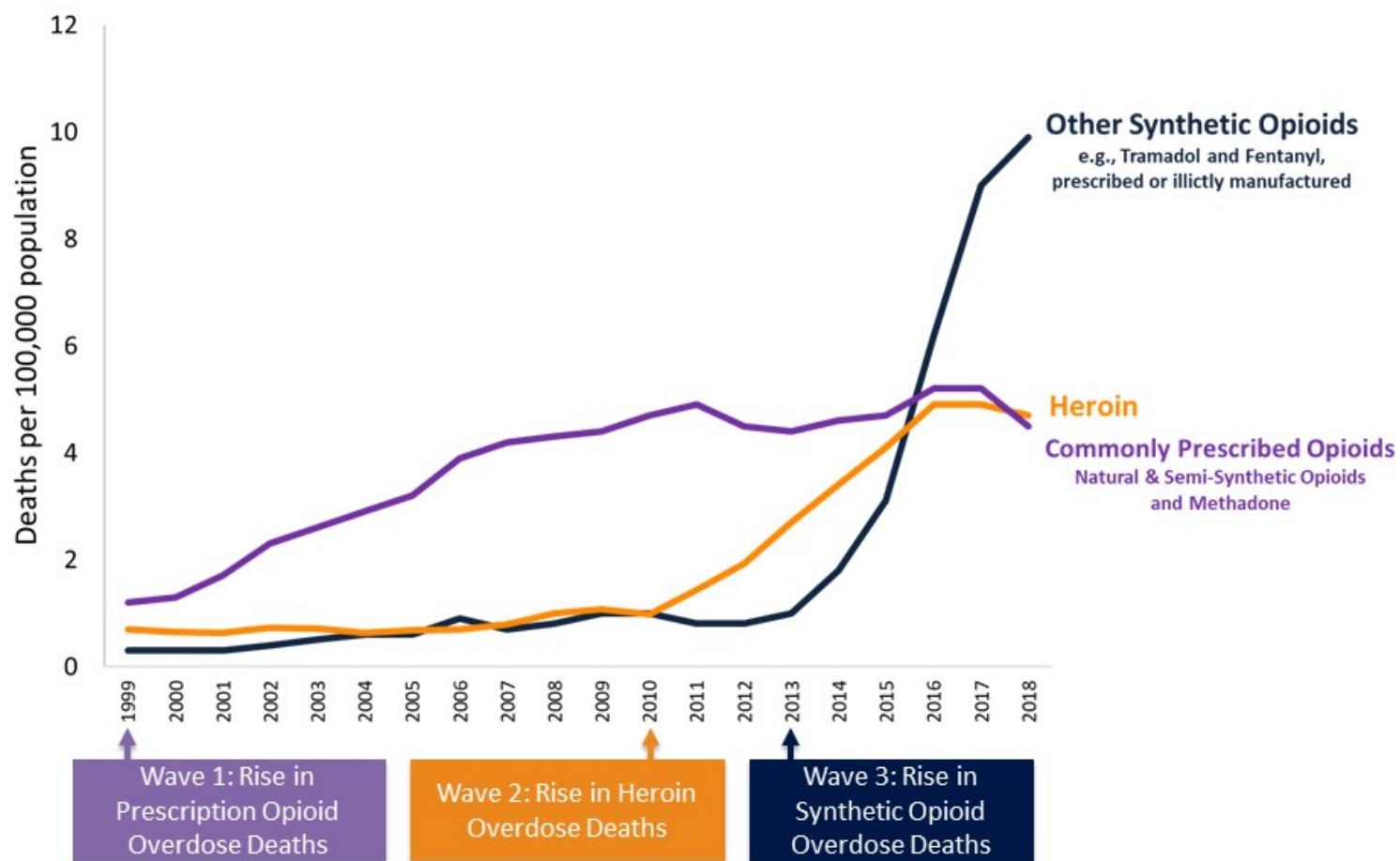
The third wave of the opioid epidemic is the most recent wave and began in 2013 with the increase in overdose deaths resulting from synthetic opioids like fentanyl which are many times more potent than heroin. Because of the potency of synthetic opioids, the increase in overdose death was drastic for the third wave, as the figure shows.

The CDC reports that 128 people die every day in the U.S. from opioid overdose.



Figure 3.8.1

### 3 Waves of the Rise in Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

Source: Centers for Disease Control and Prevention

Figure 3.8.2 Rates per 100 patients of opioid prescription dispensed by dosage and type, 2017

State	Opioid Type		Daily Dosage Per Rx (MME <sup>b</sup> /Day)				Opioid Type		Daily Dosage Per Rx (MME <sup>b</sup> /Day)		
	All	LA/ER <sup>c</sup>	< 50	≥ 50 but < 90	≥ 90		All	LA/ER	< 50	≥ 50 but < 90	≥ 90
Alabama	107.2	8.2	87.6	12.9	6.8	Montana	61.1	6.5	43.6	11.9	5.6
Alaska	52.0	7.3	30.9	12.8	8.3	Nebraska	56.5	5.4	43.0	9.5	4.0
Arizona	61.2	7.0	41.4	12.2	7.5	Nevada	72.9	7.4	48.9	16.5	7.5
Arkansas	105.4	7.2	83.7	14.7	6.9	New Hampshire	52.7	8.2	33.0	11.7	8.0
California	39.5	3.5	30.1	6.2	3.3	New Jersey	44.2	5.3	29.2	8.8	6.3
Colorado	52.8	5.4	37.3	11.1	4.4	New Mexico	56.4	4.4	41.8	10.2	4.4
Connecticut	48.0	5.4	31.8	10.4	5.8	New York	37.8	4.2	27.3	6.1	4.4
Delaware	68.3	11.0	46.1	12.4	9.8	North Carolina	71.9	7.1	51.2	14.7	6.0
District of Columbia	28.5	1.9	24.1	3.0	1.4	North Dakota	41.5	4.7	31.9	6.8	2.8
Florida	60.9	6.3	43.0	11.5	6.4	Ohio	63.5	5.0	49.6	9.8	4.1
Georgia	70.9	5.3	54.7	10.8	5.4	Oklahoma	88.0	9.0	62.0	18.1	7.9
Hawaii	37.0	4.1	25.9	6.4	4.6	Oregon	66.1	6.8	46.0	14.2	5.9
Idaho	70.3	7.6	47.1	16.3	6.9	Pennsylvania	57.7	6.6	41.3	9.7	6.7
Illinois	51.1	3.5	41.5	6.8	2.8	Rhode Island	51.2	4.7	40.4	6.1	4.6
Indiana	74.2	6.0	57.9	10.9	5.4	South Carolina	79.2	6.3	59.0	14.1	6.2
Iowa	56.4	5.0	44.3	8.2	3.8	South Dakota	49.0	4.9	37.5	7.8	3.7
Kansas	69.7	6.6	48.2	14.7	6.8	Tennessee	94.4	8.7	65.9	20.9	7.6
Kentucky	86.8	5.5	67.6	13.8	5.4	Texas	53.0	3.3	44.5	6.0	2.6
Louisiana	89.5	5.0	71.7	12.8	5.0	Utah	63.8	6.9	41.5	14.0	8.4
Maine	55.7	7.7	39.3	10.7	5.7	Vermont	50.5	8.3	33.8	8.6	8.1
Maryland	51.7	6.8	34.4	11.1	6.3	Virginia	52.9	4.9	39.3	8.7	4.9
Massachusetts	40.1	4.4	29.0	7.3	3.8	Washington	57.2	5.9	39.2	12.9	5.1
Michigan	74.2	6.6	60.7	8.1	5.4	West Virginia	81.2	6.2	65.3	10.0	6.0
Minnesota	41.0	4.0	29.6	8.4	2.9	Wisconsin	52.6	5.9	37.6	10.4	4.6
Mississippi	92.9	5.9	77.2	10.7	4.9	Wyoming	64.8	7.1	44.7	13.4	6.7
Missouri	71.8	6.1	52.9	12.8	6.2						

Source: IQVIA™ Transactional Data Warehouse.

<sup>a</sup> Rate per 100 persons.

<sup>b</sup> MME = morphine milligram equivalents.

<sup>c</sup> LA/ER represents opioids that are long acting (LA) or extended release (ER).

Source: Centers for Disease Control and Prevention

### 3.9 Drug overdose

Drug overdose mortality rates for 2018 for various regions shown in Table 3.9.1 come from several different sources. The national and state rates are based on the CDC’s National Center for Health Statics<sup>150 151</sup> that compiles the National Vital Statistics, and Cuyahoga County’s data are based on Cuyahoga County Medical Examiners Office’s 2018 Report<sup>152</sup>. Table 3.9.1 shows that the drug overdose death of Cuyahoga County is more than double the national drug overdose death rate in 2018. The majority of drug overdose death in Cuyahoga County involved opiate/opioid (see Figure 3.9.1).

Table 3.9.1 Drug overdose mortality rate by different regions, 2018<sup>153</sup>

	U.S.	Ohio	<b>Cuyahoga County</b>
Drug overdose deaths per 100,000	20.7	35.9	<b>44.4</b>

Source: CDC’s National Center for Health Statics and Cuyahoga County Medical Examiner’s report

Ohio Hospital Association, established in 1915 and unites hospitals across the state, shares overdose encounter data throughout Ohio, including inpatient, emergency room, urgent care, and observation. In 2019, Cuyahoga County had the 31<sup>st</sup> highest overdose encounter rate among 88 counties in Ohio. Fayette (32.04), Muskingum (31.14), and Scioto (30.94) counties had greater than 30.0 overdose encounter rates per 10,000 and were the top three counties with the highest overdose encounter in Ohio. Though rates were calculated differently and not comparable, Cleveland had a very high rate of overdose encounter rate compared to the state or the county rates (see Table 3.9.2).

Table 3.9.2 Overdose encounter rate per 10,000 in Ohio, 2019<sup>154</sup>

	Ohio	<b>Cuyahoga County</b>	Cleveland
Drug overdose encounter	20,444	<b>2,001</b>	3,346
Drug overdose encounter per 100,000	17.49	<b>15.63</b>	87.82

Source: Ohio Hospital Association, 2019

<sup>150</sup> <https://www.cdc.gov/nchs/data/databriefs/db309.pdf>

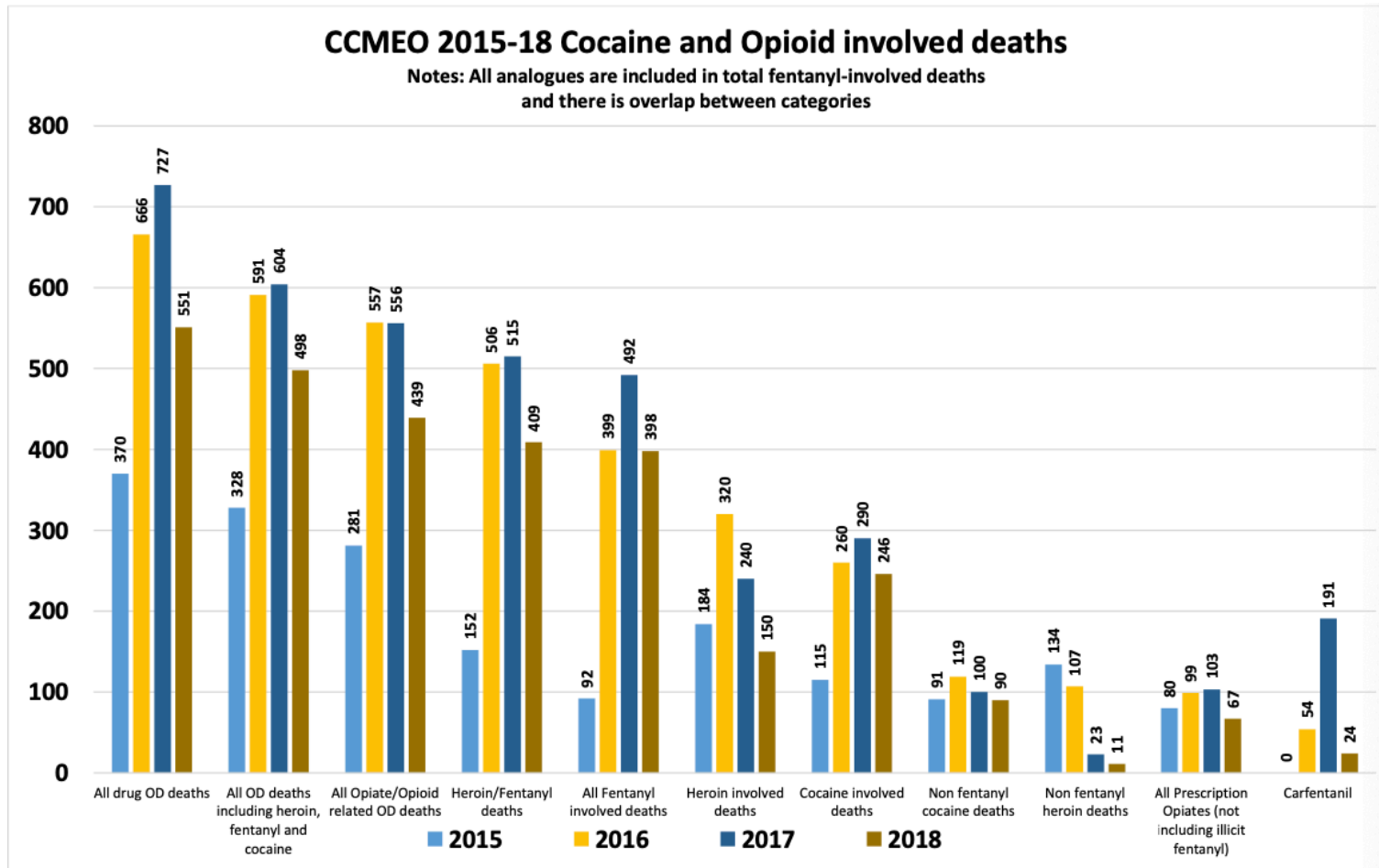
<sup>151</sup> <https://www.cdc.gov/nchs/pressroom/sosmap/suicide-mortality/suicide.htm>

<sup>152</sup> [http://medicalexaminer.cuyahogacounty.us/pdf\\_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf](http://medicalexaminer.cuyahogacounty.us/pdf_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf)

<sup>153</sup> [http://medicalexaminer.cuyahogacounty.us/pdf\\_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf](http://medicalexaminer.cuyahogacounty.us/pdf_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf)

<sup>154</sup> County data include only the encounters for patients who live in Ohio, while city data include all encounters. <https://www.ohiohospitals.org/Patient-Safety-Quality/Statewide-Initiatives/Opioid-Initiative/OHA-Overdose-Data-Sharing-Program>

Figure 3.9.1<sup>155</sup>



Source: Cuyahoga County Medical Examiner's Office revised 3-25-19

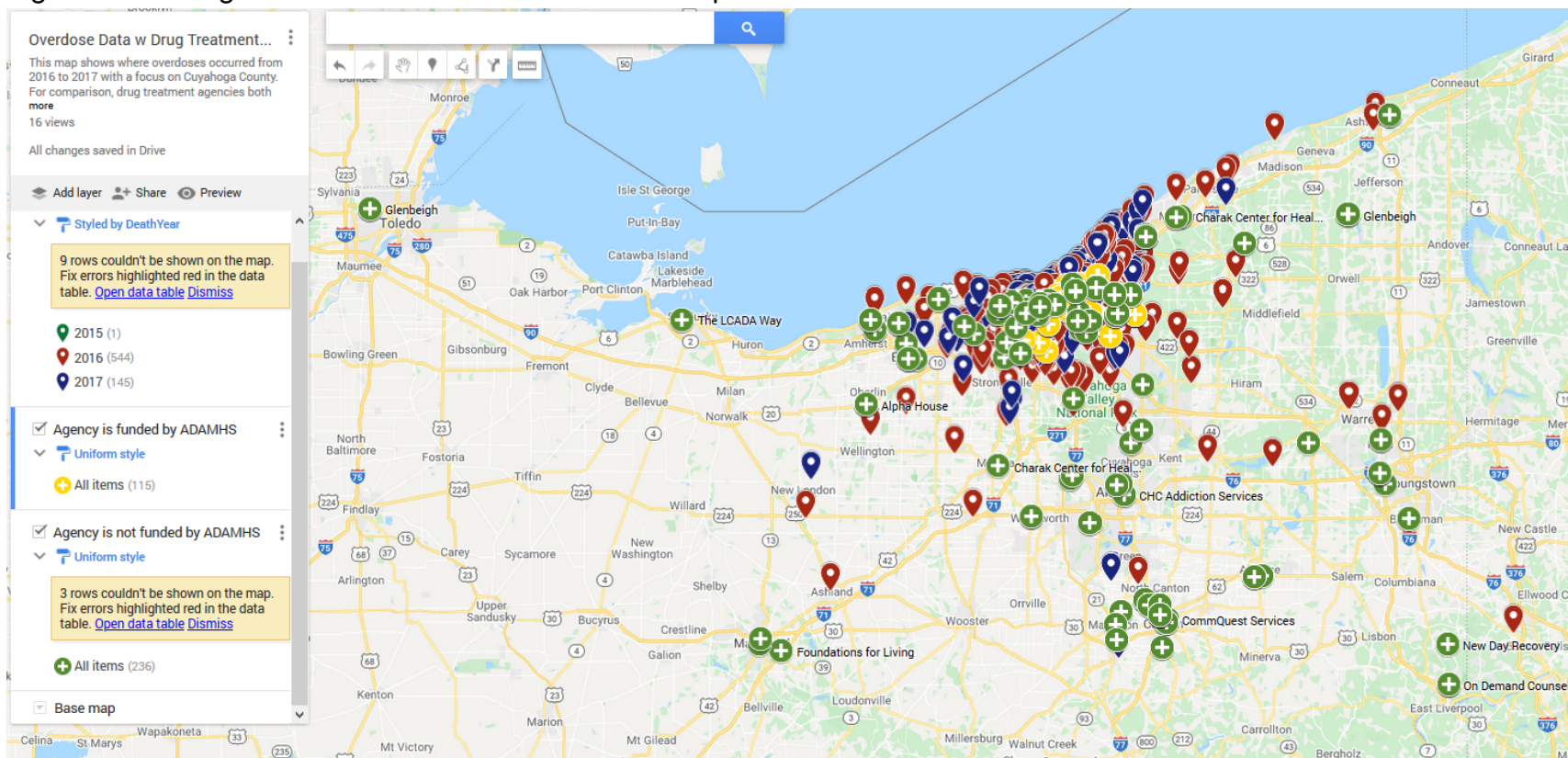


Source: Cuyahoga County Medical Examiners report, 2018

<sup>155</sup> [http://medicalexaminer.cuyahogacounty.us/pdf\\_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf](http://medicalexaminer.cuyahogacounty.us/pdf_medicalexaminer/en-US/2018CCMEODraftDrugReport.pdf)

Figure 3.9.2 is a map of the drug overdose death and treatment locations in Cuyahoga County. Dr. Mark J. Salling of Maxine Goodman Levin College of Urban Affairs at Cleveland State University shared the drug overdose data (see his report for more information: [https://engagedscholarship.csuohio.edu/urban\\_facpub/1520](https://engagedscholarship.csuohio.edu/urban_facpub/1520))

Figure 3.9.2 Drug overdose and treatment location map



(The interactive map is available [here](#))

### 3.10 Uniform Crime Reports (UCR)

The prevalence of substance use can also be estimated based on the numbers of people who engaged in crime against federal (Title 21 United States Code Controlled Substances Act) or state (O.R.C. Chapter 2925) drug laws. It is important to consider the criminal and juvenile justice population because a significant proportion of this population suffer from mental illness and substance use disorder (as discussed in Chapter 2).

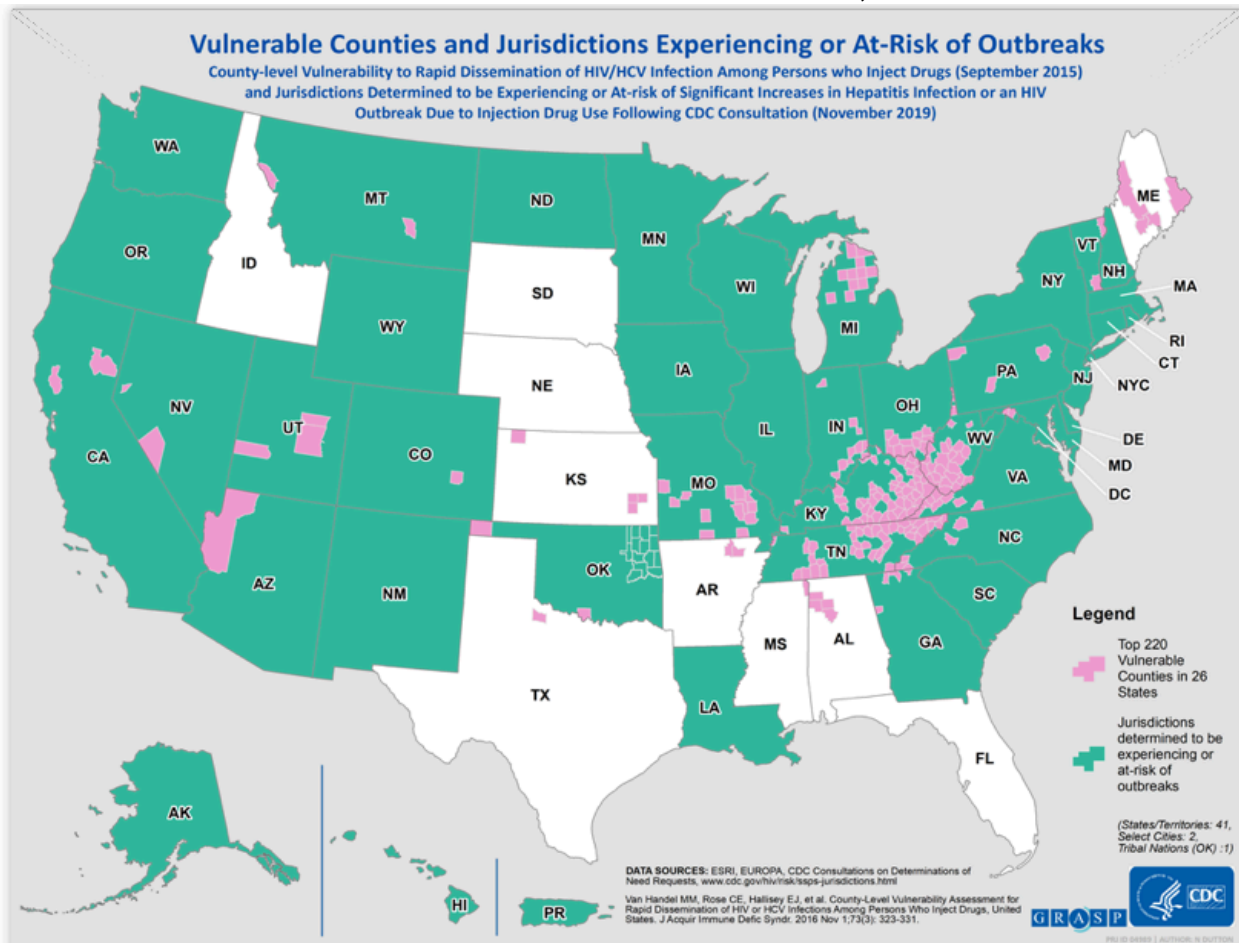
Ohio also has drug paraphernalia laws (O.R.C. Chapter 2925.14), which refers to the laws against the possession and sales of paraphernalia used to consume illegal substances (e.g., syringes and needles). This is an important consideration when examining the spread of blood-borne infectious diseases such as hepatitis B virus and hepatitis C, human immunodeficiency virus (HIV), and bacteria that cause heart infections (Centers for Disease Control and Prevention, February 18, 2020).

Figure 3.10.1 shows that, according to the CDC, Ohio is considered a jurisdiction experiencing or at-risk of outbreaks of blood-borne infectious diseases.

Ohio is one of the 15 states and the U.S. Virgin Islands that decriminalized non-medical use of marijuana as of the end of 2019. Currently in the U.S., 11 states and Guam, the Northern Mariana Islands, and the District of Columbia legalized non-medical use of marijuana. Specific laws vary by the state and often by local jurisdictions, but decriminalization means that possession of a small quantity of marijuana does not result in arrest and incarceration.

In Ohio, the possession of up to 200g of marijuana is considered misdemeanor and could result in the fine of maximum \$150-200 but not arrest and incarceration. The possession of more than 200g of marijuana is considered felony in Ohio that result in more than a year of imprisonment.

Figure 3.10.1 Counties and jurisdictions experiencing or at-risk of blood-borne infectious diseases, 2018<sup>156</sup>



County-level Vulnerability to Rapid Dissemination of HIV/HCV Infection Among Persons who Inject Drugs (September, 2015) and Jurisdictions Determined to be Experiencing or At-risk of Significant Increases in Hepatitis Infection or an HIV Outbreak Due to Injection Drug Use Following CDC Consultation (July, 2018).

Map includes top 220 vulnerable counties in 26 states and jurisdictions determined to be experiencing or at-risk of outbreaks, as well as those jurisdictions determined to be experiencing or at-risk of significant increases of viral hepatitis infection or HIV outbreak due to injection drug use following CDC consultation.

Source: Centers for Disease Control and Prevention, 2019

<sup>156</sup> Source: CDC (February 18, 2020). <https://www.cdc.gov/pwids/vulnerable-counties-data.html>

The Federal Bureau of Investigation (FBI) began the Uniform Crime Report (UCR) program in 1930 to collect, report, and archive national crime data, which today covers over 18,000 law enforcement agencies at the city, university/college, county, state, tribal, and federal levels.

The participation in the UCR program is voluntary, and the percentage of the total population covered in the UCR reached almost 98% of the total population in 2015 (Federal Bureau of Investigation, 2016). The UCR program does not cover 100% of the U.S. population because some agencies, especially smaller agencies, might fail to report their crime data for whatever reasons, such as lack of budget or a computer tracking mistake.

Table 3.10.1 shows that, according to the UCR, 1,654,282 arrests<sup>157</sup> were made nationally for drug use violations in 2018, which amounts to 16% of the total arrests. Also, nationwide, 1,001,329 arrests were made for driving under the influence (10% of the total arrests), 173,152 arrests were made for liquor law violations (10% of the total arrests), and 328,772 arrests were made for drunkenness in 2018 (20% of the total arrests).

Ohio and Cuyahoga County data come from the Ohio Department of Public Safety (investigators personally requested and got the data from the Ohio Office of Criminal Justice Services). We were told that because not all law enforcement agencies participate in the data reporting, the numbers reported might not capture the true crime rates.

In Ohio, 39,708 arrests were made in 2018 for drug use violations, which amounts to 18% of all arrests. The rate per 1,000 population of arrests was much smaller for the state of Ohio (18.7) compared to the national rate (31.5), but the rate for Cuyahoga County (31.6) was comparable to the national rate. Rates like percentage controls for the difference in the baseline population size and allows easier comparison across groups and over time.

The table also shows that while 3.4 per 1,000 residents of Ohio and 3.1 per 1,000 residents of Cuyahoga County were arrested for drug use violations, the rate was slightly higher nationally at 5.1 per 1,000.

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<sup>157</sup> The number of arrests is not the same as the number of people arrested because, in any given year, many people are arrested multiple times. Additionally, the FBI only reports the most serious offense when an individual was arrested for engaging in multiple offenses (e.g., engaging in assault while under the influence of the drug).



Table 3.10.1 Number and rate<sup>158</sup> of arrests per 1,000 in 2018<sup>159</sup>

	U.S.		Ohio		Cuyahoga County	
	Number	Rate	Number	Rate	Number	Rate
Population <sup>160</sup>	327,167,434		11,669,442		<b>1,243,857</b>	
Total arrests	10,310,960	31.5	218,433	18.7	<b>39,310<sup>161</sup></b>	<b>31.6</b>
Drug use violations <sup>162</sup>	1,654,282	5.1	39,708	3.4	<b>3,838</b>	<b>3.1</b>
Driving under the influence <sup>163</sup>	1,001,329	3.1	13,723	1.2	<b>640</b>	<b>0.5</b>
Liquor law violations <sup>164</sup>	173,152	0.5	4,793	0.4	<b>750</b>	<b>0.6</b>
Drunkness <sup>165</sup>	328,772	1.0	5,855	0.5	<b>582</b>	<b>0.5</b>

Source: 2018 Crime in the United States

<sup>158</sup> All rates are calculated per 1,000.

<sup>159</sup> <https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/persons-arrested>

<sup>160</sup> Population estimates based on the U.S. Census ACS 2018.

<https://www.census.gov/quickfacts/fact/table/US/PST045218>

<sup>161</sup> <https://ohio.staterecords.org/cuyahoga>

<sup>162</sup> According to the FBI (February 17, 2020), drug abuse violations include “the violation of laws prohibiting the production, distribution, and/or use of certain controlled substances. The unlawful cultivation, manufacture, distribution, sale, purchase, use, possession, transportation, or importation of any controlled drug or narcotic substance. Arrests for violations of state and local laws, specifically those relating to the unlawful possession, sale, use, growing, manufacturing, and making of narcotic drugs. The following drug categories are specified: opium or cocaine and their derivatives (morphine, heroin, codeine); marijuana; synthetic narcotics—manufactured narcotics that can cause true addiction (Demerol, methadone); and dangerous nonnarcotic drugs (barbiturates, Benzedrine).”

<sup>163</sup> According to the FBI (February 17, 2020), driving under the influence refers to “Driving or operating a motor vehicle or common carrier while mentally or physically impaired as the result of consuming an alcoholic beverage or using a drug or narcotic.”

<sup>164</sup> According to the FBI (February 17, 2020), liquor law violations include “the violation of state or local laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages, not including driving under the influence and drunkenness. Federal violations are excluded.”

<sup>165</sup> According to the FBI (February 17, 2020), drunkenness refers to “to drink alcoholic beverages to the extent that one's mental faculties and physical coordination are substantially impaired. Driving under the influence is excluded.”

Table 3.10.2 shows that nationally, the majority of the arrests for drug use violations (86.4%) are for the *possession* of controlled substances, while a much smaller proportion of arrests are for *sale/manufacturing* of controlled substances (13.6%).

Additionally, possession of marijuana still holds the highest percentage of those who are arrested for a drug use violation in 2018, despite 10 states and Washington D.C. legalizing recreational use of marijuana by 2018.

Table 3.10.2 Percentage distribution of arrests for drug use violation in 2018<sup>166</sup>

Total	Drug use violation	100%
Sale/ Manufacturing	Total	13.6%
	Heroin or cocaine and their derivatives	4.4%
	Marijuana	3.3%
	Synthetic or manufactured drugs	1.8%
	Other dangerous nonnarcotic drugs	4.0%
Possession	Total	86.4%
	Heroin or cocaine and their derivatives	20.2%
	Marijuana	36.8%
	Synthetic or manufactured drugs	4.3%
	Other dangerous nonnarcotic drugs	25.0%

Source: 2018 Crime in the United States

One of the significant limitations of the UCR is that they underestimate the number of the actual use of drugs because only a small number of individuals who break the law are ever arrested, especially when it comes to minor offenses. Second, even the data on “offenses known to law enforcement” underestimate actual offending because only a small number of offenses come to the attention of law enforcement (“the dark figure of crime”), particularly with victimless crimes like liquor law violation and drug use violation. Finally, the FBI uses a hierarchy rule when determining arrest data and counts only the most serious offense committed by a person who is arrested for multiple crimes.

<sup>166</sup> <https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/persons-arrested>

### 3.11 Conclusion

This chapter reviewed the national, state, and county prevalence of mental illness and substance use using the 2018 NSDUH, MTF, YRBSS, BSCH, NHIS, and UCR and provided estimations of mental illness and substance use prevalence for Cuyahoga County and Cleveland based on the national and state data and the population estimate of Cuyahoga County and Cleveland from the ACS 2018.

Table 3.11.1 summarizes the estimated prevalence of substance use based on the NSDUH 2018 and the estimated number of substance use in Cuyahoga County among people age 12 and older based on the prevalence and the ACS 2018.

- An estimated 64,741 people age 12 and older had alcohol disorder, and an estimated 47,706 people age 12 and older had illicit drug use disorder in the past year in Cuyahoga County.
- In Cuyahoga County, 4.0% of youth age 12 to 17, 15.3% of young adults aged 18 to 25, and 6.4% of adults aged 26 and older had SUD in the past year for an estimated total of 95,486 people age 12 and older in Cuyahoga County.
- Almost 1 in 4 people age 12 and older in Cuyahoga County used illicit drugs in the past year. Marijuana had the highest prevalence of disorder of use among people age 12 and older in Cuyahoga County where an estimated 19,622 people had marijuana use disorder in the past year.
- The prevalence of past year substance misuse among the population age 12 and older was high: psychotherapeutic misuse (7.6%), pain reliever misuse (4.6%), opioid misuse (4.3%), and benzodiazepine misuse (2.6%).

Table 3.11.1 Estimated prevalence and number of substance use among population age 12 and older in Cuyahoga County, 2018

	Estimated prevalence	Estimated number
Population age 12 and older	100%	1,074,305
Substance use disorder (SUD)	8.9%	95,486
Heavy alcohol use*	6.3%	67,258
Alcohol use disorder*	6.0%	64,741
Illicit drug use	24.3%	261,125
Illicit drug use disorder	4.4%	47,706
Marijuana use	18.4%	198,070
Marijuana use disorder	1.8%	19,622
Cocaine use	2.2%	23,212
Cocaine use disorder	0.4%	4,000
Heroin use	0.5%	5,747
Heroin use disorder	0.2%	2,270
Methamphetamine use	0.5%	5,388
Methamphetamine use disorder	0.4%	4,114
Hallucinogen use	2.9%	31,664
Inhalant use	0.8%	8,211
Psychotherapeutic misuse	7.6%	81,981
Stimulant misuse	2.8%	29,861
Stimulant use disorder	0.3%	3,119
Tranquilizer or sedative misuse	2.6%	28,151
Tranquilizer or sedative use disorder	0.4%	3,899
Benzodiazepine misuse	2.6%	27,623
Pain reliever misuse	4.6%	49,320
Pain reliever use disorder	1.0%	10,517
Opioid misuse	4.3%	46,033
Opioid/sedative use disorder	0.8%	8,535

\* Note: Heavy alcohol use and alcohol use disorder measure past month prevalence, while all the rest measure past year prevalence.

Table 3.11.2 summarizes the estimated prevalence of mental illness based on the NSDUH 2018 and the estimated number of mental illness in Cuyahoga County among people age 12 and older based on the prevalence and the ACS 2018.

- An estimated 126,602 adults aged 18 and older had mental illness in the past year in Cuyahoga County, almost 1 in 4 young adults aged 18 to 25 in the county had any mental illness (AMI) and 1 in 14 young adults aged 18 to 25 in the county had serious mental illness (SMI) in the past year.
- An estimated 76,222 adults age 18 and older and 35,047 youth age 12 to 17 in Cuyahoga County had a MDE in the past year.
- Among adults age 18 and older in Cuyahoga County, an estimated 28,777 had suicidal thoughts, 10,211 made suicide plans, and 2,359 attempted suicide in the past year.
- An estimated 6,793 adults aged 18 and older and 4,081 youth age 12 to 17 in Cuyahoga County had co-occurring MDE and SUD in the past year. The prevalence of drug use was higher among those who had a MDE than those who did not among both adults age 18 and older and youth age 12 to 17.

Table 3.11.2 Estimated prevalence and number of mental illness among population age 12 and older in Cuyahoga County, 2018

Age	Mental illness	Estimated prevalence	Estimated number
18+	Population in Cuyahoga County	100%	985,975
	Major depressive episode (MDE)	7.7%	76,222
	Any mental illness (AMI)	12.8%	126,602
	Serious mental illness (SMI)	3.5%	34,425
	Co-occurring MDE and SUD	1.4%	14,241
	Suicidal thoughts	4.1%	40,766
	Suicidal plans	1.7%	16,555
	Suicide attempts	0.8%	7,833
12 to 17	Population in Cuyahoga County	100%	240,047
	Lifetime major depressive episode (MDE)*	20.7%	48,666
	Past year major depressive episode (MDE)	14.6%	35,047
	MDE and alcohol use disorder	0.8%	1,920
	MDE and illicit drug use disorder	1.3%	3,121
	Co-occurring MDE and SUD	1.7%	4,081

\* Note: Lifetime MDE measures lifetime prevalence while all the rest measure past year prevalence.

The remaining summaries are based on the MTF, YRBSS, BSCH, NHIS, and UCR and other data reported in this chapter.

- Among 12<sup>th</sup> graders, more than half (58.5%) used alcohol, and almost half (47.4%) used illicit drugs in their lifetime. Almost 1 in 4 12<sup>th</sup> graders (23.7%) used illicit drugs in the past month.
- The most popularly used illicit drug was marijuana; almost half of 12<sup>th</sup> graders (43.7%) used marijuana in their lifetime. About 18.4% of 12<sup>th</sup> graders used an illicit drug other than marijuana in their lifetime.
- Prescription drug misuse was the second most popularly used illicit drug among 12<sup>th</sup> graders with 14.6% indicating that they have misused prescription drugs in their lifetime.
- Drug use has declined among youth since the 1970s, except for marijuana use, which has increased since the 1990s.
- The majority of 12<sup>th</sup> graders do not perceive trying marijuana once or twice as harmful (88.4%) nor as difficult to obtain (78.4%), but almost half disapproved of smoking marijuana even occasionally (44.1%).
- Though most 12<sup>th</sup> graders did not think illicit drugs are harmful, the majority of them disapproved using illicit drugs nonetheless.
- 12<sup>th</sup> graders perceive licit drugs more harmful than illicit drugs; the drug that 12<sup>th</sup> graders disapprove of most strongly is cigarettes (75.5%), followed by alcohol (63.2%).
- The prevalence of mental illness is higher in Cleveland compared to the national prevalence.
- In Cleveland, 17% of boys and 20% of girls in 9th through 12th grades attempted suicide in the past year.
- Almost one in five of these children in Cleveland also indicated that they have been offered, sold, or given an illegal drug at school.

- Parents of more than one in five children in Ohio indicated that they sometimes or never have adequate insurance coverage for mental health and behavioral needs, even though many of these parents believed that their child needs treatment.
- The suicide rate and drug overdose rate in Cuyahoga County are higher than the national rate, suggesting larger structural problems for the county.
- In 2018, 3,838 arrests were made in Cuyahoga County for drug use violations, which include manufacturing, sale, purchase, and use of controlled substances. This is not an accurate estimate of substance use, however, since the FBI only reports the most serious crime when people are arrested.

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## **CHAPTER 4: ESTIMATES OF UNMET NEEDS BY SPECIFIC POPULATIONS AND LEVELS OF CARE**

### **4.1 Introduction**

This chapter reviews the estimates of unmet needs for substance use and mental health treatment services in Cuyahoga County by specific populations and levels of care. The estimates are calculated using the 2018 National Survey on Drug Use and Health (NSDUH) data and the population estimate for Cuyahoga County based on the 2018 American Community Survey (ACS).

As discussed in Chapter 3, the NSDUH 2018 uses a nationally representative sample to estimate the prevalence of illicit drug and alcohol use and mental illness among people age 12 and older. In addition, the NSDUH 2018 also collects information on substance abuse and dependence and the utilization of substance use treatment and mental health services among people age 12 and older.

It should be noted that because the NSDUH 2018 collects a nationally representative sample at the household level, the survey excludes the homeless and institutionalized population (i.e., people in mental institutions, prisons, or jails) that is most vulnerable and at risk for mental illness and substance use, thus the prevalence estimated by the NSDUH 2018 is most likely underestimated.

In this chapter, “youth” refers to age 12 to 17 and “adults” refer to age 18 and older. Additionally, all races are non-Hispanic; included are non-Hispanic whites, non-Hispanic blacks/African Americans, and non-Hispanic Asians.

The NSDUH 2018 includes a race called “non-Hispanic other,” which includes non-Hispanic Native Americans/Alaskan Natives, non-Hispanic Native Hawaiians, and other pacific islanders, and non-Hispanic more than one race. This group had one of the highest substance use problems of all racial/ethnic groups, but because the size of the population of this group in Cuyahoga County is small, “non-Hispanic other” is not included in the report.

## **4.2 Estimates of unmet needs for substance use treatment by specific populations**

Tables 4.2.1 and 4.2.2 show the estimates of alcohol and illicit drug use in the past year among people age 12 and older in Cuyahoga County by specific populations based on age, gender, and race/ethnicity. The tables also show the extent that residents received treatment for current or past problems with alcohol or illicit drug use.

There are many ways the needs for substance use treatment can be calculated using the information based on the NSDUH 2018 shown in the table. For this report, the needs for treatment for substance use (the shaded rows in the table) was calculated by subtracting the estimated number of people who received treatment from the estimated number of people who had the disorder of its use.

Of course, not everyone who has substance use disorder “needs” treatment (Mechanic 2003). Thus, the estimates reported are rough estimates of the needs of substance use treatment in the county.

Some of the substances had more individuals receiving treatment than individuals who have the disorder, as seen for heroin, hallucinogens, inhalants, and sedatives. This is because the disorder was measured for the past year experience, while treatment was measured for the current or last treatment that respondents have ever received not specific to the past year.

Because disorder was measured for the past year while treatment was measured for lifetime, the need for treatment is most likely underestimated. Some respondents likely reported treatment they have received in the past but not necessarily for the current disorder.

## **4.2.1 Alcohol use disorder**

### **Age**

Adults are more likely than youth to have alcohol use disorder (AUD), receive treatment for AUD, and need treatment for AUD.

About 1.9% of youth and 7.3% of adults had AUD in the past year, while 0.2% of youth and 1.0% of adults received treatment for their current or past AUD.

An estimated 1,413 youth (1.6%) and 62,116 adults (6.3%) in Cuyahoga County, therefore, had AUD in the past year but did not receive treatment for it.

### **Gender**

Males are more likely than females to have alcohol use disorder (AUD), receive treatment for AUD, and need treatment for AUD.

About 7.4% of males and 4.7% of females had AUD in the past year, while 1.0% of males and 0.7% of females received treatment for their current or past AUD.

An estimated 32,417 males (6.4%) and 22,711 females (4.0%) in Cuyahoga County, therefore, had AUD in the past year but did not receive treatment for it.

### **Race/ethnicity**

Whites are more likely than racial/ethnic minorities to have alcohol use disorder (AUD), receive treatment for AUD, and need treatment for AUD.

About 6.7% of whites, 4.2% of blacks/African Americans, 4.1% of Asians, and 5.3% of Hispanics had AUD in the past year, while 1.0% of whites, 0.7% of blacks/African Americans, 0.2% of Asians, and 0.5% of Hispanics received treatment for their current or past AUD.

An estimated 37,211 (5.7%) whites, 10,738 (3.5%) blacks/African Americans, 1,384 (3.9%) Asians, and 2,928 (4.8%) Hispanics in Cuyahoga County, therefore, had AUD in the past year but did not receive treatment for it.

## **4.2.2 Illicit drug use disorder**

### **Age**

Adults are once again more likely than youth to have illicit drug use disorder, receive treatment for illicit drug use disorder, and need treatment for illicit drug use disorder.

About 3.1% of youth and 4.2% of adults had illicit drug use disorder in the past year, while 0.6% of youth and 1.1% of adults received treatment for their current or past illicit drug use disorder.

An estimated 2,208 (2.5%) youth and 30,565 (3.1%) adults in Cuyahoga County, therefore, had illicit drug use disorder in the past year but did not receive treatment for it.

### **Gender**

Males are also once again more likely than females to have illicit drug use disorder, receive treatment for illicit drug use disorder, and need treatment for illicit drug use disorder.

About 4.7% of males and 3.3% of females had illicit drug use disorder in the past year, while 1.1% of males and 0.9% of females received treatment for their current or past illicit drug use disorder.

An estimated 18,235 (3.6%) males and 13,627 (2.4%) females in Cuyahoga County, therefore, had illicit drug use disorder in the past year but did not receive treatment for it.

### **Race/ethnicity**

Whites are also once again more likely than racial/ethnic minorities to have illicit drug use disorder and receive treatment for illicit drug use disorder, but blacks/African Americans and Hispanics are more likely than whites to need treatment for illicit drug use disorder.

About 4.0% of whites, 3.8% of blacks/African Americans, 2.0% of Asians, and 3.7% of Hispanics had illicit drug use disorder in the past year, while 1.1% of whites, 0.8% of blacks/African Americans, 0.2% of Asians, and 0.6% of Hispanics received treatment for their current or past illicit drug use disorder.

An estimated 18,932 whites (2.9%), 9,204 blacks/African Americans (3.0%), 639 Asians (1.8%), and 1,891 Hispanics (3.1%) in Cuyahoga County, therefore, had illicit drug use disorder in the past year but did not receive treatment for it.

#### **4.2.3 Alcohol and illicit drug use disorders**

The table also shows the estimates for people in Cuyahoga County who had both alcohol use disorder and illicit drug use disorder. The numbers are expectedly smaller than the numbers of people who had one or the other.

##### **Age**

Adults are once again more likely than youth to have both alcohol and illicit drug use disorders, receive treatment for at least one of the disorders, and need treatment for alcohol and illicit drug use disorders.

About 0.9% of youth and 1.4% of adults had both alcohol and illicit drug use disorders, of these, 0.5% of youth and 0.9% of adults received treatment for at least one of the current or past disorders.

An estimated 353 youth (0.4%) and 4,930 adults (0.5%) in Cuyahoga County, therefore, had both alcohol and illicit drug use disorders but did not receive treatment for either one.

##### **Gender**

Males are also once again more likely than females to have alcohol and illicit drug use disorders, receive treatment for at least one of the disorders, and need treatment for alcohol and illicit drug use disorders.

About 1.6% of males and 1.0% of females had both alcohol and illicit drug use disorders in the past year, while 0.9% of males and 0.8% of females received treatment for at least one of the current or past disorders.

An estimated 3,545 males (0.7%) and 1,136 females (0.2%) in Cuyahoga County, therefore, had both alcohol and illicit drug use disorders in the past year but did not receive treatment for either one.

## **Race/ethnicity**

Whites are again more likely than racial/ethnic minorities to have both alcohol and illicit drug use disorders and receive treatment for at least one of the disorders, but Asians and Hispanics are more likely than whites to need treatment for both alcohol and illicit drug use disorders.

About 1.3% of whites, 0.9% of blacks/African Americans, 0.7% of Asians, and 1.2% of Hispanics had both alcohol and illicit drug use disorders in the past year, while 1.0% of whites, 0.6% of blacks/African Americans, 0.1% of Asians, and 0.5% of Hispanics received treatment for at least one of the current or past disorders.

An estimated 1,959 whites (0.3%), 920 blacks/African Americans (0.3%), 213 Asians (0.6%), and 427 Hispanic (0.7%) s in Cuyahoga County, therefore, had both alcohol and illicit drug use disorders in the past year but did not receive treatment for either one.

These estimates suggest there is a large disparity between those with alcohol and drug concerns and those who received treatment.

Table 4.2.1 Estimated prevalence and number of past year alcohol, illicit drug, and illicit drug and alcohol use disorder and receipt of treatment by age, gender, and race/ethnicity among people age 12 and older in Cuyahoga County, 2018<sup>167</sup>

Estimated population age 12+ in Cuyahoga County		Total	Age		Gender		Race/ethnicity			
			12 to 17	18+	Males	Females	White	Black/African American	Asian	Hispanic
		1,074,305	88,330	985,975	506,520	567,785	652,829	306,813	35,485	61,001
Alcohol	Dependence or abuse	73,654 (6.9%)	1,678 (1.9%)	71,976 (7.3%)	37,482 (7.4%)	26,686 (4.7%)	43,740 (6.7%)	12,886 (4.2%)	1,455 (4.1%)	3,233 (5.3%)
	Received treatment	10,036 (0.9%)	177 (0.2%)	9,860 (1.0%)	5,065 (1.0%)	3,974 (0.7%)	6,528 (1.0%)	2,148 (0.7%)	71 (0.2%)	305 (0.5%)
	Need treatment	63,529 (5.9%)	1,413 (1.6%)	62,116 (6.3%)	32,417 (6.4%)	22,711 (4.0%)	37,211 (5.7%)	10,738 (3.5%)	1,384 (3.9%)	2,928 (4.8%)
Illicit drug	Dependence or abuse	44,149 (4.0%)	2,738 (3.1%)	41,411 (4.2%)	23,806 (4.7%)	18,737 (3.3%)	26,113 (4.0%)	11,659 (3.8%)	710 (2.0%)	2,257 (3.7%)
	Received treatment	11,376 (1.0%)	530 (0.6%)	10,846 (1.1%)	5,572 (1.1%)	5,110 (0.9%)	7,181 (1.1%)	2,455 (0.8%)	71 (0.2%)	366 (0.6%)
	Need treatment	32,773 (3.1%)	2,208 (2.5%)	30,565 (3.1%)	18,235 (3.6%)	13,627 (2.4%)	18,932 (2.9%)	9,204 (3.0%)	639 (1.8%)	1,891 (3.1%)
Alcohol and illicit drug	Dependence or abuse	13,966 (1.3%)	795 (0.9%)	13,804 (1.4%)	8,104 (1.6%)	5,678 (1.0%)	8,487 (1.3%)	2,761 (0.9%)	248 (0.7%)	732 (1.2%)
	Received treatment	8,594 (0.8%)	442 (0.5%)	8,874 (0.9%)	4,559 (0.9%)	4,542 (0.8%)	6,528 (1.0%)	1,841 (0.6%)	35 (0.1%)	305 (0.5%)
	Need treatment	5,372 (0.5%)	353 (0.4%)	4,930 (0.5%)	3,545 (0.7%)	1,136 (0.2%)	1,959 (0.3%)	920 (0.3%)	213 (0.6%)	427 (0.7%)

Source: National Survey of Drug Use and Health, 2018

<sup>167</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>



Table 4.2.2 shows each illicit drug individually by specific populations based on age, gender, and race/ethnicity.

Marijuana had the highest prevalence of disorder, thus, the highest number of individuals in all population groups who have a disorder but did not receive treatment for it, followed by pain reliever, tranquilizer, stimulants, cocaine, and meth.

Consistently across substances, adults are more likely than youth and males are more likely than females to have the disorder or use, receive treatment for the disorder, and need treatment for the disorder.

For race/ethnicity, blacks/African Americans are more likely than whites to have marijuana use disorder, receive treatment for marijuana use disorder, and need treatment for marijuana use disorder.

For all other illicit drugs, either the prevalence is comparable between whites and blacks/African Americans, or the prevalence is higher for whites compared to blacks/African Americans.

Table 4.2.2 Estimated prevalence and number of past year illicit drug use disorder and receipt of treatment by age, gender, and race/ethnicity among people age 12 and older in Cuyahoga County, 2018<sup>168</sup>

Estimated population age 12+ in Cuyahoga County		Total	Age		Gender		Race/ethnicity			
			2 to 17	18+	Males	Females	White	Black/African American	Asian	Hispanic
			1,074,305	88,330	985,975	506,520	567,785	652,829	306,813	35,485
Marijuana	Dependence or abuse	27,667 (2.6%)	2,032 (2.3%)	25,635 (2.6%)	16,209 (3.2%)	10,788 (1.9%)	15,015 (2.3%)	9,204 (3.0%)	568 (1.6%)	1,525 (2.5%)
	Received treatment	4,297 (0.4%)	353 (0.4%)	3,944 (0.4%)	1,013 (0.2%)	1,136 (0.2%)	2,611 (0.4%)	1,227 (0.4%)	39 (0.1%)	244 (0.4%)
	Need treatment	23,370 (2.2%)	1,678 (1.9%)	21,691 (2.2%)	15,196 (3.0%)	9,652 (1.7%)	12,404 (1.9%)	7,977 (2.6%)	529 (1.5%)	1,281 (2.1%)
Cocaine	Dependence or abuse	4,974 (0.5%)	44 (0.1%)	4,930 (0.5%)	2,533 (0.5%)	1,703 (0.3%)	2,611 (0.4%)	1,227 (0.4%)	53 (0.2%)	183 (0.3%)
	Received treatment	2,993 (0.3%)	35 (0.0%)	2,958 (0.3%)	1,013 (0.2%)	1,136 (0.2%)	1,306 (0.2%)	614 (0.2%)	0 (0%)	122 (0.2%)
	Need treatment	1,981 (0.2%)	9 (0.0%)	1,972 (0.2%)	1,520 (0.3%)	568 (0.1%)	1,306 (0.2%)	614 (0.2%)	53 (0.2%)	61 (0.1%)
Heroin	Dependence or abuse	2,984 (0.3%)	26 (0.0%)	2,958 (0.3%)	1,013 (0.2%)	1,136 (0.2%)	1,958 (0.3%)	430 (0.1%)	0 (0%)	73 (0.1%)
	Received treatment	3,962 (0.4%)	18 (0.0%)	3,944 (0.4%)	1,520 (0.3%)	1,703 (0.3%)	2,611 (0.4%)	307 (0.1%)	0 (0%)	122 (0.2%)
	Need treatment	0 (0%)	8 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	123 (0.0%)	0 (0%)	0 (0%)

<sup>168</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

Estimated population age 12+ in Cuyahoga County		Total	Age		Gender		Race/ethnicity			
			12 to 17	18+	Males	Females	White	Black/ African American	Asian	Hispanic
			1,074,305	88,330	985,975	506,520	567,785	652,829	306,813	35,485
Hallucinogen	Dependence or abuse	2,149 (0.2%)	177 (0.2%)	1,972 (0.2%)	1,013 (0.2%)	738 (0.1%)	1,306 (0.2%)	614 (0.2%)	71 (0.2%)	61 (0.1%)
	Received treatment	2,016 (0.2%)	44 (0.1%)	1,972 (0.2%)	1,013 (0.2%)	511 (0.1%)	979 (0.2%)	245 (0.1%)	0 (0%)	43 (0.1%)
	Need treatment	132 (0.0%)	132 (0.2%)	0 (0%)	0 (0%)	227 (0.0%)	326 (0.1%)	368 (0.1%)	71 (0.2%)	18 (0.0%)
Inhalant	Dependence or abuse	670 (0.1%)	177 (0.2%)	493 (0.1%)	507 (0.1%)	397 (0.1%)	457 (0.1%)	337 (0.1%)	53 (0.2%)	61 (0.1%)
	Received treatment	717 (0.1%)	26 (0.0%)	690 (0.1%)	355 (0.1%)	284 (0.1%)	588 (0.1%)	0 (0%)	0 (0%)	37 (0.1%)
	Need treatment	150 (0.0%)	150 (0.2%)	0 (0%)	152 (0.0%)	114 (0.0%)	0 (0%)	337 (0.1%)	53 (0.2%)	24 (0.0%)
Meth	Dependence or abuse	4,992 (0.5%)	62 (0.1%)	4,930 (0.5%)	2,533 (0.5%)	2,271 (0.4%)	3,264 (0.5%)	215 (0.1%)	14 (0.0%)	244 (0.4%)
	Received treatment	2,976 (0.3%)	18 (0.0%)	2,958 (0.3%)	1,013 (0.2%)	1,136 (0.2%)	1,958 (0.3%)	123 (0.0%)	0 (0%)	122 (0.2%)
	Need treatment	2,016 (0.2%)	44 (0.1%)	1,972 (0.2%)	1,520 (0.3%)	1,136 (0.2%)	1,306 (0.2%)	92 (0.0%)	14 (0.0%)	122 (0.2%)
Pain reliever	Dependence or abuse	7,255 (0.7%)	353 (0.4%)	6,902 (0.7%)	3,546 (0.7%)	3,407 (0.6%)	5,223 (0.8%)	920 (0.3%)	71 (0.2%)	366 (0.6%)
	Received treatment	4,032 (0.4%)	88 (0.1%)	3,944 (0.4%)	1,520 (0.3%)	1,703 (0.3%)	3,264 (0.5%)	307 (0.1%)	0 (0%)	55 (0.1%)
	Need treatment	3,223 (0.3%)	265 (0.3%)	2,958 (0.3%)	2,026 (0.4%)	1,703 (0.3%)	1,958 (0.3%)	614 (0.2%)	71 (0.2%)	311 (0.5%)

Estimated population in Cuyahoga County		Total	Age		Gender		Race/ethnicity			
			12 to 17	18+	Males	Females	White	Black/ African American	Asian	Hispanic
		1,074,305	88,330	985,975	506,520	567,785	652,829	306,813	35,485	61,001
Tranquilizer	Dependence or abuse	4,121 (0.4%)	177 (0.2%)	3,944 (0.4%)	2,026 (0.4%)	1,703 (0.3%)	2,611 (0.4%)	614 (0.2%)	53 (0.2%)	183 (0.3%)
	Received treatment	1,155 (0.1%)	71 (0.1%)	1,085 (0.1%)	608 (0.1%)	511 (0.1%)	914 (0.1%)	123 (0.0%)	0 (0%)	37 (0.1%)
	Need treatment	2,965 (0.3%)	106 (0.1%)	2,859 (0.3%)	1,418 (0.3%)	1,192 (0.2%)	1,697 (0.3%)	491 (0.2%)	53 (0.2%)	146 (0.2%)
Stimulants	Dependence or abuse	3,135 (0.3%)	177 (0.2%)	2,958 (0.3%)	1,520 (0.3%)	1,703 (0.3%)	2,611 (0.4%)	215 (0.1%)	71 (0.2%)	122 (0.2%)
	Received treatment	1,012 (0.1%)	26 (0.0%)	986 (0.1%)	507 (0.1%)	397 (0.1%)	718 (0.1%)	92 (0.0%)	14 (0.0%)	31 (0.0%)
	Need treatment	2,122 (0.2%)	150 (0.2%)	1,972 (0.2%)	1,013 (0.2%)	1,306 (0.2%)	1,893 (0.3%)	123 (0.0%)	57 (0.2%)	92 (0.2%)
Sedative	Dependence or abuse	627 (0.1%)	35 (0.0%)	592 (0.1%)	304 (0.1%)	284 (0.1%)	392 (0.1%)	92 (0.0%)	14 (0.0%)	24 (0.0%)
	Received treatment	708 (0.1%)	18 (0.0%)	690 (0.1%)	304 (0.1%)	341 (0.1%)	522 (0.1%)	123 (0.0%)	0 (0%)	18 (0.0%)
	Need treatment	18 (0.0%)	18 (0.0%)	0 (0.0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	14 (0.0%)	6 (0.0%)

Source: National Survey of Drug Use and Health, 2018

## **4.3 Estimates of unmet needs for mental health treatment by specific populations**

### **4.3.1 Estimates of mental illness among adults**

Table 4.3.1 shows the estimated prevalence and number of mental illness among Cuyahoga County residents age 18 and older.

#### **Gender**

Unlike substance use, females are more likely than males to experience all types of mental illness.

About 18.8% of females and 12.5% of males experienced serious psychological distress; 26.7% of females and 17.9% of males experienced some mental illness; 7.6% of females and 4.3% of males experienced serious mental illness; and 11.5% of females and 6.8% of males experienced a major depressive episode in the past year.

An estimated 3,695 males and 5,765 females age 18 and older in Cuyahoga County attempted suicide in the past year.

#### **Race/ethnicity**

Much like substance use, whites have a higher prevalence of all types of mental illness than racial/ethnic minorities, except for suicide (discussed more in this section).

About 16.6% of whites, 13.7% of blacks/African Americans, 11.6% of Asians, and 15.1% of Hispanics experienced serious psychological distress; 24.6% of whites, 17.9% of blacks/African Americans, 16.8% of Asians, and 19.1% of Hispanics experienced some mental illness; 6.8% of whites, 4.2% blacks/African Americans, 3.2% Asians, and 5.0% of Hispanics experienced serious mental illness; and 10.2% of non-Hispanic whites, 6.9% of non-Hispanic blacks/African Americans, 6.3% of non-Hispanic Asians, and 8.2% of Hispanics experienced a major depressive episode in the past year.

An estimated 4,879 whites, 3,863 blacks/African Americans, 197 Asians, and 579 Hispanics age 18 and older in Cuyahoga County attempted suicide in the past year.

Suicide, or more specifically suicide attempts, was the only measure of mental illness where African Americans and Hispanics had a higher prevalence than whites.

Table 4.3.1 Estimated prevalence and number of mental illness in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity, 2018<sup>169</sup>

Estimated population age 18+ in Cuyahoga County	Total	Males	Females	White	Black/African American	Asian	Hispanic
	985,975	461,909	524,066	609,932	275,964	32,776	52,596
Serious psychological distress	155,784 (15.8%)	57,739 (12.5%)	98,524 (18.8%)	101,249 (16.6%)	37,807 (13.7%)	3,802 (11.6%)	7,942 (15.1%)
Seriously thought about killing self	63,102 (6.4%)	26,791 (5.8%)	36,685 (7.0%)	40,865 (6.7%)	15,454 (5.6%)	1,442 (4.4%)	2,998 (5.7%)
Made plans to kill self	20,705 (2.1%)	8,776 (1.9%)	12,054 (2.3%)	12,809 (2.1%)	5,795 (2.1%)	393 (1.2%)	1,052 (2.0%)
Attempted to kill self	9,860 (1.0%)	3,695 (0.8%)	5,765 (1.1%)	4,879 (0.8%)	3,863 (1.4%)	197 (0.6%)	579 (1.1%)
Any mental illness	222,830 (22.6%)	82,682 (17.9%)	139,926 (26.7%)	150,043 (24.6%)	49,398 (17.9%)	5,506 (16.8%)	10,046 (19.1%)
Serious mental illness	59,159 (6.0%)	19,862 (4.3%)	39,829 (7.6%)	41,475 (6.8%)	11,590 (4.2%)	1,049 (3.2%)	2,630 (5.0%)
Serious or moderate mental illness	120,289 (12.2%)	41,572 (9.0%)	78,610 (15.0%)	81,731 (13.4%)	25,389 (9.2%)	2,622 (8.0%)	5,417 (10.3%)
Moderate mental illness	60,144 (6.1%)	22,172 (4.8%)	38,781 (7.4%)	40,256 (6.6%)	13,798 (5.0%)	1,573 (4.8%)	2,788 5.3%
Low mental illness	102,541 (10.4%)	41,110 (8.9%)	61,316 (11.7%)	68,312 (11.2%)	24,009 (8.7%)	2,917 (8.9%)	4,628 (8.8%)
Mild (low) mental illness or moderate mental illness	162,686 (16.5%)	62,820 (13.6%)	100,097 (19.1%)	108,568 (17.8%)	37,807 (13.7%)	4,490 (13.7%)	7,416 (14.1%)

Source: National Survey of Drug Use and Health, 2018

<sup>169</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### **4.3.2 Estimates of receipt for mental health treatment among adults**

Table 4.3.2 shows the estimated prevalence and number of the receipt of mental health treatment in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity.

There are many ways the need for mental health treatment can be calculated using the information based on the NSDUH 2018 shown in the table. For this report, the need for treatment for mental illness (the first shaded row in the table) was calculated by subtracting the estimated number of people who received any mental health treatment (Table 4.3.2) from the estimated number of people who experienced any mental illness (see Table 4.3.1).

Of course, not everyone who experiences mental illness “needs” treatment. Mechanic (2003) suggests that prevalence of mental disorders alone is not necessarily a good measure of need for mental health services. Thus, the estimates reported are rough estimates of the need of mental health treatment in the county.

The NSDUH 2018 asked respondents their own perception of unmet need for mental health treatment (the second shaded row in the table).

These two measures of “needs” are quite different in that the former is a more objective measure of need while the latter is a more subjective measure of need for mental health treatment.

For the most part, these two measures of needs are comparable, except for the two demographic populations that are most likely than other populations to receive mental health treatment: females and whites.

The groups with a higher prevalence of perceived need for mental health treatment are the groups with a higher prevalence of the receipt of mental health treatment.

The prevalence of “subjective need” is, in fact, higher than the prevalence of “objective need” among females and whites, the two groups that are more likely than others to receive treatment for mental illness.

For all other demographic groups, the prevalence of subjective need was lower than the prevalence of objective measure of need.

Indeed, the prevalence of objective mental health need among African Americans (9.0%), Asians (10.2%), and Hispanics (9.3%) was almost twice that of the prevalence among whites (4.0%), indicating the lower likelihood that racial/ethnic minorities receive any mental health treatment compared to whites.

At the same time, whites were twice as likely to perceive the need for mental health treatment (9.1%) than racial/ethnic minorities (blacks/African Americans at 5.6%, Asians at 5.3%, and Hispanics at 6.6%).

The racial disparity in mental health treatment is also problematic given the higher prevalence of suicide attempt among blacks/African Americans, compared to other racial/ethnic groups.

## **Gender**

Females (21.1%) are twice as likely than males (10.8%) to receive any mental health treatment, and females (17.0%) are also twice as likely than males (8.5%) to receive prescription medications for mental illness.

The most popular treatment for mental illness for both genders is prescription medication. Only a small percentage of the population received inpatient or outpatient mental health treatment in the past year.

Overall, an estimated 49,886 males and 110,578 females in Cuyahoga County age 18 and older received some mental health treatment in the past year.

Compared with the prevalence of mental illness (see Table 4.3.1) with 17.9% of males and 26.7% of females experiencing a mental illness, only 10.8% of males and 21.1% of females received any mental health treatment.

This leaves an estimated 32,796 males (7.1%) and 29,348 females (5.6%) in Cuyahoga County age 18 and older who experienced a mental illness but did not receive any treatment for it in the past year.

In addition, an estimated 23,557 males and 56,075 females in Cuyahoga County age 18 and older perceived unmet need for mental health treatment.



## **Race/ethnicity**

Whites are more than twice as likely to receive mental health treatment (20.6%) than blacks/African Americans (8.9%), Asians (6.6%), and Hispanics (9.8%). Whites are also more than twice as likely (16.9%) to receive prescription medicine for mental health treatment compared to blacks/African Americans (6.6%), Asians (3.9%), and Hispanics (7.2%).

The most popular treatment for mental illness for all race/ethnicity groups is prescription medication. Only a small percentage of the population received inpatient or outpatient mental health treatment in the past year

Compared with the prevalence of mental illness (see Table 4.3.1) with 24.6% of whites, 17.9% of blacks/African Americans, 16.8% of Asians, and 19.1% of Hispanics experiencing a mental illness, Table 4.3.3 shows that 20.6% of whites, 8.9% of blacks/African Americans, 6.6% of Asians, and 9.8% of Hispanics received some mental health treatment in the past year.

This leaves an estimated 24,397 whites (4.0%), 24,837 blacks/African Americans (9.0%), 3,343 Asians (10.2%), and 4,892 Hispanics (9.3%) age 18 and older in Cuyahoga County who experienced mental illness but did not receive any treatment in the past year.

In addition, an estimated 55,504 whites, 15,454 blacks/African Americans, 1,737 Asians, and 3,471 Hispanics age 18 and older in Cuyahoga County perceived an unmet need for mental health treatment in the past year.

Table 4.3.2 Estimated prevalence and number of the receipt of mental health treatment in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity, 2018<sup>170</sup>

Estimated population age 18+ in Cuyahoga County	Total	Males	Females	White	Black/ African American	Asian	Hispanic
	985,975	461,909	524,066	609,932	275,964	32,776	52,596
Inpatient mental health treatment	11,831 (1.2%)	5,081 (1.1%)	7,047 (1.3%)	6,709 (1.1%)	4,691 (1.7%)	164 (0.5%)	631 (1.2%)
Outpatient mental health treatment	86,766 (8.8%)	26,329 (5.7%)	60,792 (11.6%)	67,093 (11.0%)	12,970 (4.7%)	1,344 (4.1%)	2,945 (5.6%)
Prescription medicine for mental health treatment	128,177 (13.0%)	39,262 (8.5%)	89,091 (17.0%)	103,079 (16.9%)	18,214 (6.6%)	1,278 (3.9%)	3,787 (7.2%)
Any mental health treatment	160,714 (16.3%)	49,886 (10.8%)	110,578 (21.1%)	125,646 (20.6%)	24,561 (8.9%)	2,163 (6.6%)	5,154 (9.8%)
Need for mental health treatment	62,116 (6.3%)	32,796 (7.1%)	29,348 (5.6%)	24,397 (4.0%)	24,837 (9.0%)	3,343 (10.2%)	4,892 (9.3%)
Perceived unmet need for mental health treatment	79,864 (8.1%)	23,557 (5.1%)	56,075 (10.7%)	55,504 (9.1%)	15,454 (5.6%)	1,737 (5.3%)	3,471 (6.6%)

Source: National Survey of Drug Use and Health, 2018

<sup>170</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### 4.3.3 Reasons for not receiving mental health treatment among adults

Table 4.3.3 shows the estimated prevalence and number of people who identify with each of the reasons for not receiving mental health treatment among adults age 18 and older in Cuyahoga County by gender and race/ethnicity.

The question was asked among those who indicated that they perceived unmet need for mental health treatment (see Table 4.3.2), and respondents were asked to indicate as many reasons that apply to them for not receiving treatment.

Because the number of uninsured seniors and seniors on Medicaid was so small, especially the ones who perceived the unmet need for mental health treatment, this section focuses on adults age 18 to 64.

The popular reasons for not receiving mental health treatment are the same across gender/race/ethnicity groups (shaded rows in the table).

Of the people who needed mental health treatment but did not receive one, the most frequently cited reasons were I “...could not afford the cost of treatment,” followed by I “...thought could handle the problem without” treatment, “...did not know where to go,” and “...didn’t have time.”

The popular reasons for not receiving mental health treatment are the same for males and females, but the prevalence for most of the reasons is higher for females compared to males.

Once again, popular reasons for not receiving mental health treatment are the same for all race/ethnicity groups, though there appear to be race/ethnicity differences in preferred reasons for not receiving mental health treatment, which might be explained by cultural differences.

For instance, Asians are more likely than other groups to indicate “fear of neighbor’s negative opinion” and I “...didn’t want others to find out” as reasons why they did not receive needed mental health treatment.

Table 4.3.3 Reasons for not receiving mental health treatment among adults age 18 and older in Cuyahoga County by gender and race/ethnicity, 2018<sup>171</sup>

Estimated population age 18+ in Cuyahoga County	Total	Males	Females	White	Black/African American	Asian	Hispanic
	79,864	23,557	56,075	55,504	15,454	1,737	3,471
Could not afford the cost	39.1%	38.9%	39.1%	40.5%	31.4%	34.2%	38.3%
Fear of neighbor's negative opinion	13.8%	18.3%	11.9%	13.4%	8.4%	25.2%	16.6%
Fear of negative effect on job	10.9%	12.2%	10.4%	11.5%	7.1%	6.3%	11.1%
Insurance does not cover at all	7.9%	9.2%	7.4%	7.5%	6.8%	8.1%	10.5%
Insurance does not pay enough	14.1%	13.0%	14.5%	16.0%	5.4%	13.5%	11.5%
Did not know where to go	25.7%	25.9%	25.6%	25.3%	21.3%	32.4%	29.3%
Confidentiality concerns	10.3%	10.4%	10.3%	9.9%	9.8%	9.0%	12.5%
Fear of being committed	15.2%	15.1%	15.3%	14.3%	16.6%	9.0%	19.3%
Did not think treatment needed	12.2%	14.8%	11.2%	12.9%	10.8%	11.7%	10.7%
Thought could handle the problem without	28.4%	28.7%	28.3%	29.1%	25.3%	32.4%	26.2%
Did not think treatment would help	12.3%	15.0%	11.2%	12.8%	8.4%	14.4%	12.3%
Didn't have time	21.0%	16.0%	23.1%	22.1%	15.9%	28.8%	18.4%
Didn't want others to find out	9.0%	9.6%	8.8%	9.2%	6.4%	13.5%	8.8%
No transportations or inconvenient	5.3%	4.1%	5.8%	5.2%	5.4%	6.3%	4.7%

Source: National Survey of Drug Use and Health, 2018

<sup>171</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

#### **4.3.4 Estimates of major depressive episode and receipt of treatment among adults**

Table 4.3.4 shows the estimated prevalence and number of major depressive episode (MDE) and receipt of treatment for depressive feelings in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity.

Once again, there are many ways the need for MDE treatment can be calculated using the information based on the NSDUH 2018 shown in the table. For this report, the need for treatment for MDE (the shaded row in the table) was calculated by subtracting the estimated number of people who received any treatment for depressive feelings from the estimated number of people who experienced a MDE (see Table 4.3.4).

##### **Gender**

Females are more likely than males to experience a MDE, receive treatment for depressive feelings, and need treatment for depressive feelings.

An estimated 31,410 males (6.8%) and 59,219 females (11.3%) age 18 and older in Cuyahoga County experienced a major depressive episode in the past year.

An estimated 5.0% of males and 11.0% of females received any treatment for depressive feelings in the past year.

Overall, an estimated 8,314 males (1.8%) and 1,572 females (0.3%) age 18 and older in Cuyahoga County experienced a MDE but did not receive any treatment in the past year.

##### **Race/ethnicity**

Whites are more likely than racial/ethnic minorities to experience a MDE and receive treatment for depressive feelings, but racial/ethnic minority groups are more likely than whites to need treatment for depressive feelings.

As estimated 10.1% of whites, 6.8% of blacks/African Americans, 6.2% of Asians, and 8.2% of Hispanics age 18 and older experienced a MDE in the past year.

An estimated 10.1% of whites, 4.5% of blacks/African Americans, 4.0% of Asians, and 5.5% of Hispanics received any treatment for depressive feelings in the past year.

Overall, an estimated 6,347 blacks/African Americans (2.3%), 721 Asians (2.2%), and 1,367 Hispanics (2.6%) age 18 and older in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

Table 4.3.4 Estimated prevalence and number of MDE and the receipt of treatment for depressive feelings in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity, 2018<sup>172</sup>

Estimated population age 18+ in Cuyahoga County	Total	Males	Females	White	Black/ African American	Asian	Hispanic
	985,975	461,909	524,066	609,932	275,964	32,776	52,596
MDE	90,710 (9.2%)	31,410 (6.8%)	59,219 (11.3%)	61,603 (10.1%)	18,766 (6.8%)	2,032 (6.2%)	4,260 (8.1%)
Saw/talk to MD or professional about depressive feelings	70,990 (7.2%)	20,324 (4.4%)	50,834 (9.7%)	53,064 (8.7%)	11,590 (4.2%)	1,147 (3.5%)	2,682 (5.1%)
Used RX medication for depressive feelings	59,159 (6.0%)	16,167 (3.5%)	42,973 (8.2%)	47,575 (7.8%)	7,727 (2.8%)	688 (2.1%)	1,683 (3.2%)
Received treatment/counseling or RX medication for depressive feelings	80,850 (8.2%)	23,095 (5.0%)	57,647 (11.0%)	61,603 (10.1%)	844 (4.5%)	1,311 (4.0%)	2,893 (5.5%)
Saw/talk to general practice/family MD about depressive feelings	37,467 (3.8%)	9,700 (2.1%)	27,775 (5.3%)	29,887 (4.9%)	338 (1.8%)	459 (1.4%)	1,157 (2.2%)
Saw/talk to psychologist about depressive feelings	20,705 (2.1%)	6,929 (1.5%)	13,626 (2.6%)	15,248 (2.5%)	206 (1.1%)	328 (1.0%)	789 (1.5%)
Saw/talk to psychiatrist about depressing feelings	23,663 (2.4%)	7,852 (1.7%)	16,246 (3.1%)	18,908 (3.1%)	18,766 (1.4%)	393 (1.2%)	736 (1.4%)
Any treatment	80,850 (8.2%)	23,095 (5.0%)	57,647 (11.0%)	61,603 (10.1%)	12,418 (4.5%)	1,311 (4.0%)	2,893 (5.5%)
Need treatment for MDE	9,860 (1.0%)	8,314 (1.8%)	1,572 (0.3%)	0 (0.0%)	6,347 (2.3%)	721 (2.2%)	1,367 (2.6%)

Source: National Survey of Drug Use and Health, 2018

<sup>172</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### **4.3.5 Estimates of dual diagnosis among adults**

Table 4.3.5 shows the estimated prevalence and number of dual diagnosis for mental illness and substance use disorder (SUD) in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity.

#### **Gender**

The prevalence of dual diagnosis for mental illness and SUD is comparable between males and females.

About 1.6% of males and 2.0% of females had a serious mental illness and SUD; 5.3% of males and 4.7% of females had any mental illness and SUD; and 3.6% of males and 2.7% of females had mild (low) mental illness or moderate mental illness and SUD in the past year.

The prevalence rate amounted to an estimated 7,391 males and 10,481 females with serious mental illness, 24,481 males and 24,631 females with any mental illness, and 16,629 males and 14,150 females with mild (low) mental illness or moderate mental illness along with SUD in the past year among Cuyahoga County residents age 18 and older.

#### **Race/ethnicity**

As expected from the higher prevalence of substance use disorder and mental illness, whites are more likely than racial/ethnic minorities to experience dual diagnosis for mental health and substance use disorder (SUD).

About 2.1% of whites, 1.3% of blacks/African Americans, 0.8% of Asians, and 1.3% of Hispanics had a serious mental illness and SUD; 5.4% of whites, 4.0% of blacks/African Americans, 2.8% of Asians, and 4.0% of Hispanics had any mental illness and SUD; and 3.4% of whites, 2.6% of blacks/African Americans, 2.0% of Asians, and 2.7% of Hispanics had mild (low) mental illness or moderate mental illness and SUD in the past year.

The prevalence amounted to an estimated 12,809 whites, 3,588 blacks/African Americans, 262 Asians, and 684 Hispanics with serious mental illness; 32,936 whites, 11,039 blacks/African Americans, 918 Asians, and 2,104 Hispanics with any mental illness and SUD; and 20,738 whites, 7,175 blacks/African Americans, 656 Asians, and 1,420 Hispanics with mild (low) mental illness or moderate mental illness along with SUD in the past year among Cuyahoga county residents age 18 and older.



Table 4.3.5 Estimated prevalence and number of dual diagnosis in the past year among adults age 18 and older in Cuyahoga County by gender and race/ethnicity, 2018<sup>173</sup>

Estimated population age 18+ in Cuyahoga County	Total	Males	Females	White	Black/African American	Asian	Hispanic
		985,975	461,909	524,066	609,932	275,964	32,776
Serious mental illness and SUD	17,746 (1.8%)	7,391 (1.6%)	10,481 (2.0%)	12,809 (2.1%)	3,588 (1.3%)	262 (0.8%)	684 (1.3%)
Any mental illness and SUD	31,551 (3.2%)	24,481 (5.3%)	24,631 (4.7%)	32,936 (5.4%)	11,039 (4.0%)	918 (2.8%)	2,104 (4.0%)
Mild (low) mental illness or moderate mental illness and SUD	49,299 (5.0%)	16,629 (3.6%)	14,150 (2.7%)	20,738 (3.4%)	7,175 (2.6%)	656 (2.0%)	1,420 (2.7%)

Source: National Survey of Drug Use and Health, 2018

<sup>173</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### **4.3.6 Estimates of major depressive episode and receipt of treatment among youth**

Table 4.3.6 shows the estimated past year prevalence and number of major depressive episode (MDE) and receipt of treatment for depressive feelings among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity.

Once again, there are many ways the need for MDE treatment can be estimated using the information based on the NSDUH 2018 shown in the table. For this report, we apply the same method we used to calculate the need for MDE treatment among adults (see Table 4.3.4).

The need for treatment for depressive feelings among youth (the shaded row in the table) was calculated by subtracting the estimated number who received any kind of treatment for depressive feelings from the estimated number of youth who experienced a MDE (see Table 4.3.6).

#### **Gender**

Overall, girls are more likely than boys to experience MDE, receive treatment for depressive feelings., and need treatment for MDE.

An estimated 3,480 boys (7.8%) and 9,050 girls (20.7%) age 12 to 17 in Cuyahoga County experienced a MDE in the past year. The prevalence of experiencing MDE is higher among youth than among adults.

About 3.8% of boys and 11.7% of girls received any mental health treatment for depressive feelings in the past year.

Overall, an estimated 1,785 boys (4.0%) and 3,935 girls (9.0%) age 12 to 17 in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

## **Race/ethnicity**

White youth are more likely than racial/ethnic minority youth to experience a MDE and receive treatment for depressive feelings. However, Asian and Hispanic youth are more likely than white youth to need treatment for MDE.

An estimated 6,349 white (14.08%), 3,147 black/African American (10.2%), 330 Asian (12.2%), and 1,202 Hispanic (14.3%) youth age 12 to 17 in Cuyahoga County experienced a MDE in the past year.

About 9.0% of white, 4.8% of black/African American, 4.5% of Asian, and 6.4% of Hispanic youth received any mental health treatment for depressive feelings in the past year.

Overall, an estimated 2,488 white (5.8%), 1,666 black/African American (5.4%), 209 Asian (7.7%), and 664 Hispanic (7.9%) youth age 12 to 17 in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

Table 4.3.6 Estimated past year prevalence and number of MDE and the receipt of treatment for depressive feelings among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity, 2018<sup>174</sup>

Estimated population age 12 to 17 in Cuyahoga County	Total	Boys	Girls	White	Black/African American	Asian	Hispanic
		88,330	44,611	43,719	42,897	30,849	2,709
MDE	12,455 (14.1%)	3,480 (7.8%)	9,050 (20.7%)	6,349 (14.8%)	3,147 (10.2%)	330 (12.2%)	1,202 (14.3%)
Saw/talk to MD or professional about depressive feelings	6,271 (7.1%)	1,561 (3.5%)	4,765 (10.9%)	3,603 (8.4%)	1,357 (4.4%)	122 (4.5%)	496 (5.9%)
Used RX medication for depressive feelings	3,180 (3.6%)	758 (1.7%)	2,448 (5.6%)	1,973 (4.6%)	555 (1.8%)	30 (1.1%)	210 (2.5%)
Saw/talk to general practice/family MD about depressive feelings	1,413 (1.6%)	223 (0.5%)	1,180 (2.7%)	901 (2.1%)	247 (0.8%)	11 (0.4%)	84 (1.0%)
Saw/talk to other MD about depressive feelings	265 (0.3%)	45 (0.1%)	175 (0.4%)	129 (0.3%)	31 (0.1%)	5 (0.2%)	25 (0.3%)
Saw/talk to psychologist about depressive feelings	2,297 (2.6%)	580 (1.3%)	1,705 (3.9%)	1,373 (3.2%)	432 (1.4%)	60 (2.2%)	151 (1.8%)
Saw/talk to psychiatrist about depressive feelings	1,502 (1.7%)	312 (0.7%)	1,137 (2.6%)	858 (2.0%)	216 (0.7%)	30 (1.1%)	92 (1.1%)
Saw health professional or RX med for depressive feelings	6,536 (7.4%)	1,651 (3.7%)	4,897 (11.2%)	3,732 (8.7%)	1,419 (4.6%)	119 (4.4%)	513 (6.1%)
Saw health professional only for depressive feelings	3,268 (3.7%)	892 (2.0%)	2,448 (5.6%)	1,716 (4.0%)	864 (2.8%)	89 (3.3%)	311 (3.7%)
Received RX medication but not health professional for depressive feelings	530 (0.6%)	178 (0.4%)	350 (0.8%)	257 (0.6%)	123 (0.4%)	0 (0.0%)	42 (0.5%)
Saw health professional and RX medication for depressive feelings	2,650 (3.0%)	580 (1.3%)	2,099 (4.8%)	1,673 (3.9%)	432 (1.4%)	30 (1.1%)	160 (1.9%)
Received any treatment	6,801 (7.7%)	1,695 (3.8%)	5,115 (11.7%)	3,861 (9.0%)	1,481 (4.8%)	122 (4.5%)	538 (6.4%)
Need for treatment for MDE	5,654 (6.4%)	1,785 (4.0%)	3,935 (9.0%)	2,488 (5.8%)	1,666 (5.4%)	209 (7.7%)	664 (7.9%)

Source: National Survey of Drug Use and Health, 2018

<sup>174</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

#### **4.3.7 Estimates of dual diagnosis among youth**

Table 4.3.7 shows the estimated past year prevalence and number of dual diagnosis for major depressive episode (MDE) and alcohol use disorder (AUD), illicit drug use disorder, or substance use disorder (SUD) among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity.

Girls are more likely than boys to have dual diagnosis of MDE and all three types of disorders in the table. This is most likely explained by the fact that girls are more likely than boys to experience a MDE.

In Cuyahoga County, an estimated 223 boys (0.5%) and 525 girls (1.2%) age 12 to 17 experienced MDE and AUD, 312 boys (0.7%) and 743 girls (1.7%) age 12 to 17 experienced MDE and illicit drug use disorder, and 401 boys (0.9%) and 1,006 girls (2.3%) experienced MDE and SUD in the past year.

White youth are more likely than racial/ethnic minority youth to experience all three types of dual diagnosis. This is once again most likely due to the high prevalence of experiencing a MDE among white youth compared to minority youth.

In Cuyahoga County, 386 white (0.9%), 123 black/African American (0.4%), 5 Asian (0.2%), and 59 (0.7%) youth age 12 to 17 experienced MDE and AUD; 601 white (1.4%), 213 black/African American (0.7%), 24 Asian (0.9%), and 92 Hispanic (1.1%) youth age 12 to 17 experienced MDE and illicit drug use disorder; and 772 white (1.8%), 247 black/African American (0.8%), 24 Asian (0.9%), and 126 Hispanic (1.5%) youth experienced MDE and SUD in the past year.

Table 4.3.7 Estimated past year prevalence and number of depression and receipt of treatment among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity, 2018<sup>175</sup>

Estimated population age 12 to 17 in Cuyahoga County	Total	Males	Females	White	Black/ African American	Asian	Hispanic
	88,330	44,611	43,719	42,897	30,849	2,709	8,405
Major depressive episode and alcohol dependence or abuse	707 (0.8%)	223 (0.5%)	525 (1.2%)	386 (0.9%)	123 (0.4%)	5 (0.2%)	59 (0.7%)
Major depressive episode and illegal drug dependence or abuse	1,060 (1.2%)	312 (0.7%)	743 (1.7%)	601 (1.4%)	216 (0.7%)	24 (0.9%)	92 (1.1%)
Major depressive episode and substance dependence or abuse	1,413 (1.6%)	401 (0.9%)	1,006 (2.3%)	772 (1.8%)	247 (0.8%)	24 (0.9%)	126 (1.5%)

Source: National Survey of Drug Use and Health, 2018

<sup>175</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

#### **4.3.8 Estimates of mental health treatment among youth**

Table 4.3.8 shows the estimated past year prevalence and number of the receipt of different types of mental health and substance use treatment among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity.

Because the NSDUH 2018 did not include mental illness information of youth, their mental health treatment needs cannot be calculated.

Just like among adults, females age 12 to 17 are consistently more likely than males to receive mental health and substance use treatment. More than 1 in 5 males (22.5%) and almost 1 in 3 females (31.0%) age 12 to 17 received mental health services or substance treatment at specialty facility in the past year.

Once again, just like among adults, non-Hispanic whites age 12 to 17 had the highest prevalence of receipt of most mental health and substance use treatment in the past year with some exceptions. About 27.7% of non-Hispanic whites, 25.7% of non-Hispanic blacks/African Americans, 18.0% of non-Hispanic Asians, 25.1% of Hispanics, and 30.6% of non-Hispanic other age 12 to 17 received mental health services or substance treatment at specialty facility in the past year.

Whites are less likely than other race/ethnicity groups to receive education mental health services and non-specialty mental health services.

Table 4.3.8 Estimated past year prevalence and number of the receipt of mental health treatment among youth age 12 to 17 in Cuyahoga County by gender and race/ethnicity, 2018<sup>176</sup>

Estimated population age 12 to 17 in Cuyahoga County	Total	Males	Females	White	Black/ African American	Asian	Hispanic
	88,330	44,611	43,719	42,897	30,849	2,709	8,405
Specialty inpatient mental health services	2,738 (3.1%)	1,249 (2.8%)	1,530 (3.5%)	1,244 (2.9%)	1,234 (4.0%)	54 (2.0%)	261 (3.1%)
Specialty outpatient mental health series	13,514 (15.3%)	5,086 (11.4%)	8,482 (19.4%)	7,679 (17.9%)	3,054 (9.9%)	230 (8.5%)	1,084 (12.9%)
Specialty mental health services	14,928 (16.9%)	5,844 (13.1%)	9,137 (20.9%)	8,193 (19.1%)	3,887 (12.6%)	268 (9.9%)	1,252 (14.9%)
Non-specialty mental health services	15,104 (17.1%)	6,246 (14.0%)	8,919 (20.4%)	7,207 (16.8%)	5,738 (18.6%)	330 (12.2%)	1,252 (16.6%)
Education mental health services	12,985 (14.7%)	5,487 (12.3%)	7,563 (17.3%)	6,134 (14.3%)	5,183 (16.8%)	314 (11.6%)	1,202 (14.3%)
Specialty mental health along with other services <sup>177</sup>	6,713 (7.6%)	2,186 (4.9%)	4,547 (10.4%)	3,603 (8.4%)	1,728 (5.6%)	119 (4.4%)	555 (6.6%)
Mental health services or substance treatment at specialty facility	23,585 (26.7%)	10,038 (22.5%)	13,553 (31.0%)	11,882 (27.7%)	7,928 (25.7%)	488 (18.0%)	2,110 (25.1%)
Mental health service but not substance treatment at specialty facility	23,231 (26.3%)	9,859 (22.1%)	13,422 (30.7%)	11,711 (27.3%)	7,897 (25.6%)	482 (17.8%)	2,076 (24.7%)
Substance treatment at specialty facility but not mental health service	115 (0.1%)	89 (0.2%)	13 (0.0%)	51 (0.1%)	19 (0.1%)	5 (0.2%)	17 (0.2%)
Both mental health service and substance treatment at specialty facility	177 (0.2%)	89 (0.2%)	131 (0.3%)	129 (0.3%)	19 (0.1%)	0 (0.0%)	17 (0.2%)

Source: National Survey of Drug Use and Health, 2018

<sup>176</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

<sup>177</sup> Specialty mental health along with other services from education, general medicine (family doctor/pediatrician), or foster care or therapeutic foster care settings for problems with behavior or emotions that were not caused by alcohol or drugs



#### **4.4 Conclusion**

This chapter reviewed the estimates of unmet needs for substance use and mental health treatment services in Cuyahoga County by age, gender, and race/ethnicity and levels of care. Rough estimated numbers of unmet needs for Cuyahoga County were calculated using the NSDUH 2018 and the ASC 2018.

The calculated estimated unmet need for substance use treatment in Cuyahoga County is summarized in Table 4.4.1 and unmet need for mental health treatment for adults in Cuyahoga County is summarized in Table 4.4.2 and for youth in Cuyahoga County is summarized in Table 4.4.3. This is followed by a narrative description of our estimates of unmet need for mental health and substance use treatment among adults and youth in Cuyahoga County.

Table 4.4.1 Summary of substance use treatment unmet need by age, gender, and race/ethnicity

	Total	12 to 17	18+	Males	Females	White	Black/African American	Asian	Hispanic
Alcohol	63,529 (5.9%)	1,413 (1.6%)	62,116 (6.3%)	32,417 (6.4%)	22,711 (4.0%)	37,211 (5.7%)	10,738 (3.5%)	1,384 (3.9%)	2,928 (4.8%)
Illicit drug	32,773 (3.1%)	2,208 (2.5%)	30,565 (3.1%)	18,235 (3.6%)	13,627 (2.4%)	18,932 (2.9%)	9,204 (3.0%)	639 (1.8%)	1,891 (3.1%)
Alcohol and illicit drug	5,372 (0.5%)	353 (0.4%)	4,930 (0.5%)	3,545 (0.7%)	1,136 (0.2%)	1,959 (0.3%)	920 (0.3%)	213 (0.6%)	427 (0.7%)

Table 4.4.2 Summary of mental health treatment unmet need in Cuyahoga County among adults age 18 and older by gender and race/ethnicity

	Total	Males	Females	White	Black/African American	Asian	Hispanic
Need for mental health treatment	62,116 (6.3%)	32,796 (7.1%)	29,348 (5.6%)	24,397 (4.0%)	24,837 (9.0%)	3,343 (10.2%)	4,892 (9.3%)
Perceived unmet need for mental health treatment	79,864 (8.1%)	23,557 (5.1%)	56,075 (10.7%)	55,504 (9.1%)	15,454 (5.6%)	1,737 (5.3%)	3,471 (6.6%)
Need treatment for Major Depressive Episode (MDE)	9,860 (1.0%)	8,314 (1.8%)	1,572 (0.3%)	0 (0.0%)	6,347 (2.3%)	721 (2.2%)	1,367 (2.6%)

Table 4.4.3 Summary of mental health treatment unmet need in Cuyahoga County among youth age 12 to 17 by gender and race/ethnicity

Unmet need for MDE	Total	Boys	Girls	White	Black/African American	Asian	Hispanic
	5,654 (6.4%)	1,785 (4.0%)	3,935 (9.0%)	2,488 (5.8%)	1,666 (5.4%)	209 (7.7%)	664 (7.9%)

## Unmet need for substance use treatment

- Based on our analyses, we estimate that there is a large disparity between those with alcohol and drug concerns and those who received treatment.
- Overall, adults are more likely than youth and males are more likely than females to have disorders of substance use, receive treatment for the disorder, and need treatment for the disorder.
- Though whites are more likely than racial/ethnic minorities to have the disorder of substance use and receive treatment for the disorder, minorities are more likely than whites to need treatment for the disorder, especially for illicit substance.
- Following are more details regarding our estimates of unmet need for mental health and substance use treatment.

- Unmet need for Alcohol Use Disorder (AUD) treatment:

1,413 youth (1.6%), 62,116 adults (6.3%), 32,417 males (6.4%), 22,711 females (4.0%), 37,211 (5.7%) whites, 10,738 (3.5%) blacks/African Americans, 1,384 (3.9%) Asians, and 2,928 (4.8%) Hispanics in Cuyahoga County had AUD in the past year but did not receive treatment for it.

- Unmet need for treatment for an illicit drug use disorder:

2,208 (2.5%) youth, 30,565 (3.1%) adults, 18,235 (3.6%) males, 13,627 (2.4%) females, 18,932 whites (2.9%), 9,204 blacks/African Americans (3.0%), 639 Asians (1.8%), and 1,891 Hispanics (3.1%) in Cuyahoga County had illicit drug use disorder in the past year but did not receive treatment for it.

- Unmet need for both AUD and illicit drug use disorders:

353 youth (0.4%), 4,930 adults, 3,545 males (0.7%), 1,136 females (0.2%), 1,959 whites (0.3%), 920 blacks/African Americans (0.3%), 213 Asians (0.6%), and 427 Hispanics (0.7%) in Cuyahoga County had both alcohol and illicit drug use disorders in the past year but did not receive treatment for either one.

## Unmet need for mental health treatment among adults

- Suicide Attempts

Females are more likely than males and whites are more likely than racial/ethnic minorities to experience mental illness, however, blacks/African Americans and Hispanics are more likely than whites to attempt suicide.

An estimated 9,460 individuals; 3,695 males, 5,765 females, 4,879 whites, 3,863 blacks/African Americans, 197 Asians, and 579 Hispanics in Cuyahoga County attempted suicide in the past year.

- Perceived Need for Treatment

The groups with a higher prevalence of perceived need for mental health treatment are the groups with a higher prevalence of the receipt of mental health treatment (i.e., females and whites).

- Unmet Need for Mental Health Treatment

Among adults, an estimated 62,144 individuals; 32,796 males (7.1%), 29,348 females (5.6%), 24,397 whites (4.0%), 24,837 blacks/African Americans (9.0%), 3,343 Asians (10.2%), and 4,892 Hispanics (9.3%) in Cuyahoga County experienced mental illness but did not receive any treatment in the past year.

Among adults, an estimated 79,632 individuals; 23,557 males, 56,075 females, 55,504 whites, 15,454 blacks/African Americans, 1,737 Asians, and 3,471 Hispanics in Cuyahoga County perceived an unmet need for mental health treatment in the past year.

- Females are more likely than males to experience a major depressive episode (MDE), receive treatment for depressive feelings, and need treatment for depressive feelings. Whites are more likely than racial/ethnic minorities to experience a MDE and receive treatment for depressive feelings, but racial/ethnic minority groups are more likely than whites to need treatment for depressive feelings.

- Among adults, an estimated 9,886 individuals; 8,314 males (1.8%), 1,572 females (0.3%), 6,347 blacks/African Americans (2.3%), 721 Asians (2.2%), and 1,367 Hispanics (2.6%) in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

### **Co-occurring disorder and unmet need for treatment among adults**

- Among adults, an estimated 17,872 individuals; 7,391 males (1.6%), 10,481 females (2.0%), 12,809 whites (2.1%), 3,588 blacks/African Americans (1.3%), 262 Asians (0.8%), and 684 Hispanics (1.3%) in Cuyahoga County experienced serious mental illness and SUD in the past year.

### **Reason for unmet need for treatment**

- Among adults, of the people who needed mental health treatment but did not receive it, the most frequently cited reasons were I “...could not afford the cost of treatment,” followed by I “...thought could handle the problem without” treatment, “...did not know where to go,” and “...didn’t have time.”

### **Mental health treatment needs among youth**

- An estimated 5,720 youth; 1,785 boys (4.0%), 3,935 girls (9.0%), 2,488 white youth (5.8%), 1,666 black/African American youth (5.4%), 209 Asian youth (7.7%), and 664 Hispanic youth (7.9%) in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

### **Co-occurring disorder and unmet need among youth**

- An estimated 1,407 youth; 401 boys (0.9%), 1,006 girls (2.3%), 772 white youth (1.8%), 247 black/African American youth (0.8%), 24 Asian youth (0.9%), and 126 Hispanic youth (1.5%) in Cuyahoga County experienced MDE and SUD in the past year.

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## **CHAPTER 5: ESTIMATES OF PEOPLE WHO NEED PUBLICLY FUNDED SERVICES**

### **5.1 Introduction**

This chapter reviews the estimates of people who need publicly funded mental health and substance use treatment services in Cuyahoga County. Like Chapters 3, 4, and 5, the estimates for this chapter were calculated using the 2018 National Survey on Drug Use and Health (NSDUH) data and the population estimate Cuyahoga County based on the 2018 American Community Survey (ACS).

The population that requires publicly funded services includes people who are without any health insurance as well as people who are on Medicare, Medicaid, VA healthcare, or some combination of public insurances.

The population that requires publicly funded services overall tends to be economically disadvantaged and, thus, is more likely to experience a multitude of risk factors for substance use and mental illness discussed in Chapter 2. Cuyahoga County residents who require publicly funded services are, therefore, more likely to suffer from mental illness and/or substance use problems, and thus require the services funded by the ADAMHS Board.

### **5.2 Health insurance coverage**

The estimates of health insurance coverage shown in Table 5.2.1 come from the U.S. Census's 2018 American Community Survey (ACS).

The table shows that Ohio had relatively high insurance coverage<sup>178</sup> in 2018, with 93.5% of Ohio residents covered by health insurance. In 2018, Ohio ranked the 19th highest in health insurance coverage out of 50 states and the District of Columbia.

The health insurance coverage among Cuyahoga County residents was also high; the percentage of uninsured in Cuyahoga County (5.7%) was almost half of the national percentage (8.9%) of uninsured. In Cuyahoga County in 2018 overall, there were an estimated 70,248 residents who were uninsured, and almost half of them (N=29,959) reside in Cleveland.

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<sup>178</sup> "Health insurance coverage in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) refers to comprehensive coverage during the calendar year for the civilian, noninstitutionalized population." (<https://www.census.gov/content/dam/Census/library/publications/2019/demo/p60-267.pdf>).

Table 5.2.1 Estimated prevalence and number of civilian noninstitutionalized population without insurance 2018<sup>179</sup>

	U.S.	Ohio	Hamilton County	Franklin County	<b>Cuyahoga County</b>	Cleveland
Total uninsured	28,565,542 (8.9%)	743,905 (6.5%)	42,154 (5.2%)	104,599 (8.0%)	<b>70,248 (5.7%)</b>	29,959 (7.9%)
Uninsured age 19 and under	4,055,370 (5.2%)	132,567 (4.8%)	4,869 (2.5%)	14,724 (4.5%)	<b>9,714 (3.6%)</b>	3,886 (4.4%)
Uninsured age 19+	24,510,172 (10.0%)	611,338 (7.0%)	37,285 (6.1%)	89,875 (9.2%)	<b>60,534 (6.3%)</b>	26,073 (9.0%)

Source: American Community Survey, 2018

According to the ACS 2018, many socio-demographic characteristics are related to having no health insurance coverage. Nationally, people age 19 to 34 are least likely to be insured; 5.5% among age 0 to 18, 14.3% among age 19 to 25, 13.9% among age 26 to 34, 12.5% among age 35 to 44, 9.3% among age 45 to 64, and 0.9% among 65 and older are uninsured.

Males (90.1%) are less likely than females (94.0%) to have health insurance coverage. Non-Hispanic whites (94.0%) are more likely than non-Hispanic Black or African Americans (89.9%) or Hispanic or Latino (82.1%) to have health insurance coverage. People in married-couple families (93.0%) are more likely than people in the single-family household (87.0%) to have health insurance coverage. People with disabilities (94.5%) are more likely than people without a disability (90.6%) to have health insurance coverage.

As noted, socioeconomic status is related to the likelihood one has health insurance coverage. The higher the education level, overall, the greater the likelihood of having health insurance coverage, where 78.6% of people with less than a high school degree, 87.9% of people with a high school degree, 91.5% of people with some college degree, and 96.1% of people with a bachelor's degree or higher are insured.

Moreover, people who are employed (88.9%) are more likely than people who are unemployed (72.7%) to have health insurance coverage. Likewise, the higher the household income, overall, the greater the likelihood of having health insurance coverage, where 86.8% of people making under \$25,000 or between \$25,000-\$49,999, 89.3% of people making \$50,000-\$74,999, 92.2% of people making \$75,000-\$99,999, and 95.5% of people making \$100,000 or over have health insurance coverage.

<sup>179</sup> The American Community Survey (ACS) 2018 conducted by the U.S. Census.

The people who are more likely to be without health insurance are, therefore, single minority males who are age 19 to 34 with a low education level and low income. This is also the group that is most at risk for substance use and a myriad of other social problems like homelessness, crime, and victimization. As discussed in Chapter 2, this at-risk population requires a multitude of publicly funded services not just for mental health and substance use. However, this is also the group least likely to seek help, as discussed in the previous chapter.

### 5.3 Type of public health insurance coverage

The high health insurance coverage in Cuyahoga County is explained by the high percentage of residents in the county covered by Medicare (19.6%) or Medicaid means-tested public coverage (25.0%) (see Table 5.3.1), compared to the national percentages of coverage of these two public insurances (17.6% and 20.5%, respectively).

An estimated 240,794 residents are covered by Medicare alone or in combination, and additional 306,958 residents are covered by Medicaid/means-tested public coverage alone or in combination in Cuyahoga County. Consistent with the high rate of poverty in Cleveland, a high percentage, almost half (44.4% or estimated 167,907), of residents in Cleveland are covered by Medicaid means-tested public coverage.

Table 5.3.1 Estimated prevalence and number of types of public health insurance among the total civilian noninstitutionalized population, 2018<sup>180</sup>

	U.S.	Ohio	Hamilton County	Franklin County	Cuyahoga County	Cleveland
Total civilian noninstitutionalized population	322,249,485	11,517,226	808,492	1,302,626	<b>1,228,956</b>	377,767
Medicare coverage	56,868,977 (17.6%)	2,171,835 (18.9%)	135,172 (16.7%)	176,709 (13.6%)	<b>240,794 (19.6%)</b>	66,164 (17.5%)
Medicaid/means-tested public coverage	65,965,404 (20.5%)	2,392,027 (20.8%)	162,724 (20.1%)	282,528 (21.7%)	<b>306,958 (25.0%)</b>	167,907 (44.4%)
VA health care coverage	7,476,954 (2.3%)	273,600 (2.4%)	13,762 (1.7%)	20,164 (1.5%)	<b>24,811 (2.0%)</b>	8,068 (2.1%)

Source: American Community Survey, 2018

<sup>180</sup> The American Community Survey (ACS) 2018 conducted by the U.S. Census. Note: Numbers presented here are for “alone or in combination” for each.

According to the U.S. Census (2018), many socio-demographic characteristics are related to public health insurance coverage among people age 15 to 64, including:

- Married people (12.6%) are less likely to be on public health insurance than widowed (34.9%), divorced (25.3%), separated (29.7%), or never married (21.6%).
- The higher the education level, the lower the likelihood of being on public health insurance, where people with a bachelor's degree (8.5%) and graduate or professional degree (5.7%) are less likely to be on public health insurance than people without a high school diploma (36.9%), some college (24.4%), or associate degree (15.8%).
- The lower the household income, the higher the likelihood for being on public health insurance, which ranged from 71.2% for household income less than \$25,000 to 12.4% for household income \$150,000 or more.
- The greater the income-to-poverty ratio, the less likely to be on public health insurance, which ranged from 66.8% for those below 100% of poverty to 18.5% for those at or above 400% of poverty.
- African Americans (41.2%) are more likely than whites (33.2%), Asians (26.1%), or Hispanics (36.5%) to be on public health insurance.
- Non-citizens (26.2%) are less likely than native-born (34.9%) or naturalized citizens (36.4%) to be on public health insurance.

The people who are more likely to be on public health insurance are, therefore, similar to the people who are more likely to be without health insurance: likely to be minority and single with a low education level and low income and more likely to be in poverty. This is the group that is, once again, most at risk for substance use and a myriad of other social problems and risk factors discussed in Chapter 2 and require multitude of services offered publicly.

#### **5.4 Disability and health insurance coverage**

Almost 1 in 10 people between the age of 15 to 64 with a disability are uninsured (9.6%), but the percentage of uninsured among people without a disability was similar (11.5%) to the one for people with a disability.

More than half of all people age 15 to 64 with a disability are covered by public health insurance (53.9%). In comparison, the percentage of public insurance coverage among people without a disability is much lower (16.0%).

## **5.5 Medicare and the gap in mental health and substance use treatment coverage**

According to medicare.gov (an official U.S. government website for Medicare), Medicare Plan B helps pay for the following outpatient mental health services<sup>181</sup>:

- One depression screening per year. The screening must be done in a primary care doctor's office or primary care clinic that can provide follow-up treatment and referrals.
- Individual and group psychotherapy with doctors or certain other licensed professionals allowed by the state where you get the services.
- Family counseling, if the main purpose is to help with your treatment.
- Testing to find out if you're getting the services you need and if your current treatment is helping you.
- Psychiatric evaluation.
- Medication management.
- Certain prescription drugs that aren't usually "self-administered" (drugs you would normally take on your own), like some injections.
- Diagnostic tests.
- Partial hospitalization if you meet certain requirements and your doctor certifies that you would otherwise need inpatient treatment.
- A one-time "Welcome to Medicare" preventive visit. This visit includes a review of your possible risk factors for depression.
- A yearly "Wellness" visit. Talk to your doctor or other health care provider about changes in your mental health. They can evaluate your changes year to year.

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<sup>181</sup> All verbatim from the website: <https://www.medicare.gov/coverage/mental-health-care-outpatient>

Medicare Plan B also covers outpatient mental health services for substance use treatment. However, there appears to be a gap in the coverage of treatment for mental illness and substance use for those with Medicare alone, including:

- Everything else that is not covered for mental health and substance use treatment.
- Limited number of providers that can be reimbursed under Medicare.
- The co-pay of 20%. Seniors with private supplemental insurance may have assistance with the co-pay and for services outside what is listed here.
- Medicare Plan B covers occupational therapy (if it's part of the treatment) and individual patient training and education about the medical condition during partial hospitalization, but it does not cover meals, transportation, support groups, or testing or training for job skills<sup>182</sup>.

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<sup>182</sup> <https://www.medicare.gov/coverage/mental-health-care-partial-hospitalization>

## 5.6 Estimates of people who are uninsured or on public health insurance by age

Tables 5.6.1 to 5.6.3 show types of insurance for different age groups. The prevalence of different types of insurance among people age 18 and under is shown in Table 5.6.1, among people age 19 to 64 is shown in Table 5.6.2, and among people age 65 and older is shown in Table 5.6.3.

### 5.6.1 Youth age 18 and under

As Table 5.6.1 shows, almost half of youth age 18 and under in Cuyahoga County (42.6%) are covered by Medicaid/means-tested public coverage alone or in combination. This percentage is slightly higher than the national percentage for Medicaid/means-tested public coverage (38.5%). An even higher, 71.4% of youth 18 and under are covered by Medicaid/means-tested public coverage in Cleveland.

About 3.6% of youth age 18 and under are uninsured, which amounted to an estimated 9,714 youth age 18 and under in Cuyahoga County. All told an estimated 127,206 youth age 18 and under in Cuyahoga County qualify for publicly funded services.

Table 5.6.1 Estimated prevalence and number of types of public health insurance among the civilian noninstitutionalized population age 18 and under, 2018<sup>183</sup>

Population age 18 and under	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
	77,817,110	2,748,263	324,666	197,532	<b>273,280</b>	87,895
Uninsured	4,055,370 (5.2%)	132,567 (4.8%)	14,724 (4.5%)	4,869 (2.5%)	<b>9,714 (3.6%)</b>	3,886 (4.4%)
Employer-based health insurance	40,647,558 (52.2%)	1,577,269 (57.4%)	167,985 (51.7%)	117,052 (59.3%)	<b>139,627 (51.1%)</b>	20,342 (23.1%)
Direct-purchase health insurance	5,475,273 (7.0%)	141,148 (5.1%)	15,820 (4.9%)	8,525 (4.3%)	<b>15,549 (5.7%)</b>	4,064 (4.6%)
Tricare/military health insurance	1,905,867 (2.4%)	35,764 (1.3%)	3,228 (1.0%)	2,092 (1.1%)	<b>1,790 (0.7%)</b>	220 (0.3%)
Medicare coverage	463,981 (0.6%)	12,059 (0.4%)	2,657 (0.8%)	1,540 (0.8%)	<b>1,051 (0.4%)</b>	646 (0.7%)
Medicaid/means-tested public coverage	29,984,776 (38.5%)	1,007,683 (36.7%)	134,799 (41.5%)	72,080 (36.5%)	<b>116,384 (42.6%)</b>	62,781 (71.4%)
VA health care coverage	104,573 (0.1%)	2,849 (0.1%)	0 (0.0%)	182 (0.1%)	<b>57 (0.0%)</b>	57 (0.1%)

Source: American Community Survey, 2018

<sup>183</sup> The American Community Survey (ACS) 2018 conducted by the U.S. Census. Note: Numbers presented here are for “alone or in combination” for each.

## 5.6.2 Adults age 19 to 64

Table 5.6.2 shows that the prevalence of Medicaid/means-tested public coverage among people age 19 to 64 in Cuyahoga County (21.7%) is also higher than the national prevalence (14.9%) but much lower than among the people age 18 and under. The prevalence of Medicaid/means-tested public coverage among people age 19 to 64 in Cleveland (38.2%) is more than twice that of national prevalence (14.9%).

About 8.1% of people age 19 to 64 in Cuyahoga County are uninsured. An estimated 258,059 people age 19 to 64 in Cuyahoga County require publicly funded services.

Table 5.6.2 Estimated prevalence and number of types of public health insurance among the civilian noninstitutionalized population age 19 to 64, 2018<sup>7</sup>

Population age 19 to 64	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
	193,295,029	6,840,199	823,534	491,462	<b>736,996</b>	236,568
Uninsured	24,109,214 (12.5%)	602,244 (8.8%)	88,226 (10.7%)	36,724 (7.5%)	<b>59,832 (8.1%)</b>	25,753 (10.9%)
Employer-based health insurance	120,775,178 (62.5%)	4,507,504 (65.9%)	543,158 (66.0%)	333,020 (67.8%)	<b>459,799 (62.4%)</b>	104,872 (44.3%)
Direct-purchase health insurance	21,655,735 (11.2%)	597,110 (8.7%)	67,931 (8.2%)	47,397 (9.6%)	<b>65,645 (8.9%)</b>	15,880 (6.7%)
Tricare/military health insurance	3,911,217 (2.0%)	75,600 (1.1%)	6,279 (0.8%)	3,879 (0.8%)	<b>5,230 (0.7%)</b>	1,393 (0.6%)
Medicare coverage	7,387,084 (3.8%)	299,071 (4.4%)	28,863 (3.5%)	19,594 (4.0%)	<b>29,286 (4.0%)</b>	14,204 (6.0%)
Medicaid/means-tested public coverage	28,877,719 (14.9%)	1,191,786 (17.4%)	132,283 (16.1%)	77,879 (15.8%)	<b>159,601 (21.7%)</b>	90,434 (38.2%)
VA health care coverage	3,315,560 (1.7%)	112,341 (1.6%)	10,167 (1.2%)	6,961 (1.4%)	<b>9,840 (1.3%)</b>	4,017 (1.7%)

Source: American Community Survey, 2018



### 5.6.3 Seniors age 65 and older

Table 5.6.3 shows that almost all the people age 65 and older in Cuyahoga County (96.2%) are covered by Medicare alone or in combination, and only 0.3% of people age 65 and older in Cuyahoga County are uninsured.

An estimated 257,046 people age 65 and older in Cuyahoga County require publicly funded services.

Table 5.6.3 Percentage distributions of type of public health insurance among the civilian noninstitutionalized population age 65 and older, 2018<sup>7 184</sup>

Population age 65 and over	U.S.	Ohio	Franklin County	Hamilton County	<b>Cuyahoga County</b>	Cleveland
	51,137,346	1,928,764	154,426	119,498	<b>218,680</b>	53,304
Uninsured	400,958 (0.8%)	9,094 (0.5%)	1,649 (1.1%)	561 (0.5%)	<b>702 (0.3%)</b>	320 (0.6%)
Employer-based health insurance	16,316,890 (31.9%)	669,070 (34.7%)	52,439 (34.0%)	41,463 (34.7%)	<b>75,722 (34.6%)</b>	13,595 (25.5%)
Direct-purchase health insurance	16,060,163 (31.4%)	639,613 (33.2%)	47,904 (31.0%)	36,652 (30.7%)	<b>63,851 (29.2%)</b>	11,078 (20.8%)
Tricare/military health insurance	2,949,596 (5.8%)	69,894 (3.6%)	7,123 (4.6%)	3,143 (2.6%)	<b>3,040 (1.4%)</b>	897 (1.7%)
Medicare coverage	49,017,912 (95.9%)	1,860,705 (96.5%)	145,189 (94.0%)	114,038 (95.4%)	<b>210,457 (96.2%)</b>	51,314 (96.3%)
Medicaid/means-tested public coverage	7,102,909 (13.9%)	192,558 (10.0%)	15,446 (10.0%)	12,765 (10.7%)	<b>30,973 (14.2%)</b>	14,692 (27.6%)
VA health care coverage	4,056,821 (7.9%)	158,410 (8.2%)	9,997 (6.5%)	6,619 (5.5%)	<b>14,914 (6.8%)</b>	3,994 (7.5%)

Source: American Community Survey, 2018

<sup>184</sup> People over 65 who are in poverty and/or may have a disability are dually eligible for more than one type of public insurance. They tend to have a lot of service needs overall but also specifically in the mental health and substance abuse arenas.

## 5.7 Underinsurance

Unfortunately, the U.S. Census does not collect information on underinsurance, which is one of the four types of health insurance coverage, along with excessive, full, and adequate insurance coverage.

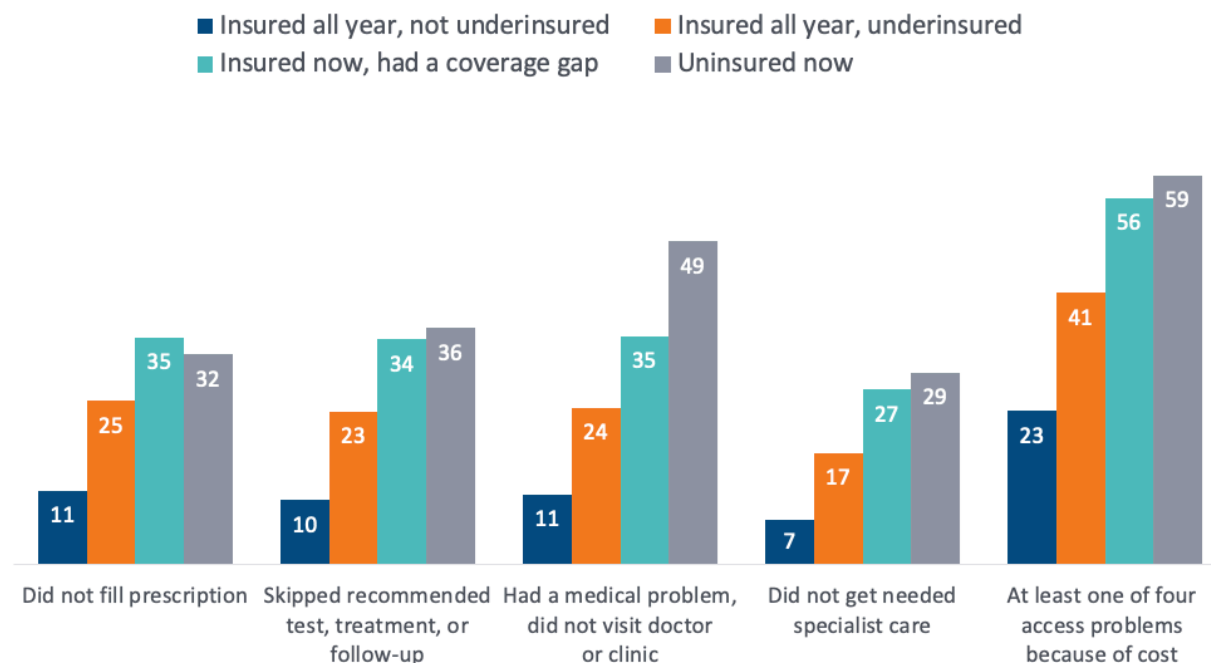
According to Bashshur, Smith, and Stiles (1993, p, 202), underinsurance is characterized by one or more of the following conditions: “(a) too few services are covered, or the coverage is inadequate; (b) amounts of out-of-pocket expenditures, with or without regard to family income, are excessive; and (c) insurance is perceived to be inadequate.”

Though the research and policy attention are lacking on underinsured compared to uninsured, Bashshur, Smith, and Stiles (1993) argue that the problems faced by the underinsured are essentially the same (see Figure 5.7.1), though maybe at different degrees, as those faced by the uninsured. That is, both the underinsured and the uninsured face economic hardship resulting from health care expenses as well as health problems from unmet needs for healthcare.

Figure 5.7.1 Problems faced by uninsured, underinsured, and gap in coverage of health insurance<sup>185</sup>

### Inadequate Coverage Is Associated with More Cost-Related Problems Getting Needed Care

Percent of adults ages 19–64 who had any of four access problems in past year because of cost\*



Notes: \* Includes any of the following because of cost: did not fill a prescription; skipped recommended medical test, treatment, or follow-up; had a medical problem but did not visit doctor or clinic; did not see a specialist when needed. "Underinsured" refers to adults who were insured all year but experienced one of the following: out-of-pocket costs, excluding premiums, equaled 10% or more of income; out-of-pocket costs, excluding premiums, equaled 5% or more of income if low-income (<200% of poverty); or deductibles equaled 5% or more of income. "Insured now, had a coverage gap" refers to adults who were insured at the time of the survey but were uninsured at any point in the 12 months prior to the survey field date. "Uninsured now" refers to adults who reported being uninsured at the time of the survey.

Data: Commonwealth Fund Biennial Health Insurance Survey (2018).



Source: Sara R. Collins, Herman K. Bhuwal, and Michelle M. Doty, *Health Insurance Coverage Eight Years After the ACA: Fewer Uninsured Americans and Shorter Coverage Gaps, But More Underinsured — Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2018* (Commonwealth Fund, Feb. 2019).

Source: Commonwealth Fund

<sup>185</sup> <https://www.commonwealthfund.org/publications/issue-briefs/2019/feb/health-insurance-coverage-eight-years-after-aca>

As they were writing during the Clinton administration, Bashshur, Smith, and Stiles (1993) predicted an increase in the numbers of underinsured if the administration's universal healthcare plan were adopted.

A study by the Commonwealth Fund, unfortunately, found the prediction to be true after the adoption of the Affordable Care Act (ACA) in 2010 (see Figure 5.7.2).

As the figure shows, though the proportion of uninsured decreased over time from 17% in 2003 to 12% in 2018, the proportion of underinsured increased during the same period from 9% to 23%. The percentage point increase of underinsured (14% points) was greater than the percentage point decrease of uninsured (5% points) during the period.

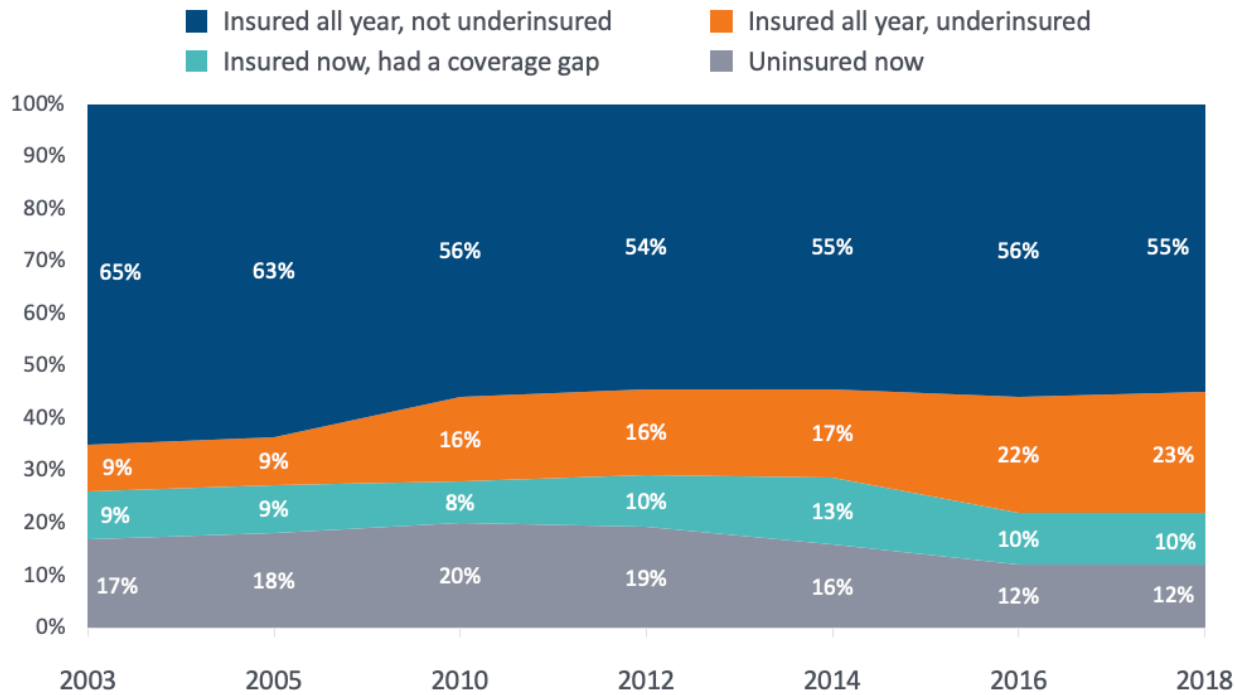
The Commonwealth Fund study estimates 12.4% of adults between the age 19 to 64 in the U.S. are underinsured.

Based on this national prevalence of underinsured, there are an estimated 91,388 underinsured adults in Cuyahoga County.

Figure 5.7.2 Change in the proportion of uninsured and underinsured in the U.S. since the ACA<sup>186</sup>

## Since the ACA, Fewer Adults Are Uninsured, but More Are Underinsured

Percent of adults ages 19–64



Notes: “Underinsured” refers to adults who were insured all year but experienced one of the following: out-of-pocket costs, excluding premiums, equaled 10% or more of income; out-of-pocket costs, excluding premiums, equaled 5% or more of income if low-income (<200% of poverty); or deductibles equaled 5% or more of income. “Insured now, had a coverage gap” refers to adults who were insured at the time of the survey but were uninsured at any point in the 12 months prior to the survey field date. “Uninsured now” refers to adults who reported being uninsured at the time of the survey.

Data: Commonwealth Fund Biennial Health Insurance Surveys (2003, 2005, 2010, 2012, 2014, 2016, 2018).



Source: Sara R. Collins, Herman K. Bhuwal, and Michelle M. Doty, *Health Insurance Coverage Eight Years After the ACA: Fewer Uninsured Americans and Shorter Coverage Gaps, But More Underinsured — Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2018* (Commonwealth Fund, Feb. 2019).

Source: Commonwealth Fund

<sup>186</sup> <https://www.commonwealthfund.org/publications/issue-briefs/2019/feb/health-insurance-coverage-eight-years-after-aca>

## **5.8 Estimates of County population who need publicly funded services for mental health and substance use by age**

There are two possible ways to estimate county residents who need publicly funded services using the NSDUH 2018 and the ACS 2018.

First, the 2018 NSDUH data include information on the type of insurance. Using the national estimated prevalence of different insurance coverage and the population estimate based on the ACS 2018, estimates of the number of county residents who need publicly funded services can be calculated.

This way is more accurate in terms of the population size for different age groups but less accurate in terms of the prevalence of different types of insurance coverage. As tables 5.6.1 -5.6.3 show, the prevalence of Medicaid coverage in Cuyahoga County is higher than the national prevalence of Medicaid coverage while the prevalence of uninsured is lower in Cuyahoga County than the national prevalence of uninsured.

The second way is to use the estimates of insurance coverage from the ACS 2018 (as shown in Tables 5.6.1-5.6.3). This way is more accurate in terms of the prevalence of different types of insurance coverage but less accurate in terms of the population size for different age groups since the ACS 2018 provides insurance information for limited number of age groups. While the NSDUH 2018 includes a sample of respondents age 12 and older, there is no way to exclude the people age 11 and under using the ACS 2018, for instance.

In this section, therefore, we report on the estimates based on the first way using only the NSDUH 2018, while being mindful that the prevalence of insurance coverage in Cuyahoga County varies from the national prevalence of insurance coverage.

In addition to the prevalence of illicit drug and alcohol use and mental illness among people age 12 and older, the NSDUH also collects information on health insurance coverage (see Table 5.8.1). Estimates of people who need publicly funded mental health and substance use treatment were, thus, calculated using the NSDUH 2018.

Table 5.8.1 Prevalence of different types of insurance coverage among respondents in the NSDUH 2018<sup>187</sup>

Groups of insurance coverage used in the analysis	Type of insurance	National prevalence
No insurance	No insurance	9.6%
Private insurance <sup>188</sup>	Private insurance alone	54.6%
	Private insurance and Medicare	4.8%
	Private insurance and Medicaid	2.2%
	Private insurance and Tricare, CHAMPUS, VA, or Military health	1.2%
Public insurance	Medicare alone	2.0%
	Medicare and Tricare, CHAMPUS, VA, or Military health	0.5%
	Medicaid alone	19.5%
	Medicaid and Tricare, CHAMPUS, VA, or Military health	0.2%
	Tricare, CHAMPUS, VA, or Military health alone	2.0%
	Medicare and Medicaid	1.4%
Other <sup>189</sup>	Other insurance	2.5%

Source: National Survey of Drug Use and Health, 2018

Many people have more than one insurance coverage. For instance, a veteran over age 65 who is still employed could have private insurance, Medicare, while also eligible for VA insurance. The VA pays on a sliding scale, so if the veteran is high-income, they may be eligible for VA insurance, but the VA will not pay for them. Rather, they would use Medicare and the veteran would have to pick up the rest.

People who have multiple insurance coverages are combined into groups to make the analyses simpler and less cluttering. Anyone who has private insurance in combination with public insurance are included in the private insurance category. Those with Medicare and Tricare, CHAMPUS, VA, or Military health are included in the Medicare category. Likewise, those with Medicaid and Tricare, CHAMPUS, VA, or Military health are included in the Medicaid category. Those with all three public insurances are included in the Medicare and Medicaid category.

<sup>187</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

<sup>188</sup> According to the NSDUH 2018, "Private health insurance can be obtained through work, such as through an employer, union, or professional association, by paying premiums directly to a health insurance company, or by purchasing a plan through the Health Insurance Marketplace. It includes coverage by a health maintenance organization or HMO, fee for service plans, and single service plans." <https://datafiles.samhsa.gov/study-dataset/national-survey-drug-use-and-health-2018-nsduh-2018-ds0001-nid18758>

<sup>189</sup> The NSDUH did not collect information on what "other" health insurance respondents have.

### 5.8.1 Estimates of the county residents who need publicly funded services for substance use by age

Table 5.8.2 shows for each age group examined in this report (12 to 17, 18 to 64, and 65 and older), the prevalence and an estimated population size based on the NSDUH 2018 and the ACS 2018 for each type of insurance (private, uninsured, public, and other). The category “other” is not included in the rest of the analyses in the report since the group is small, and the focus of the report is on the people who are uninsured or on public insurance.

Table 5.8.2 Estimated population by age group for each type of insurance coverage in Cuyahoga County based on the NSDUH 2018 and the ACS 2018<sup>190</sup>

Age group	12 to 17		18 to 64		65+	
Population of Cuyahoga County	Prevalence based on the NSDUH 2018	Estimated population based on the ACS 2018	Prevalence based on the NSDUH 2018	Estimated population based on the ACS 2018	Prevalence based on the NSDUH 2018	Estimated population based on the ACS 2018
	100%	88,330	100%	929,544	100%	225,983
Private	56.0%	49,465	63.9%	593,979	65.5%	148,019
Uninsured	3.5%	3,092	12.6%	117,123	0.5%	1,130
Medicaid	35.7%	31,534	16.0%	148,727	0.5%	1,130
Other public	3.1%	2,738	4.6%	42,759	33.2%	75,026
Other	1.7%	1,502	3.0%	27,886	0.3%	678

Source: National Survey of Drug Use and Health, 2018 and American Community Survey 2018

Table 5.8.3 shows the prevalence based on the NSDUH 2018 and the estimated number of each of the three age groups (12 to 17, 16 to 64, and 65 and older) in Cuyahoga County who had substance dependence or abuse, calculated for each type of insurance based on the ACS 2018.

<sup>190</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>



### **5.8.1.1 Youth age 12 to 17**

#### ***Alcohol use disorder***

There does not appear to be any pattern of relationship between type of insurance and alcohol use disorder (AUD) among youth.

About 2.0% of uninsured youth and 1.6% of youth on Medicaid had AUD in the past year and 0.2% of uninsured youth and 0.3% of youth on Medicaid received treatment for current or past AUD.

An estimated 56 uninsured youth and 410 youth on Medicaid in Cuyahoga County, therefore, had AUD in the past year but did not get treatment for it.

#### ***Illicit drug use disorder***

Uninsured youth and youth on Medicaid are more likely than youth on private insurance to have illicit drug use disorder, but they are not more likely than youth with private insurance to receive treatment for it. Thus, uninsured youth and youth on Medicaid are more likely than youth on private insurance to need treatment for this disorder.

About 4.7% of uninsured youth and 3.5% of youth on Medicaid had illicit drug use disorder in the past year, and 0.4% of uninsured youth and 0.5% of youth on Medicaid received treatment for the current or past illicit drug use disorder.

An estimated 133 uninsured youth and 946 youth on Medicaid in Cuyahoga County, therefore, had illicit drug use disorder in the past year but did not receive treatment for it.

#### ***Both alcohol and illicit drug use disorders***

Uninsured youth are more likely than youth on private insurance or Medicaid to have both alcohol and illicit drug use disorders, but uninsured youth are least likely than other youth to receive treatment for both disorders. Thus, uninsured youth are more likely than youth on private insurance or Medicaid to need treatment for both alcohol and illicit drug use disorders.

About 1.1% of uninsured youth and 0.8% of youth on Medicaid had both alcohol and illicit drug use disorders, 0% of uninsured youth and 0.2% of youth on Medicaid received treatment for both alcohol and illicit drug use disorders.

An estimated 34 uninsured youth and 189 youth on Medicaid in Cuyahoga County, therefore, had both alcohol and illicit drug use disorders in the past year but did not receive treatment for them.

#### **5.7.1.2 Adults age 18 to 64**

##### ***Alcohol use disorder***

Uninsured adults and adults on Medicaid are more likely than adults on private insurance to have AUD and receive treatment for this disorder. Adults on Medicaid are less likely and uninsured adults are equally likely as adults on private insurance to need treatment for AUD.

About 8.9% of uninsured adults and 7.8% of adults on Medicaid had AUD in the past year, and 1.5% of uninsured adults and 1.8% of adults on Medicaid received treatment for the current or past AUD.

An estimated 8,667 uninsured adults and 1,177 adults on Medicaid in Cuyahoga County had AUD in the past year but did not receive treatment for it.

##### ***Illicit drug use disorder***

Uninsured adults and adults on Medicaid are more likely than adults on private insurance to have illicit drug use disorder, receive treatment for the disorder, and need treatment for the disorder.

About 6.4% of uninsured adults and 7.5% of adults on Medicaid had illicit drug use disorder in the past year, and 1.5% of uninsured adults and 2.5% of adults on Medicaid received treatment for the current or past illicit drug use disorder.

An estimated 5,739 uninsured adults and 7,436 adults on Medicaid in Cuyahoga County, therefore, had illicit drug use disorder in the past year but did not receive treatment for it.

##### ***Both alcohol and illicit drug use disorders***

Once again, uninsured adults and adults on Medicaid are more likely than adults on private insurance to have both alcohol and illicit drug use disorders, receive treatment for both disorders, and need treatment for both alcohol and illicit drug use disorders.

About 2.1% of uninsured adults and 2.4% of adults on Medicaid had both alcohol and illicit drug use disorders in the past year, and 0.7% of uninsured adults and 0.8% of adults on Medicaid received treatment for both alcohol and illicit drug use disorders.

An estimated 1,640 uninsured adults and 2,380 adults on Medicaid in Cuyahoga County, therefore, had both alcohol and illicit drug use disorders in the past year but did not receive treatment for it.

### **5.8.1.3 Seniors age 65 and older**

This section only focuses on AUD since such a small number of seniors who are uninsured or on Medicaid have illicit drug use disorder.

#### ***Alcohol use disorder***

Uninsured seniors are more likely than seniors on private insurance to have AUD, receive treatment for AUD, and need treatment for AUD.

About 9.5% of uninsured seniors had AUD, but none of them received treatment for current or past AUD.

An estimated 107 seniors in Cuyahoga County, therefore, had AUD in the past year but did not receive any treatment for it.

Table 5.8.3 Estimated prevalence and number of past year alcohol, illicit drug, and alcohol and illicit drug use disorder and receipt of treatment by age and type of insurance among people age 12 and older in Cuyahoga County, 2018<sup>191</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Estimated population age 12 and older in Cuyahoga County		Age 12 to 17				Age 18 to 64				Age 65 and older			
		P	U	M	O	P	U	M	O	P	U	M	O
		49,465	3,092	31,534	2,738	593,979	117,123	148,727	42,759	148,019	1,130	1,130	75,026
Alcohol	Dependence or abuse	989 (2.0%)	62 (2.0%)	505 (1.6%)	60 (2.2%)	46,330 (7.8%)	10,424 (8.9%)	11,601 (7.8%)	2,908 (6.8%)	2,664 (1.8%)	107 (9.5%)	0 (0.0%)	1,275 (1.7%)
	Received treatment	99 (0.2%)	6 (0.2%)	95 (0.3%)	5 (0.2%)	2,970 (0.5%)	1,757 (1.5%)	10,424 (1.8%)	770 (1.8%)	296 (0.2%)	0 (0.0%)	0 (0.0%)	300 (0.4%)
	Need treatment	890 (1.8%)	56 (1.8%)	410 (1.3%)	55 (2.0%)	43,360 (7.3%)	8,667 (7.4%)	1,177 (0.8%)	2,138 (5.0%)	2,368 (1.6%)	107 (9.5%)	0 (0.0%)	975 (1.3%)
Illicit drug	Dependence or abuse	1,385 (2.8%)	145 (4.7%)	1,104 (3.5%)	66 (2.4%)	20,789 (3.5%)	7,496 (6.4%)	11,155 (7.5%)	2,095 (4.9%)	444 (0.3%)	0 (0.0%)	107 (5.0%)	375 (0.5%)
	Received treatment	198 (0.4%)	12 (0.4%)	158 (0.5%)	14 (0.5%)	2,970 (0.5%)	1,757 (1.5%)	3,718 (2.5%)	855 (2.0%)	148 (0.1%)	0 (0.0%)	0 (0.0%)	150 (0.2%)
	Need treatment	1,187 (2.4%)	133 (4.3%)	946 (3.0%)	52 (1.9%)	17,819 (3.0%)	5,739 (4.9%)	7,436 (5.0%)	1,240 (2.9%)	296 (0.2%)	0 (0.0%)	107 (0.0%)	225 (0.3%)
Alcohol and illicit drug	Dependence or abuse	396 (0.8%)	34 (1.1%)	252 (0.8%)	19 (0.7%)	7,722 (1.3%)	2,460 (2.1%)	3,569 (2.4%)	556 (1.3%)	0 (0.0%)	1 (0.1%)	0 (0.0%)	150 (0.2%)
	Received treatment	49 (0.1%)	0 (0.0%)	63 (0.2%)	5 (0.2%)	1,188 (0.2%)	820 (0.7%)	1,190 (0.8%)	214 (0.5%)	148 (0.1%)	0 (0.0%)	0 (0.0%)	150 (0.2%)
	Need treatment	346 (0.7%)	34 (1.1%)	189 (0.6%)	14 (0.5%)	6,534 (1.1%)	1,640 (1.4%)	2,380 (1.6%)	342 (0.8%)	148 (0.1%)	1 (0.1%)	0 (0.0%)	0 (0.0%)

Source: National Survey of Drug Use and Health, 2018 and American Community Survey 2018

<sup>191</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

## **5.9 Estimates of people in Cuyahoga County who need publicly funded services for mental health by age**

### **5.9.1 Estimates of mental illness among adults**

Because the NSDUH 2018 collected information on mental illness only from adults age 18 and older, this section includes the results for adults only separately for age 18 to 64 and 65 and older.

Table 5.9.1 shows the prevalence based on the NSDUH 2018, and the estimated number of adults age 18 to 64 in Cuyahoga County who had mental illness was calculated for each type of insurance based on the ACS 2018.

#### **5.9.1.1 Adults age 18 to 64**

Uninsured adults and adults on Medicaid are more likely than adults on private insurance to experience all kinds of mental illness. However, uninsured adults are least likely to get any mental health treatment, and thus experienced the greatest need for mental health treatment. Adults are equally likely to perceive the unmet need for mental health treatment regardless of the type of insurance.

About 15.1% of adults on private insurance, 18.2% of uninsured adults, 22.5% of adults on Medicaid, and 20.0% of adults on other public insurance experienced serious psychological distress; about 5.6% of adults on private insurance, 6.6% of uninsured adults, 8.6% of adults on Medicaid, and 9.5% of adults on other public insurance experienced serious mental illness; and about 22.0% of adults on private insurance, 22.7% of uninsured adults, 28.7% of adults on Medicaid, and 28.9% of adults on other public insurance experienced any mental illness in the past year.

About 16.9% of adults on private insurance, 9.4% of uninsured adults, 18.4% of adults on Medicaid, and 23.4% of adults on other public insurance received any mental health treatment in the past year.

This leaves an estimated 15,577 uninsured adults (13.3%), 15,319 adults on Medicaid (10.3%), and 2,352 adults on other public insurance (5.5%) who had any mental illness in the past year but did not receive treatment for it.

Additionally, an estimated 9,370 uninsured adults and 16,063 adults on Medicaid perceived an unmet need for mental health treatment in the past year.

Table 5.9.1 Estimated prevalence and number of past year mental illness and receipt of treatment by age and type of insurance among people age 18 and older in Cuyahoga County, 2018<sup>192</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Population age 18 to 64 in Cuyahoga County	Adults age 18-64				Seniors age 65 and older			
	P	U	M	O	P	U	M	O
	593,979	117,123	148,727	42,759	148,019	1,130	1,130	75,026
Serious psychological distress	89,691 (15.1%)	21,316 (18.2%)	33,464 (22.5%)	8,552 (20.0%)	4,441 (3.0%)	162 (14.3%)	113 (10.0%)	4,727 (6.3%)
Seriously thought about killing self	35,639 (6.0%)	8,901 (7.6%)	13,237 (8.9%)	3,720 (8.7%)	1,924 (1.3%)	54 (4.8%)	0 (0.0%)	2,026 (2.7%)
Made plans to kill self	10,692 (1.8%)	3,162 (2.7%)	5,057 (3.4%)	1,326 (3.1%)	592 (0.4%)	0 (0.0%)	0 (0.0%)	450 (0.6%)
Attempted to kill self	4,158 (0.7%)	1,523 (1.3%)	2,975 (2.0%)	599 (1.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	300 (0.4%)
Serious mental illness	33,263 (5.6%)	7,730 (6.6%)	12,791 (8.6%)	4,062 (9.5%)	1,628 (1.1%)	0 (0.0%)	57 (5.0%)	1,726 (2.3%)
Any mental illness	130,675 (22.0%)	26,587 (22.7%)	42,685 (28.7%)	12,357 (28.9%)	14,950 (10.1%)	376 (33.3%)	283 (25.0%)	11,254 (15.0%)
Inpatient mental health treatment	4,158 (0.7%)	1,523 (1.3%)	4,016 (2.7%)	1,112 (2.6%)	592 (0.4%)	0 (0.0%)	0 (0.0%)	825 (1.1%)
Outpatient mental health treatment	55,834 (9.4%)	5,388 (4.6%)	15,021 (10.1%)	5,644 (13.2%)	7,845 (5.3%)	0 (0.0%)	113 (10.0%)	3,751 (5.0%)
Prescription medicine for mental health treatment	78,999 (13.3%)	8,550 (7.3%)	21,863 (14.7%)	8,338 (19.5%)	15,986 (10.8%)	0 (0.0%)	170 (15.0%)	6,827 (9.1%)
Any mental health treatment	100,382 (16.9%)	11,010 (9.4%)	27,366 (18.4%)	10,006 (23.4%)	18,502 (12.5%)	0 (0.0%)	170 (15.0%)	8,328 (11.1%)
Need for mental health treatment	30,293 (5.1%)	15,577 (13.3%)	15,319 (10.3%)	2,352 (5.5%)	3,552 (2.4%)	376 (33.3%)	113 (10.0%)	2,926 (3.9%)
Perceived unmet need for mental health treatment	49,300 (8.3%)	9,370 (8.0%)	16,063 (10.8%)	3,848 (9.0%)	1,924 (1.3%)	0 (0.0%)	57 (5.0%)	2,926 (1.7%)

Source: National Survey of Drug Use and Health, 2018 and American Community Survey 2018

<sup>192</sup> <https://www.samhsa.gov/data/report/2018-nsduh-annual-national-report>

## **5.9.2 Estimates of reasons for not receiving service among adults**

Table 5.9.2 shows past year reasons for not receiving mental health treatment by type of insurance among adults age 18 to 24 and seniors age 65 and older.

The question was asked among those who indicated that they perceived unmet need for mental health treatment (see Table 5.9.1), and respondents were asked to indicate as many reasons that apply to them for not receiving treatment.

Because the number of uninsured seniors and seniors on Medicaid is small, especially the ones who perceived the unmet need for mental health treatment, this section focuses on adults age 18 to 64.

The most popularly cited reasons were similar across different types of health insurance. For all insurance types, “[I] could not afford the cost” was most popularly cited reason for the perceived unmet need for mental health treatment. Other popularly cited reasons were “[I] did not know where to go,” “[I] thought [I] could handle the problem without,” and “[I] didn’t have time.”

Table 5.9.2 Past year reasons for not receiving mental health treatment by type of insurance among age 18 and older and estimates for Cuyahoga County, 2018<sup>193</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Population of Cuyahoga County who perceived unmet need among age 18 and older	Adults age 18 to 64				Seniors age 65 and older			
	P	U	M	O	P	U	M	O
	49,300	9,370	16,063	3,848	1,924	0	57	1,275
Could not afford the cost	38.2%	67.8%	31.9%	25.8%	21.2%	0.0%	0.0%	2.6%
Fear of neighbor's negative opinion	15.5%	11.3%	10.8%	12.9%	6.1%	0.0%	0.0%	0.0%
Fear of negative effect on job	11.4%	10.6%	10.0%	10.2%	3.0%	0.0%	4.3%	3.5%
Insurance does not cover at all	7.0%	12.1%	6.7%	9.5%	15.2%	0.0%	0.0%	21.7%
Insurance does not pay enough	17.4%	8.2%	7.9%	9.5%	18.2%	0.0%	0.0%	17.4%
Did not know where to go	25.9%	27.8%	25.0%	21.6%	18.2%	0.0%	0.0%	26.1%
Confidentiality concerns	9.6%	9.5%	12.6%	11.0%	9.1%	0.0%	0.0%	4.3%
Fear of being committed	15.1%	17.0%	14.1%	16.3%	12.1%	0.0%	0.0%	8.7%
Did not think treatment needed	13.6%	8.5%	10.3%	10.6%	15.2%	0.0%	0.0%	8.7%
Thought could handle the problem without	31.3%	19.6%	24.4%	26.5%	39.4%	0.0%	0.0%	13.0%
Did not think treatment would help	13.0%	9.0%	11.4%	12.1%	18.2%	0.0%	0.0%	8.7%
Didn't have time	23.7%	14.7%	19.0%	14.8%	12.1%	0.0%	0.0%	0.0%
Didn't want others to find out	12.2%	6.4%	7.5%	8.0%	3.0%	0.0%	0.0%	0.0%
No transportations or inconvenient	4.1%	7.2%	7.0%	7.6%	3.0%	0.0%	0.0%	0.0%
Some other reason	8.5%	6.7%	12.7%	12.5%	15.2%	0.0%	0.0%	8.7%

Source: National Survey of Drug Use and Health, 2018 and American Community Survey 2018

<sup>193</sup> <https://datafiles.samhsa.gov/study/national-survey-drug-use-and-health-nsduh-2018-nid18757>



### **5.9.3 Estimates of major depressive episode and receipt of treatment among adults**

Table 5.9.3 shows the estimated prevalence and number of major depressive episode (MDE) and receipt of treatment for depressive feelings in the past year among adults in Cuyahoga County by type of insurance for adults age 18 to 64 and seniors age 65 and older.

The need for treatment for MDE (the shaded row in the table) was calculated by subtracting the estimated number of people who received any treatment for depressive feelings from the estimated number of people who experienced a MDE.

#### **Adults age 18 to 64**

Adults on Medicaid and other public insurance are more likely than adults on private insurance or uninsured adults to experience a MDE.

About 8.8% of adults on private insurance, 9.8% of uninsured adults, 12.6% of adults on Medicaid, and 12.4% of adults on other public insurance experienced a MDE in the past year.

About 8.3% of adults on private insurance, 5.2% of uninsured adults, 10.5% of adults on Medicaid, and 13.3% of adults on other public insurance received any treatment for depressive feelings in the past year.

Overall, an estimated 5,388 uninsured adults (4.6%) and 3,123 adults on Medicaid (2.1%) in Cuyahoga County experienced a MDE in the past year but did not receive any treatment for it.

## **Seniors age 65 and older**

Uninsured seniors and seniors who are on Medicaid are more likely than seniors on private insurance to experience a MDE, seniors on Medicaid are more likely than seniors on private insurance or uninsured to receive treatment for depressive feelings, and uninsured seniors are the only one who do not receive treatment for depressive feelings.

About 2.6% of adults on private insurance, 14.3% of uninsured adults, 10.0% of adults on Medicaid, and 3.7% of adults on other public insurance experienced a MDE in the past year.

About 4.2% of adults on private insurance, 4.8% of uninsured adults, 10.0% of adults on Medicaid, and 4.7% of adults on other public insurance received any treatment for depressive feelings in the past year.

Overall, an estimated 108 uninsured adults (9.5%) in Cuyahoga County experienced a MDE in the past year but did not receive any treatment for it.

Table 5.9.3 Estimated prevalence and number of MDE and the receipt of treatment for depressive feelings in the past year among adults age 18 and older in Cuyahoga County by type of insurance and age, 2018<sup>194</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Population age 18+ in Cuyahoga County	Adults age 18 to 64				Seniors age 65 and older			
	P	U	M	O	P	U	M	O
	593,979	117,123	148,727	42,759	148,019	1,130	1,130	75,026
MDE	52,270 (8.8%)	11,478 (9.8%)	18,740 (12.6%)	5,302 (12.4%)	3,848 (2.6%)	162 (14.3%)	113 (10.0%)	2,776 (3.7%)
Saw/talk to MD or professional about depressive feelings	42,766 (7.2%)	5,388 (4.6%)	14,278 (9.6%)	4,960 (11.6%)	5,033 (3.4%)	54 (4.8%)	113 (10.0%)	2,926 (3.9%)
Used RX medication for depressive feelings	35,045 (5.9%)	4,099 (3.5%)	10,857 (7.3%)	4,532 (10.6%)	5,033 (3.4%)	54 (4.8%)	0 (0.0%)	2,851 (3.8%)
Received treatment/counseling or RX medication for depressive feelings	49,300 (8.3%)	6,090 (5.2%)	15,616 (10.5%)	5,687 (13.3%)	6,217 (4.2%)	54 (4.8%)	113 (10.0%)	3,526 (4.7%)
Saw/talk to general practice/family MD about depressive feelings	22,571 (3.8%)	2,342 (2.0%)	7,436 (5.0%)	2,694 (6.3%)	3,256 (2.2%)	0 (0.0%)	0 (0.0%)	1,951 (2.6%)
Saw/talk to psychologist about depressive feelings	13,068 (2.2%)	1,523 (1.3%)	3,867 (2.6%)	1,454 (3.4%)	1,184 (0.8%)	54 (4.8%)	0 (0.0%)	600 (0.8%)
Saw/talk to psychiatrist about depressing feelings	14,849 (2.5%)	1,523 (1.3%)	4,611 (3.1%)	2,010 (4.7%)	1,480 (1.0%)	0 (0.0%)	0 (0.0%)	825 (1.1%)
Any treatment	49,300 (8.3%)	6,090 (5.2%)	15,616 (10.5%)	5,687 (13.3%)	6,217 (4.2%)	54 (4.8%)	113 (10.0%)	3,526 (4.7%)
Need treatment for MDE	2,970 (0.5%)	5,388 (4.6%)	3,123 (2.1%)	0 (0.0%)	0 (0.0%)	108 (9.5%)	0 (0.0%)	0 (0.0%)

Source: National Survey of Drug Use and Health, 2018

<sup>194</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

#### **5.9.4 Estimates of dual diagnosis for mental illness and substance use among adults**

Table 5.9.4 shows the estimated prevalence and number of dual diagnosis for mental illness and substance use disorder (SUD) in the past year among adults age 18 and older in Cuyahoga County by type of insurance for adults age 18 to 64 and seniors age 65 and older.

The prevalence of dual diagnosis for mental illness and SUD is higher among adults who are uninsured or on Medicaid compared to adults who are on private insurance.

About 1.6% of adults on private insurance, 2.4% of uninsured and 2.9% of adults on Medicaid, and 2.5% of adults on other public insurance had a serious mental illness and SUD; 4.6% of adults on private insurance, 6.5% of uninsured adults, 7.5% of adults on Medicaid, and 6.1% adults on other public insurance had any mental illness and SUD; and 3.0% of adults on private insurance, 4.1% of uninsured adults, 4.6% of adults on Medicaid, and 3.6% of adults on other public insurance had mild (low) mental illness or moderate mental illness and SUD in the past year.

The prevalence amounted to an estimated 2,811 uninsured adults and 4,313 adults on Medicaid with serious mental illness, 7,613 uninsured adults and 11,155 adults on Medicaid with any mental illness, and 4,802 uninsured adults and 6,841 adults on Medicaid with mild (low) in Cuyahoga County with mental illness or moderate mental illness along with SUD in the past year.

Table 5.9.4 Estimated prevalence and number of dual diagnosis in the past year among adults age 18 and older in Cuyahoga County by type of insurance and age, 2018<sup>195</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Estimated population age 18 to 64 in Cuyahoga County	Adults age 18 to 64				Seniors age 65 and older			
	P	U	M	O	P	U	M	O
	593,979	117,123	148,727	42,759	148,019	1,130	1,130	75,026
Serious mental illness and drug/alcohol dependence or abuse	9,504 (1.6%)	2,811 (2.4%)	4,313 (2.9%)	1,070 (2.5%)	148 (0.1%)	0 (0.0%)	0 (0.0%)	300 (0.4%)
Any mental illness and drug/alcohol dependence or abuse	27,323 (4.6%)	7,613 (6.5%)	11,155 (7.5%)	2,608 (6.1%)	592 (0.4%)	107 (9.5%)	57 (5.0%)	600 (0.8%)
Mild (low) mental illness or moderate mental illness and drug/alcohol dependence or abuse	17,819 (3.0%)	4,802 (4.1%)	6,841 (4.6%)	1,539 (3.6%)	444 (0.3%)	107 (9.5%)	57 (5.0%)	300 (0.4%)

Source: National Survey of Drug Use and Health, 2018

<sup>195</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### **5.9.5 Estimates of depression and receipt of treatment among youth**

Table 5.9.5 shows the estimated past year prevalence and number of major depressive episode (MDE) and receipt of treatment for depressive feelings among youth age 12 to 17 in Cuyahoga County by type of insurance.

The need for treatment for depressive feelings among youth (the shaded row in the table) was calculated by subtracting the estimated number of youth who received any kind of treatment for depressive feelings from the estimated number of youth who experienced a MDE.

Overall, there is no difference in the prevalence of MDE by type of insurance. However, youth who are on private insurance or Medicaid are more likely than uninsured youth to receive treatment for depressive feelings. Thus, uninsured youth are more likely than youth who are on private insurance or Medicaid to need treatment for MDE.

An estimated 7,172 youth on private insurance, 470 uninsured youth, 4,131 youth on Medicaid, and 449 youth on other private insurance age 12 to 17 in Cuyahoga County experienced a MDE in the past year.

About 7.8% of youth on private insurance, 3.9% of uninsured youth, 7.6% of youth on Medicaid, and 7.6% of youth on other public insurance received any mental health treatment for depressive feelings in the past year.

Overall, an estimated 349 uninsured youth (11.3%) and 1,734 youth on Medicaid (5.5%) age 12 to 17 in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.

Table 5.9.5 Estimated past year prevalence and number of MDE and the receipt of treatment for depressive feelings among youth age 12 to 17 in Cuyahoga County by type of insurance, 2018<sup>196</sup>. Note: *P* refers to private insurance, *U* refers to uninsured, *M* refers to Medicaid, and *O* refers to other public insurance

Estimated population age 12 to 17 in Cuyahoga County	P	U	M	O
	49,465	3,092	31,534	2,738
Major depressive episode	7,172 (14.5%)	470 (15.2%)	4,131 (13.1%)	449 (16.4%)
Major depressive episode and alcohol dependence or abuse	396 (0.8%)	12 (0.4%)	252 (0.8%)	25 (0.9%)
Major depressive episode and illegal drug dependence or abuse	544 (1.1%)	46 (1.5%)	410 (1.3%)	38 (1.4%)
Major depressive episode and substance dependence or abuse	791 (1.6%)	53 (1.7%)	505 (1.6%)	52 (1.9%)
Saw/talk to MD or professional about depressive feelings	3,611 (7.3%)	108 (3.5%)	2,207 (7.0%)	246 (9.0%)
Used RX medication for depressive feelings	1,929 (3.9%)	80 (2.6%)	1,041 (3.3%)	118 (4.3%)
Saw/talk to general practice/family MD about depressive feelings	940 (1.9%)	12 (0.4%)	378 (1.2%)	52 (1.9%)
Saw/talk to other MD about depressive feelings	148 (0.3%)	0 (0.0%)	63 (0.2%)	5 (0.2%)
Saw/talk to psychologist about depressive feelings	1,434 (2.9%)	22 (0.7%)	694 (2.2%)	77 (2.8%)
Saw/talk to psychiatrist about depressive feelings	890 (1.8%)	22 (0.7%)	410 (1.3%)	82 (3.0%)
Saw health professional or RX med for depressive feelings	3,710 (7.5%)	121 (3.9%)	2,334 (7.4%)	241 (8.8%)
Saw health professional only for depressive feelings	1,781 (3.6%)	40 (1.3%)	1,293 (4.1%)	126 (4.6%)
Received RX medication but not health professional for depressive feelings	297 (0.6%)	12 (0.4%)	221 (0.7%)	8 (0.3%)
Saw health professional and RX medication for depressive feelings	1,632 (3.3%)	68 (2.2%)	788 (2.5%)	104 (3.8%)
Received any treatment	3,858 (7.8%)	121 (3.9%)	2,397 (7.6%)	255 (9.3%)
Need treatment for MDE	3,314 (6.7%)	349 (11.3%)	1,734 (5.5%)	194 (7.1%)

Source: National Survey of Drug Use and Health, 2018

<sup>196</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

### 5.9.6 Estimates of dual diagnosis among youth

Table 5.9.6 shows the estimated past year prevalence and number of dual diagnosis for major depressive episode (MDE) and alcohol use disorder (AUD), illicit drug use disorder, or substance use disorder (SUD) among youth age 12 to 17 in Cuyahoga County by type of insurance.

In Cuyahoga County, an estimated 12 uninsured youth (0.4%) and 252 youth on Medicaid (0.8%) age 12 to 17 experienced MDE and AUD, 46 uninsured youth (1.5%) and 410 youth on Medicaid (1.3%) age 12 to 17 experienced MDE and illicit drug use disorder, and 53 uninsured youth (1.7%) and 505 youth on Medicaid (1.6%) experienced MDE and SUD in the past year.

Table 5.9.6 Estimated past year prevalence and number of dual diagnosis for major depressive episode (MDE) and alcohol use disorder (AUD), illicit drug use disorder, or substance use disorder (SUD) among youth age 12 to 17 in Cuyahoga County by type of insurance, 2018<sup>197</sup>. *Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance*

Estimated population age 12 to 17 in Cuyahoga County	P	U	M	O
	49,465	3,092	31,534	2,738
Major depressive episode and alcohol dependence or abuse	396 (0.8%)	12 (0.4%)	252 (0.8%)	25 (0.9%)
Major depressive episode and illegal drug dependence or abuse	544 (1.1%)	46 (1.5%)	410 (1.3%)	38 (1.4%)
Major depressive episode and substance dependence or abuse	791 (1.6%)	53 (1.7%)	505 (1.6%)	52 (1.9%)

Source: National Survey of Drug Use and Health, 2018

<sup>197</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>



### **5.9.7 Estimates of mental health treatment among youth**

Table 5.9.7 shows the estimated past year prevalence and number of the receipt of different types of mental health and substance use treatment among youth age 12 to 17 in Cuyahoga County by type of insurance.

Because the NSDUH 2018 did not include mental illness information of youth, their mental health treatment needs cannot be calculated.

Overall, uninsured youth are less likely than youth with a health insurance to receive treatment for mental illness. An estimated 25.2% of youth on private insurance, 18.7% of uninsured youth, 27.4% of youth on Medicaid, and 25.4% of youth on other public insurance received mental health services or substance treatment at a specialty facility.

Table 5.9.7 Estimated past year prevalence and number of the receipt of mental health treatment among youth age 12 to 17 in Cuyahoga County by type of insurance, 2018<sup>198</sup>. Note: P refers to private insurance, U refers to uninsured, M refers to Medicaid, and O refers to other public insurance

Estimated population age 12 to 17 in Cuyahoga County	P	U	M	O
		49,465	3,092	31,534
Specialty inpatient mental health services	1,138 (2.3%)	93 (3.0%)	1,324 (4.2%)	112 (4.1%)
Specialty outpatient mental health series	7,964 (16.1%)	275 (8.9%)	4,383 (13.9%)	397 (14.5%)
Specialty mental health services	8,557 (17.3%)	303 (9.8%)	5,140 (16.3%)	427 (15.6%)
Non-specialty mental health services	7,568 (15.3%)	402 (13.0%)	6,023 (19.1%)	441 (16.1%)
Education mental health services	6,529 (13.2%)	356 (11.5%)	5,203 (16.5%)	383 (14.0%)
Specialty mental health along with services from education, general medicine (family doctor/pediatrician), or foster care or therapeutic foster care settings for problems with behavior	3,710 (7.5%)	133 (4.3%)	2,460 (7.8%)	172 (6.3%)
Mental health services or substance treatment at specialty facility	12,465 (25.2%)	578 (18.7%)	8,766 (27.8%)	698 (25.5%)
Mental health service but not substance treatment at specialty facility	12,317 (24.9%)	557 (18.0%)	8,640 (27.4%)	695 (25.4%)
Substance treatment at specialty facility but not mental health service	49 (0.1%)	0 (0.0%)	63 (0.2%)	5 (0.2%)
Both mental health service and substance treatment at specialty facility	99 (0.2%)	12 (0.4%)	63 (0.2%)	0 (0.0%)

Source: National Survey of Drug Use and Health, 2018

<sup>198</sup> <https://www.samhsa.gov/data/report/2018-nsduh-detailed-tables>

## 5.10 Conclusion

This chapter reviewed the estimates of people who need publicly funded mental health and substance use treatment services in Cuyahoga County. Like Chapter 4, the estimates for this chapter were calculated using the NSDUH 2018 and the population estimate Cuyahoga County based on the ACS 2018. The need for treatment for substance use and mental illness by age group for uninsured and those on Medicaid are shown in Table 5.10.1.

Table 5.10.1 Summary of the need for substance use and mental health treatment by age group for uninsured and on Medicaid, 2018. *Note: U refers to uninsured and M refers to Medicaid*

Estimated population age 12 and older in Cuyahoga County	Youth age 12 to 17		Adults age 18 to 64		Seniors age 65 and older	
	U	M	U	M	U	M
	3,092	31,534	117,123	148,727	1,130	1,130
Need for treatment for alcohol use disorder	56 (1.8%)	410 (1.3%)	8,667 (7.4%)	1,177 (0.8%)	107 (9.5%)	0 (0.0%)
Need for treatment for illicit drug use disorder	133 (4.3%)	946 (3.0%)	5,739 (4.9%)	7,436 (5.0%)	0 (0.0%)	107 (0.0%)
Need for treatment for alcohol and illicit drug use disorder	34 (1.1%)	189 (0.6%)	1,640 (1.4%)	2,380 (1.6%)	1 (0.1%)	0 (0.0%)
Need for mental health treatment	- -	- -	15,577 (13.3%)	15,319 (10.3%)	376 (33.3%)	113 (10.0%)
Perceived unmet need for mental health treatment	- -	- -	9,370 (8.0%)	16,063 (10.8%)	0 (0.0%)	57 (5.0%)
Need treatment for major depressive episode (MDE)	349 (11.3%)	1,734 (5.5%)	5,388 (4.6%)	3,123 (2.1%)	107 (9.5%)	0 (0.0%)

Source: National Survey of Drug Use and Health, 2018

- The percentage of uninsured in Cuyahoga County (5.7%) was almost half of the national percentage (8.9%) of uninsured. In Cuyahoga County in 2018 overall, there were an estimated 70,248 residents who were uninsured.
- The high health insurance coverage in Cuyahoga County is explained by the high percentage of residents in the county covered by Medicare (19.6%) or Medicaid means-tested public coverage (25.0%).

## **Medicare and Medicaid coverage**

- An estimated 240,794 residents are covered by Medicare alone or in combination, and an additional 306,958 residents are covered by Medicaid/means-tested public coverage alone or in combination in Cuyahoga County.
- Almost half (44.4%) or an estimated 167,907 residents in Cleveland are covered by Medicaid means-tested public coverage.
- Almost half of youth age 18 and under in Cuyahoga County (42.6%) are covered by Medicaid/means-tested public coverage alone or in combination and 3.6% of youth age 18 and under are uninsured, which amounted to an estimated 9,714 youth age 18 and under in Cuyahoga County. An estimated 127,206 youth age 18 and under in Cuyahoga County qualify for publicly funded services.
- About 21.7% of people age 19 to 64 in Cuyahoga County are on Medicaid/means-tested public coverage and 8.1% of people age 19 to 64 in Cuyahoga County are uninsured. An estimated 258,059 people age 19 to 64 in Cuyahoga County require publicly funded services.
- Almost all of the people age 65 and older in Cuyahoga County (96.2%) are covered by Medicare alone or in combination, and only 0.3% of people age 65 and older in Cuyahoga County are uninsured. An estimated 257,046 people age 65 and older in Cuyahoga County require publicly funded services.

## **Underinsured and uninsured populations and substance use treatment**

- The Commonwealth Fund study estimates 12.4% of adults between the age 19 to 64 in the U.S. are underinsured. There are an estimated 91,388 underinsured adults in Cuyahoga County.

Based on our analyses, we estimate that:

- 56 uninsured youth and 410 youth on Medicaid in Cuyahoga County had alcohol use disorder (AUD) in the past year but did not get treatment for it. An estimated 133 uninsured youth and 946 youth on Medicaid in Cuyahoga County had illicit drug use disorder in the past year but did not get treatment for it. An estimated 34 uninsured youth and 189 youth on Medicaid in Cuyahoga County had both

alcohol and illicit drug use disorders in the past year but did not receive treatment for it.

- 8,667 uninsured adults and 1,177 adults on Medicaid in Cuyahoga County had AUD in the past year but did not receive treatment for it. An estimated 5,739 uninsured adults and 7,436 adults on Medicaid in Cuyahoga County had illicit drug use disorder in the past year but did not receive treatment for it. An estimated 1,640 uninsured adults and 2,380 adults on Medicaid in Cuyahoga County had both alcohol and illicit drug use disorders in the past year but did not receive treatment for it.
- 10,892 (9.3%) of seniors in Cuyahoga County had AUD in the past year but did not receive any treatment for it.

### **Underinsured and Uninsured Populations and Mental Health Treatment**

Based on our analyses, we estimate that:

- 5,388 uninsured adults (4.6%) and 3,123 adults on Medicaid (2.1%) in Cuyahoga County experienced a major depressive disorder (MDE) in the past year but did not receive any treatment for it.
- 107 uninsured seniors (9.5%) in Cuyahoga County experienced a MDE in the past year but did not receive any treatment for it.
- 2,811 uninsured adults and 4,313 adults on Medicaid with serious mental illness, 7,613 uninsured adults and 11,155 adults on Medicaid with any mental illness, and 4,802 uninsured adults and 6,841 adults on Medicaid with mild (low) in Cuyahoga County with mental illness or moderate mental illness along with SUD in the past year.
- 349 uninsured youth (11.3%) and 1,734 youth on Medicaid (5.5%) age 12 to 17 in Cuyahoga County experienced a MDE but did not receive any treatment for it in the past year.
- 12 uninsured youth (0.4%) and 252 youth on Medicaid (0.8%) age 12 to 17 experienced MDE and AUD, 46 uninsured youth (1.5%) and 410 youth on Medicaid (1.3%) age 12 to 17 experienced MDE and illicit drug use disorder, and 53 uninsured youth (1.7%) and 505 youth on Medicaid (1.6%) experienced MDE and SUD in the past year.

- Uninsured youth are less likely than youth with health insurance to receive treatment for mental illness. An estimated 25.2% of youth on private insurance, 18.7% of uninsured youth, 27.4% of youth on Medicaid, and 25.4% of youth on other public insurance received mental health services or substance treatment at specialty facility.

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## **CHAPTER 6: UTILIZATION DATA-COMPARISON OF LOCAL PREVALENCE RATES, LOCAL UNMET NEEDS, LOCAL PUBLICLY FUNDED SERVICE NEEDS, AND LOCAL SERVICE RATES**

### **6.1 Introduction**

This chapter examines utilization data by comparing the local prevalence of mental illness and substance use (Chapter 3), local unmet needs (Chapter 4), and local publicly funded service needs (Chapter 5) calculated based on the National Survey on Drug Use and Health (NSDUH) 2018 and local service rates calculated based on the data on publicly funded clients provided by the ADAMHS Board of Cuyahoga County.

It should be noted that, as Mechanic and Bilder (2004) point out, more services for mental health and substance use treatment does not necessarily equate directly with improved care. What is also important is the quality of care and outcomes. There is fundamentally a limitation of assessing need through amount of services received (utilization data).

This chapter also reviews the National Survey on Substance use treatment Services (N-SSATS), Treatment Episode Data Set: Admissions (TEDS-A), and Treatment Episode Data Set: Discharges (TEDS-D). These are national and state data on substance use and mental illness treatment facilities and characteristics of patients at these facilities.

### **6.2. Publicly funded clients in Cuyahoga County**

The ADAMHS Board's 2020 provider network guide includes 69 agencies that received funding from the ADAMHS Board of Cuyahoga County in 2020 (see the list of agencies in the endnote at the end of this chapter).

Three interactive maps of the location of these agencies were created (Figures 6.2.1, 6.2.2, and 6.2.3). These maps illustrate the geographic distribution of agencies providing substance use and mental health treatment services in Cuyahoga County.

These maps can assist in understanding the difference in access to care based on the location of agency and where people who need publicly funded services reside.

Figure 6.2.1 Map of provider agencies funded by ADAMHS Board of Cuyahoga County by type of service: substance use, mental health, or dual services, 2020 (Click [here](#) for the interactive map online)

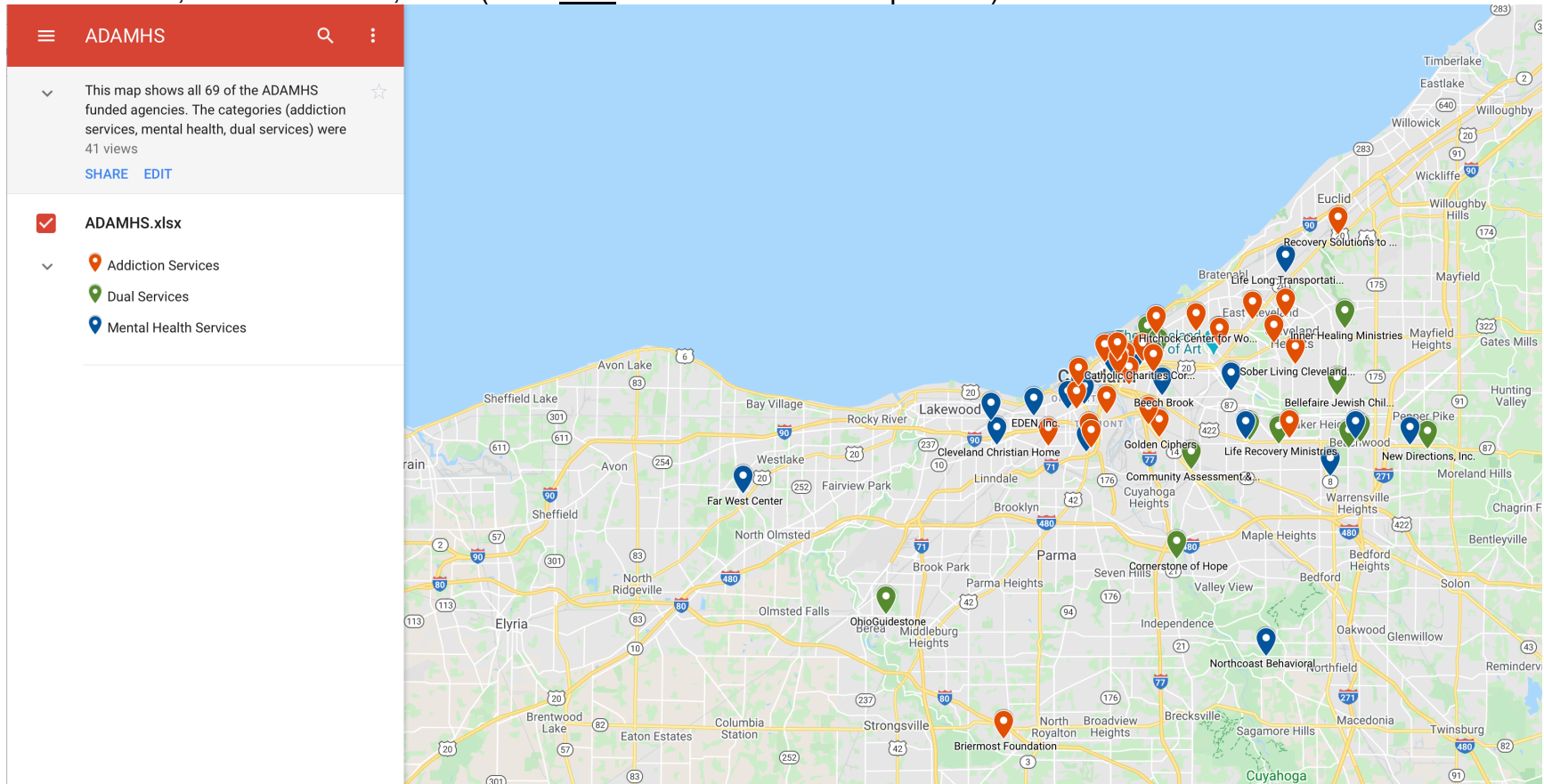


Figure 6.2.2 Map of all agencies in Cuyahoga County that provide services for substance use and mental health, 2018 (click here)

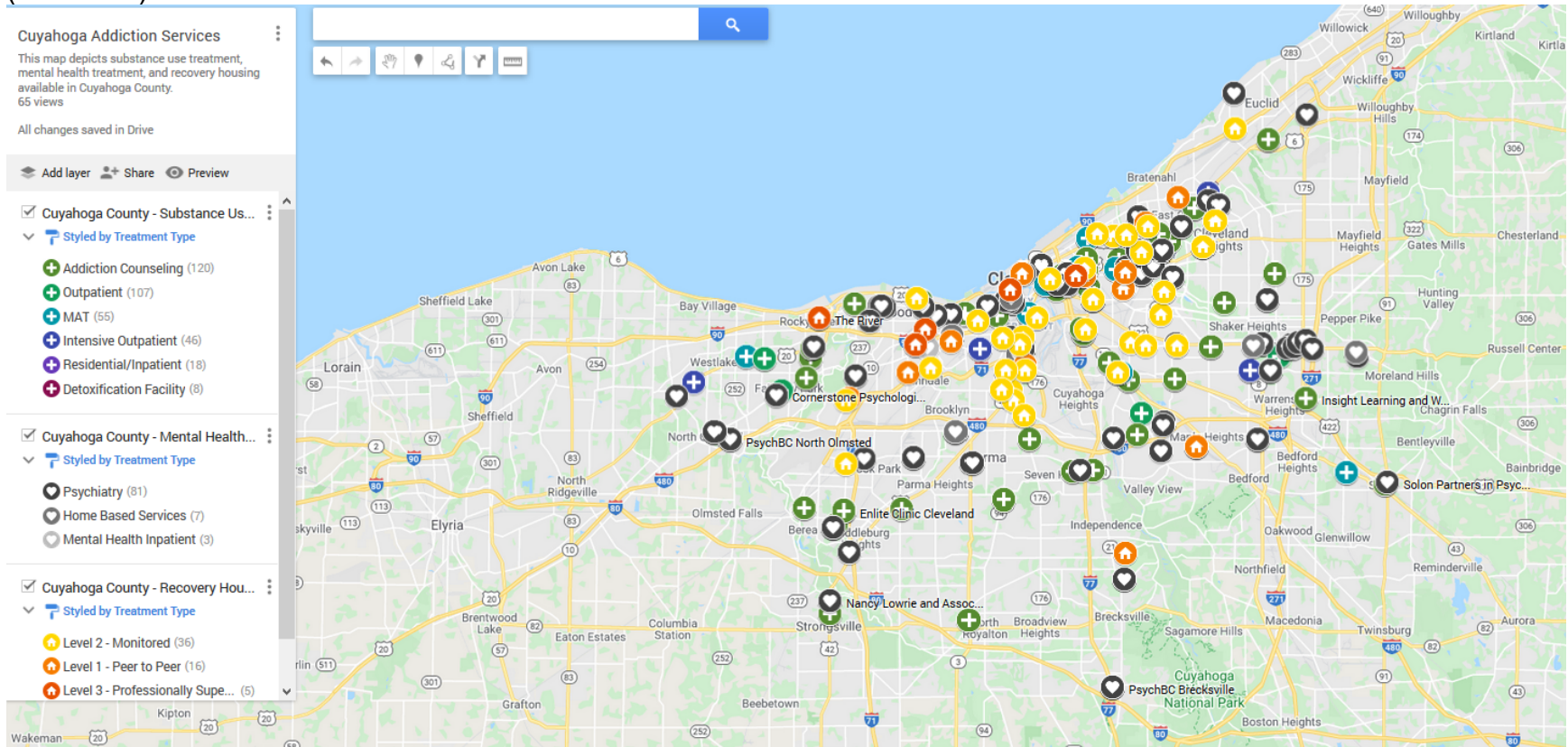
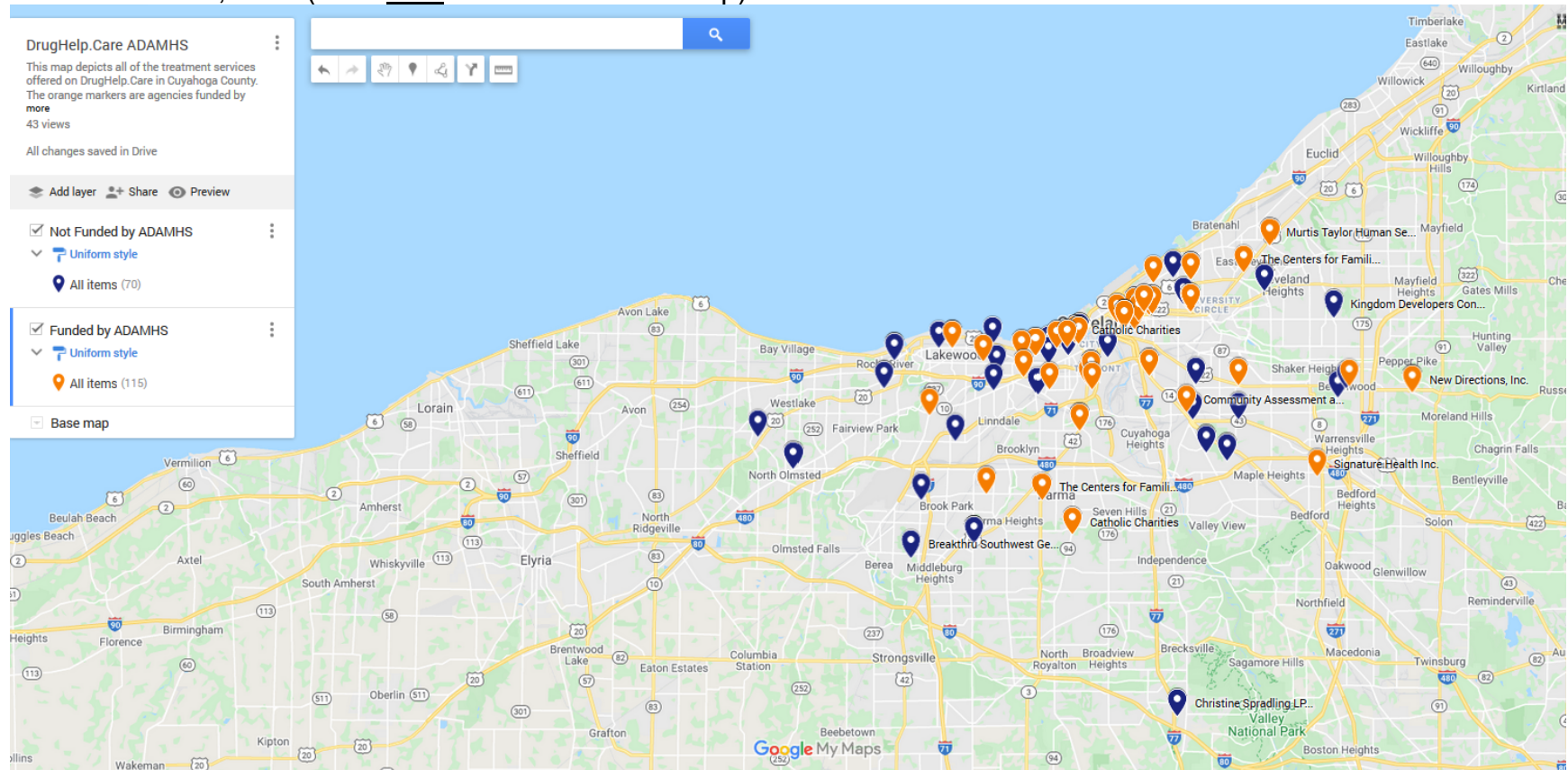


Figure 6.2.3 Map of all agencies registered on [drughelp.care](http://drughelp.care) with color coding showing which ones are funded by ADAMHS Board, 2018 (Click [here](#) for the interactive map)



This section examines utilization data by comparing the local prevalence of mental illness and substance use, local unmet needs, local publicly funded service needs, and local service prevalence calculated using the data on publicly funded clients provided by the ADAMHS Board of Cuyahoga County.

After the ADAMHS Board deleted personal, identifying information, we received publicly funded client data from both the Board's GOSH system and the Medicaid MITS system for Cuyahoga County residents. The GOSH is an online system used to manage client enrollments and processes locally funded claim payments for mental health and substance use treatment services.

The combined dataset captures a majority of publicly funded behavioral health services rendered to clients served by agencies and organizations in Cuyahoga County. However, individuals with Medicaid coverage who have not previously received an ADAMHS Board funded service do not appear in the dataset.

The dataset contains the information on 243 unique agency ID numbers (hereafter called agencies, though some agencies appear to have more than one ID number) for a total of 421,938 services rendered to a total of 13,458 individual ID numbers (hereafter called clients) from January 1, 2019 through December 31, 2019.

Agencies varied in the number of services offered to these clients in the dataset from 1 service to 78,101 services (with a mean of 38.91 services per agency).



## 6.2.1 Sociodemographic characteristics of publicly funded clients

The basic demographic breakdowns of the publicly funded clients are shown in Table 6.2.1. Missing indicates clients without information for the demographic characteristic.

Of clients whose gender is known, males (55.8%) were more likely than females (44.2%) to be the publicly funded clients. Of clients whose race and ethnicity are known, blacks or African Americans represented the largest proportion of the publicly funded clients (50.9%), a much higher proportion compared to the proportion of this group in the general population of Cuyahoga County (see Chapter 1). Hispanics constituted 6.5% of the publicly funded clients. Though the marital status information is missing on many of the publicly funded clients, of the clients whose marital status is known, single/never married clients constituted the largest group of the clients (81.3%), while “married/living together as married” clients (6.5%) constituted a relatively small proportion of the clients.

Table 6.2.1 Frequency and percentage distributions of 2019 publicly funded clients

Total unique individual ID #s of publicly funded clients		Frequencies	Percentage distribution
		13,458	100.0%
Gender	Males	7,451	55.8%
	Females	5,892	44.2%
	Unknown	115	-
Race	White	6,085	47.1%
	Black/African American	6,587	50.9%
	Asian	60	0.5%
	Other single race	8	0.1%
	Two or more races	190	1.5%
	Unknown	217	-
	Missing	253	-
Ethnicity	Hispanic	466	6.5%
	Not Hispanic	6,659	93.5%
	Unknown	199	-
	Missing	6,135	-
Marital status	Married/living together as married	464	6.5%
	Divorced	585	8.2%
	Separated	128	1.8%
	Single/never married	5,783	81.3%
	Widowed	152	2.1%
	Unknown	211	-
	Missing	6,135	-

Table 6.2.2 and 6.2.3 show the frequency and percentage distributions of age groups of the publicly funded clients. The age of the clients ranged from 0 to 95 years old. The mean age of clients was 35.2 (with a standard deviation of 19.2 years). The age is distributed in a curvilinear fashion with the peak age around 31 to 40 with decrease in the frequency as age moves away from the peak age in both directions.

Table 6.2.2 Frequency and percentage distributions of age of 2019 publicly funded clients

Age group	Frequencies	Percentage distribution
0 to 10	1,630	12.1%
11 to 20	1,881	14.0%
21 to 30	2,256	16.8%
31 to 40	2,397	17.8%
41 to 50	1,820	13.5%
51 to 60	1,974	14.7%
61 to 70	1,226	9.1%
71 to 80	224	1.7%
81 to 90	43	0.3%
91 to 95	7	0.1%
Total	13,458	100.0%

Table 6.2.3 shows that about a quarter of publicly funded clients were minors under age 18 (23.5%), and only a small portion of publicly funded clients were age above 65 (5.8%).

Table 6.2.3 Frequency and percentage distributions of age group of 2019 publicly funded clients

Age group	Frequencies	Percentage distribution
0 to 17	3,162	23.5%
18 to 64	9,515	70.7%
65+	781	5.8%
Total	13,458	100%

There were 142 unique zip codes associated with the addresses of the 13,458 clients. Table 6.2.4 shows 50 of the most frequent zip codes with at least ten clients (to protect the privacy of clients) and the city that is associated with each zip code, the frequency, and the percentage. These zip codes constituted almost 80 communities throughout Ohio in addition to some outside of Ohio (14 clients were out of state residents, and there were also 11 unrecognized zip codes, i.e. not actual zip codes). Of 13,458 clients, 98.6% of them provided a zip code in Cuyahoga County.

Table 6.2.4 Frequency and percentage distributions of zip code associated with publicly funded clients in 2019, N=13,458.

Zip code	City	Frequency	Percentage
44102	Cleveland	1,146	8.5%
44109	Cleveland	846	6.3%
44105	Cleveland	717	5.3%
44111	Cleveland	671	5.0%
44104	Cleveland	563	4.2%
44107	Lakewood	518	3.8%
44120	Cleveland	484	3.6%
44135	Cleveland	459	3.4%
44103	Cleveland	434	3.2%
44108	Cleveland	408	3.0%
44112	Cleveland	406	3.0%
44128	Cleveland	331	2.5%
44113	Cleveland	328	2.4%
44110	Cleveland	322	2.4%
44125	Cleveland	321	2.4%
44130	Cleveland	317	2.4%
44106	Cleveland	311	2.3%
44121	Cleveland	295	2.2%
44137	Maple Heights	278	2.1%
44118	Cleveland	260	1.9%
44134	Cleveland	259	1.9%
44114	Cleveland	256	1.9%
44115	Cleveland	235	1.7%
44129	Cleveland	227	1.7%
44146	Bedford	225	1.7%
44144	Cleveland	217	1.6%
44070	North Olmsted	197	1.5%
44142	Brook park	166	1.2%

Zip code	City	Frequency	Percentage
44123	Euclid	165	1.2%
44132	Euclid	160	1.2%
44017	Berea	156	1.2%
44117	Euclid	156	1.2%
44124	Cleveland	154	1.1%
44122	Beachwood	150	1.1%
44119	Cleveland	131	1.0%
44116	Rocky River	123	0.9%
44127	Cleveland	119	0.9%
44133	North Royalton	111	0.8%
44126	Cleveland	104	0.8%
44145	Westlake	103	0.8%
44143	Cleveland	92	0.7%
44138	Olmsted Falls	77	0.6%
44136	Strongsville	63	0.5%
44131	Independence	49	0.4%
44140	Bay Village	49	0.4%
44147	Broadview Heights	37	0.3%
44149	Strongsville	33	0.2%
44139	Solon	30	0.2%
44141	Brecksville	17	0.1%
44022	Chagrin Falls	12	0.1%

Table 6.2.5 shows 23 of the most frequent cities with at least ten clients (to protect the privacy of clients), the frequency, and the percentage. The majority of publicly funded clients in the dataset (77.4%) resided in Cleveland.

Table 6.2.5 Frequency and percentage distributions of cities associated with publicly funded clients in 2019, N=13,458.

City	Frequency	Percentage
Cleveland	10,418	77.4%
Lakewood	518	3.8%
Euclid	481	3.6%
Maple Heights	278	2.1%
Bedford	225	1.7%
North Olmsted	197	1.5%
Brook park	166	1.2%
Berea	156	1.2%
Beachwood	150	1.1%
Rocky River	123	0.9%
North Royalton	111	0.8%
Westlake	103	0.8%
Strongsville	96	0.7%
Olmsted Falls	77	0.6%
Bay Village	49	0.4%
Independence	49	0.4%
Broadview Heights	37	0.3%
Solon	30	0.2%
Youngstown	18	0.1%
Brecksville	17	0.1%
Chagrin Falls	14	0.1%
N/A	11	0.1%
Canton	10	0.1%

## 6.2.2 Frequency and percentage distributions of publicly funded clients by primary diagnosis and payer of service

Table 6.2.6 shows frequency and percentage distributions of publicly funded clients who received services funded by the ADAMHS Board and/or Medicaid in 2019 by primary diagnosis and payer of service.

Of the 13,458 clients in the dataset:

- 5,013 received services funded by the ADAMHS Board only (37.2%)
- 6,200 received services funded by Medicaid only (46.1%)
- 2,245 received serviced funded by both the ADAMHS Board and Medicaid (16.7%)

Of the 13,458 clients in the dataset:

- 4,139 received services for substance use disorder (SUD) only (31.8%)
- 8,345 received mental health (MH) services only (66.5%)
- 374 received services for both (2.8%)

Overall, the ADAMHS Board is more likely to fund MH services (67.7%) than SUD services (30.4%), while Medicaid is even more likely to fund MH services (87.5%) than SUD services (11.8%). SUD services are more likely to be funded by both the ADAMHS Board and Medicaid, (83.9%) than MH services (5.6%).

Table 6.2.6 Frequency and percentage distributions of numbers publicly funded clients by primary diagnosis and payer of service in 2019, N=13,458 clients

Primary diagnosis/Payer of service	ADAMHS Board only	ADAMHS Board and Medicaid	Medicaid only	Total
SUD only	1,523 (30.4%)	1,883 (83.9%)	733 (11.8%)	4,139 (30.8%)
MH only	3,394 (67.7%)	125 (5.6%)	5,426 (87.5%)	8,945 (66.5%)
SUD and MH	96 (1.9%)	237 (10.6%)	41 (0.7%)	374 (2.8%)
Total	5,013 (100%)	2,245 (100%)	6,200 (100%)	13,458 (100%)

### **6.2.3 Type diagnoses associated with the services publicly funded by primary diagnosis and payer of service**

Tables 6.2.7 (for the ADAMHS Board) and 6.2.8 (for Medicaid) show the number and percentage of type of diagnoses for substance use disorder (SUD) by payer of service. Tables 6.2.9 (for the ADAMHS Board) and 6.2.10 (for Medicaid) show the number and percentage of type of diagnoses for mental health (MH) by payer of service.

Diagnoses were grouped based on the first three numbers of the diagnostic code. The tables only show diagnosis groups that have the frequency greater than 50. Diagnosis groups with less than 50 frequencies are included in “other.”

Mental health disorders represented the most frequent primary diagnoses for SUD services funded by the ADAMHS Board (see Table 6.2.7). These include bipolar disorder, major depressive disorder, and post-traumatic stress disorder.

In terms of SUD services funded by Medicaid, the most frequent primary diagnosis was post-traumatic stress disorders and major depressive disorders (Table 6.2.8).

The findings in Tables 6.2.6 and 6.2.7 suggest that more than 40% of individuals receiving SUD services have a dual diagnosis. This assumes that individuals receiving SUD services in fact have a SUD that needs treatment, in addition to a mental health disorder.

Mood affective disorders were the most frequent diagnosis funded by the ADAMHS Board for mental health services (see Table 6.2.9).

Similarly, mood affective disorders were the most frequent diagnosis Medicaid for mental health services (see Table 6.2.10). This is closely followed by unspecified behavioral disorders.

Table 6.2.7 Frequency and percentage distributions of services for SUD funded by the ADAMHS Board, 2019

Diagnostic code	Frequency	Percentage
F10 (Alcohol Abuse)	1,657	1.0%
F11 (Opioid Abuse)	894	0.5%
F12 (Cannabis Disorders)	1,185	0.7%
F14 (Cocaine Abuse)	361	0.2%
F15 (Other Stimulant Disorder)	126	0.1%
F16 (Hallucinogen Disorder)	58	0.0%
F19 (Other Psychoactive Substance)	311	0.2%
F20 (Paranoid Schizophrenia)	309	0.2%
F31 (Bipolar Disorder)	115,182	67.8%
F33 (Major Depressive Disorder)	16,594	9.8%
F43 (Post-traumatic Stress)	16,571	9.7%
NDX	16,513	9.7%
R69 (Illness, unspecified)	135	0.1%
Other	96	0.1%
Total	169,992	100.0%



Table 6.2.8 Frequency and percentage distributions of diagnoses for SUD service funded by Medicaid, 2019

Diagnostic code	Frequency	Percentage
F10 (Alcohol Abuse)	55,925	11.4%
F11 (Opioid Abuse)	3,594	0.7%
F12 (Cannabis Disorders)	2,170	0.4%
F13 (Sedative-related disorder)	1,008	0.2%
F14 (Cocaine Abuse)	2,020	0.4%
F15 (Other Stimulant Disorder)	540	0.1%
F16 (Hallucinogen Disorder)	1,259	0.3%
F17 (Nicotine Dependence)	87	0.0%
F18 (Inhalant Related Disorders)	123	0.0%
F19 (Other Psychoactive Substance)	1,132	0.2%
F20 (Paranoid Schizophrenia)	903	0.2%
F25 (Schizoaffective Disorders)	59	0.0%
F31 (Bipolar Disorder)	412	0.1%
F32 (Major Depressive Disorder)	126	0.0%
F33 (Major Depressive Disorder)	209,788	42.9%
F34 (Persistent Mood Disorders)	191	0.0%
F41 (Generalized Anxiety Disorder)	261	0.1%
F43 (Post-traumatic Stress)	209,587	42.8%
Other	110	0.0%
Total	489,295	100.0%

Table 6.2.9 Frequency and percentage distributions of diagnoses for mental health service funded by the ADAMHS Board, 2019

Diagnostic code	Frequency	Percentage
F06 (Psychotic disorder with hallucinations)	327	0.2%
F10 (Alcohol Abuse)	8,445	4.3%
F11 (Opioid Abuse)	8,424	4.3%
F12 (Cannabis Disorders)	8,129	4.1%
F14 (Cocaine Abuse)	178	0.1%
F20 (Paranoid Schizophrenia)	15,004	7.6%
F22 (Delusional Disorders)	80	0.0%
F25 (Schizoaffective Disorders)	6,587	3.3%
F28 (Other psychoactive disorders)	82	0.0%
F29 (Unspecified Diagnosis)	788	0.4%
F30 (Mood Affective Disorders)	1,042	0.5%
F31 (Mood Affective Disorders)	103,210	52.4%
F32 (Mood Affective Disorders)	1,603	0.8%
F33 (Mood Affective Disorders)	1,501	0.8%
F34 (Mood Affective Disorders)	1,042	0.5%
F39 (Mood Affective Disorders)	840	0.4%
F40 (Phobic Anxiety Disorders)	199	0.1%
F41 (Generalized Anxiety Disorders)	175	0.1%
F42 (Compulsive Disorders)	48	0.0%
F43 (Post-traumatic Stress)	12,266	6.2%
F60 (Specific Personality Disorders)	629	0.3%
F63 (Impulse Disorders)	565	0.3%
F70 (Intellectual Disabilities)	51	0.0%
F84 (Autistic Disorder)	476	0.2%
F90 (ADHD)	6,287	3.2%
F91 (Conduct Disorder)	9,415	4.8%
F93 (Emotional Disorders)	79	0.0%
F98 (Unspecified Behavioral Disorders)	68	0.0%
NDX	6,071	3.1%
R69 (Illness, unspecified)	3,256	1.7%
Z03 (Encounter for medical observation)	2,130	1.1%
Z71 (Counseling, unspecified)	166	0.1%
Other	347	0.2%
Total	196,867	100.0%

Table 6.2.10 Frequency and percentage distributions of diagnoses for mental illness services funded by Medicaid, 2019

Diagnostic code	Frequency	Percentage
F06 (Psychotic disorder with hallucinations)	1,304	2.00%
F10 (Alcohol Abuse)	1,462	2.30%
F11 (Opioid Abuse)	711	1.10%
F12 (Cannabis Disorders)	1,300	2.00%
F20 (Paranoid Schizophrenia)	1,797	2.80%
F25 (Schizoaffective Disorders)	754	1.20%
F28 (Other psychoactive disorders)	28	0.00%
F29 (Unspecified Diagnosis)	137	0.20%
F31 (Mood Affective Disorders)	26,441	41.20%
F32 (Mood Affective Disorders)	597	0.90%
F33 (Mood Affective Disorders)	460	0.70%
F34 (Mood Affective Disorders)	135	0.20%
F39 (Mood Affective Disorders)	106	0.20%
F40 (Phobic Anxiety Disorders)	79	0.10%
F41 (Generalized Anxiety Disorders)	131	0.20%
F42 (Compulsive Disorders)	112	0.20%
F43 (Post-traumatic Stress)	854	1.30%
F44 (Conversion disorder)	47	0.10%
F60 (Specific Personality Disorders)	673	1.00%
F63 (Impulse Disorders)	387	0.60%
F70 (Intellectual Disabilities)	34	0.10%
F84 (Autistic Disorder)	631	1.00%
F90 (ADHD)	354	0.60%
F91 (Conduct Disorder)	129	0.20%
F93 (Emotional Disorders)	61	0.10%
F94 (Reactive attachment disorder)	69	0.10%
F98 (Other behavioral and emotional disorders)	25,092	39.10%
F99 (Unspecified mental disorder)	32	0.00%
Other	203	0.30%
Total	64,120	100.00%

#### **6.2.4 Type of service publicly funded by primary diagnosis and payer of service**

Tables 6.2.11 (for the ADAMHS Board) and 6.2.12 (for Medicaid) show the number and percentage of type of services for SUD by payer of service. Tables 6.2.13 (for the ADAMHS Board) and 6.2.14 (for Medicaid) show the number and percentage of type of services for mental health by payer of service.

These tables only show services that have the frequency greater than 50. All other less popularly offered services are included in “other.”

Alcohol and other drug (AOD) Residential treatment, sober living/supportive housing, and Methadone Administration were the most frequent substance use disorder (SUD) services funded by the ADAMHS Board (see Table 6.2.11).

Methadone Administration, Alcohol and/or other drug treatment program, SUD Partial Hospitalization were the most frequent SUD services funded by Medicaid (see Table 6.2.12).

Residential care, subsidized housing, and Community Psychiatric Support and Treatment (CPST) were the most frequent mental health services funded by the ADAMHS Board (see Table 6.2.13).

Therapeutic Behavioral Services (TBS), CPST, and psychotherapy were the most frequent funded health services by Medicaid (see Table 6.2.14).

Table 6.2.11 Frequency and percentage distributions of services for SUD funded by the ADAMHS Board, 2019

Service	Frequency	Percentage
Acute Detox Hospital Inpatient	193	0.2%
Alcohol and/or drug assessment	518	0.5%
Alcohol and/or drug services; acute detoxification (residential)	1,591	1.6%
Alcohol and/or drug services; case management	2,566	2.6%
Alcohol and/or drug services; group counseling	3,715	3.8%
Alternatives	484	0.5%
AOD Residential	2,345	2.4%
AOD Residential Expansion	1,307	1.3%
AOD Residential Treatment	27,860	28.3%
Community-Based Process	185	0.2%
Education	862	0.9%
Information Dissemination	289	0.3%
Methadone Administration	18,239	18.5%
Psychiatric Diagnostic Evaluation	515	0.5%
Psychotherapy, 30 minutes	992	1.0%
Psychotherapy, 45 minutes	98	0.1%
Psychotherapy, 60 minutes	515	0.5%
Residential Care	304	0.3%
Sober Living/Supportive Housing	25,618	26.0%
Sober Living/Supportive Housing Expanded	2,552	2.6%
SUD Partial Hosp IOP	5,517	5.6%
Therapeutic, prophylactic, or diagnostic injection	66	0.1%
Urine Drug Screen	1,941	2.0%
Vivitrol	61	0.1%
Other	119	0.1%
Total	98,452	100.0%

Table 6.2.12 Frequency and percentage distributions of services for SUD funded by Medicaid, 2019

Service	Frequency	Percentage
Alcohol and/or drug abuse halfway house services, per diem	13,482	6.4%
Alcohol and/or drug assessment	115	0.1%
Alcohol and/or Drug Services; (SUD LPN Services)	700	0.3%
Alcohol and/or Drug Services; (SUD RN Services)	840	0.4%
Alcohol and/or drug services; acute detoxification (residential)	6,556	3.1%
Alcohol and/or drug services; ambulatory detoxification	72	0.0%
Alcohol and/or drug services; case management	9,205	4.4%
Alcohol and/or drug services; group counseling	13,167	6.3%
Alcohol and/or drug services; sub-acute detoxification	65	0.0%
Alcohol and/or other drug treatment program, per diem	35,027	16.7%
BH counseling and therapy, per 15 min	1,052	0.5%
Buprenorphine/naloxone administration	941	0.4%
CPST, per 15 min	224	0.1%
Electrocardiogram, ECG; tracing only	110	0.1%
Group psychotherapy (other than multiple-fam grp)	355	0.2%
Interactive Complexity Add On	188	0.1%
Methadone Administration	72,000	34.4%
MH Day Treatment TBS-Unlicensed or Licensed	862	0.4%
MH SRSP Peer Recovery Support	2,024	1.0%
Office/OP visit for E&M established patient 10min	218	0.1%
Office/OP visit for E&M established patient 15 min	609	0.3%
Office/OP visit for E&M established patient 25 min	569	0.3%
Office/OP visit for E&M established patient 40 min	57	0.0%
Office/OP visit for E&M established patient 5 min	783	0.4%
Office/OP visit for E&M of a new patient 30 min	58	0.0%
Prolonged Office/OP direct w/pat 1st hr. Add-On	94	0.0%
Psychiatric Diagnostic Evaluation	800	0.4%
Psychotherapy, 30 minutes	1,752	0.8%
Psychotherapy, 45 minutes	1,013	0.5%
Psychotherapy, 60 minutes	5,215	2.5%
SUD Partial Hosp IOP	28,273	13.5%
TBS, per 15 minutes	502	0.2%
Therapeutic, prophylactic, or diagnostic injection	142	0.1%
Urine Drug Screen	12,042	5.8%
Other	272	0.1%
Total	209,384	100.0%

Table 6.2.13 Frequency and percentage distributions of services for mental illness funded by the ADAMHS Board, 2019

Service	Frequency	Percentage
Consultation – Early Childhood	2,776	3.1%
CPST, per 15 min	13,857	15.6%
Crisis Bed MH/DD	323	0.4%
Crisis Care Bed MCD	377	0.4%
Crisis Care Medicaid Eligible Rate	342	0.4%
Crisis Care Non MCD Eligible Rate	84	0.1%
Crisis Stabilization Bed - MCD	154	0.2%
Employment	1,706	1.9%
Employment Group	5,091	5.7%
Employment - Telephone	836	0.9%
Group psychotherapy (other than multiple-fam grp)	339	0.4%
Interactive Complexity Add On	109	0.1%
MH Consultation	2,547	2.9%
MH Day Treatment TBS-Unlicensed or Licensed	1,090	1.2%
MH Prevention	511	0.6%
Office/OP visit for E&M established patient 15 min	301	0.3%
Office/OP visit for E&M established patient 25 min	351	0.4%
Office/OP visit for E&M established patient 5 min	803	0.9%
Payee Service	1,699	1.9%
Prevention Early Childhood	3,988	4.5%
Psychiatric Diagnostic Evaluation	478	0.5%
Psychosocial rehabilitation service 15 min	201	0.2%
Psychotherapy, 30 minutes	2,537	2.8%
Psychotherapy, 45 minutes	473	0.5%
Psychotherapy, 60 minutes	1,809	2.0%
Residential Care	24,334	27.3%
Subsidized Housing	18,668	21.0%
TBS, per 15 minutes	2,989	3.4%
Therapeutic, prophylactic, or diagnostic injection	112	0.1%
Other	177	0.2%
Total	89,062	100.0%

Table 6.2.14 Frequency and percentage distributions of services for mental illness funded by Medicaid, 2019

Service	Frequency	Percentage
Assertive community treatment program, per diem	118	0.5%
CPST, per 15 min	4,730	18.9%
Family psychotherapy with patient 50 min	113	0.5%
Group psychotherapy (other than multiple-fam grp)	208	0.8%
IHBT per 15 min	150	0.6%
Interactive Complexity Add On	925	3.7%
MH Day Treatment	206	0.8%
MH Day Treatment TBS-Unlicensed or Licensed	1,223	4.9%
Office/OP visit for E&M established patient 15 min	144	0.6%
Office/OP visit for E&M established patient 25 min	184	0.7%
Prolonged Office/OP direct w/pat 1st hr. Add-On	340	1.4%
Psychiatric Diagnostic Evaluation	515	2.1%
Psychosocial rehabilitation service 15 min	437	1.7%
Psychotherapy, 30 minutes	496	2.0%
Psychotherapy, 45 minutes	629	2.5%
Psychotherapy, 60 minutes	2,523	10.1%
TBS, per 15 minutes	11,860	47.4%
Other	234	0.9%
Total	25,035	100.0%

### 6.2.5 Service utilization data analysis

In the remaining section, three major analyses of the client treatment records in the dataset requested by the ADAMHS Board are reported.

First, the gap in service delivery was examined by comparing what was estimated based on the national prevalence data for substance use and mental illness in 2018 discussed in Chapters 3-5 and the publicly funded client data for the actual service delivery in 2019.

Second, the equitable service delivery and funding of services was examined across demographic groups and between mental health and substance use disorder (SUD) clients.

Third, possible ADAMHS Board funding oversight was examined through analyzing the funding sequence of each client.



In all, there are a total of 421,938 service entries with the number of services received by clients ranging from 1 service to 851 services with a mean of 31.4 services per client. Each of these 421,938 services has a set of information including primary diagnosis, agency name, type insurance, type of service, and payer of service. Because clients varied greatly in terms of the number of services they received in 2019, analyzing the service information (e.g., type of service) at the individual level is not possible if not meaningless.

### **6.2.5.1 Gap in service delivery**

A gap in service delivery was examined by comparing the number of publicly funded clients based on primary diagnosis (substance use disorder vs. mental health) to estimated need projections for mental illness and substance use in Cuyahoga County calculated in previous chapters.

#### **6.2.5.1.1 Estimated need for substance use treatment among publicly funded clients**

Table 6.2.15 shows the estimated number of people in Cuyahoga County who could benefit from publicly funded services for substance use disorder (SUD) based on the NSDUH 2018 by age, gender, and race/ethnicity separately for uninsured and on Medicaid. In addition, the table shows the actual number of people who received treatment for SUD funded by the ADAMHS Board and/or Medicaid in 2019.

The actual number of people who received services for SUD includes people who received services for SUD only and for both SUD and mental health (MH). Of the 1.2 million people in Cuyahoga County, an estimated:

- 15,860 people were uninsured and had a SUD in the past year
- 27,978 people were on Medicaid and had a SUD in the past year

Overall, about 15,860 uninsured and 27,978 on Medicaid age 12 and older in Cuyahoga County who had SUD received any service for substance use funded by the ADAMHS Board (N=1,619), Medicaid (N=774), or both (N=2,111). These numbers include both SUD only and both SUD and MH clients.

Table 6.2.15 Frequency and percentage distributions of numbers of publicly funded clients who benefit from substance use treatment by payer of service in 2019

SUD		Estimated number of people who could benefit from publicly funded treatment based on the NSDUH 2018			Actual number of people who received treatment funded by the ADAMHS Board and/or Medicaid				Estimated number of people who could benefit from publicly funded services but did not get one
		Uninsured	Medicaid	Total	ADAMHS Board only	Medicaid only	Both ADAMHS Board and Medicaid	Total	
Total		15,860	27,978	43,838	1,619	774	2,111	4,504	39,334
Age	0/12 to 17	176	1,356	1,532	15	11	25	51	1,481
	18 to 64	15,577	19,186	34,763	1,535	719	2,066	4,320	30,443
	65+	107	7,436	7,543	69	44	20	133	7,410
Gender	Males	10,340	10,552	20,892	1,216	425	1,381	3,022	17,870
	Females	4,694	11,771	16,465	372	349	735	1,456	15,009
Race/ethnicity	Whites	7,508	10,618	18,126	909	370	1,320	2,599	15,527
	Blacks or African Americans	4,374	8,947	13,321	651	343	757	1,751	11,570
	Asian	224	238	462	6	1	7	14	448
	Hispanic	1,348	1,670	3,018	106	2	150	258	2,760

### **6.2.5.1.2 Publicly funded clients with SUD based on primary diagnosis by age**

#### ***Age 12 to 17***

Few of the youth who could benefit from services for SUD received services from either the ADAMHS Board or from Medicaid.

- 15 of the 176 uninsured youth received services for their SUD funded by the ADAMHS Board.
- 11 of the 1,356 on Medicaid received services for their SUD funded by Medicaid.
- 25 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 1,481 youth age 12 to 17 with SUD could benefit from publicly funded services for their SUD but did not receive treatment.

#### ***Age 18 to 64***

Overall, of the 15,577 uninsured and 19,186 on Medicaid age 18 to 64 in Cuyahoga County who had SUD in the past year:

- 1,535 received services for their SUD funded by the ADAMHS Board
- 719 received services for their SUD funded by Medicaid
- 2,066 received services for their SUD funded by both the ADAMHS Board and Medicaid

Based on our estimates, 30,443 adults age 18 to 64 with SUD could benefit from publicly funded services for their SUD but did not receive treatment.

#### ***Age 65 and over***

Overall, of the 107 uninsured and 7,436 on Medicaid age 65 and older in Cuyahoga County who had SUD in the past year:

- 69 received services for their SUD funded by the ADAMHS Board
- 44 received services for their SUD funded by Medicaid
- 20 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 7,410 seniors age 65 and older with SUD who could benefit from publicly funded services for their SUD but did not receive treatment.

#### **6.2.5.1.3 Publicly funded clients with SUD based on primary diagnosis by gender**

##### ***Males***

Overall, of the 10,340 uninsured and 10,552 on Medicaid males in Cuyahoga County who had SUD in the past year:

- 1,216 received services for their SUD funded by the ADAMHS Board
- 425 received services for their SUD funded by Medicaid
- 1,381 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 17,870 males with SUD who could benefit from publicly funded services for their SUD but did not receive treatment.

##### ***Females***

Overall, of the 4,694 uninsured and 11,771 on Medicaid females in Cuyahoga County who had SUD in the past year:

- 372 received services for their SUD funded by the ADAMHS Board
- 349 received services for their SUD funded by Medicaid
- 735 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 15,009 females with SUD who could benefit from publicly funded services for their SUD but did not receive treatment.

#### **6.2.5.1.4 Publicly funded clients with SUD based on primary diagnosis by race/ethnicity**

##### ***Whites***

Overall, of the 7,508 uninsured and 10,618 on Medicaid whites in Cuyahoga County who had SUD in the past year:

- 909 received services for their SUD funded by the ADAMHS Board
- 370 received services for their SUD funded by Medicaid
- 1,320 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 15,527 whites with SUD who could use publicly funded services for their SUD but did not receive treatment.

##### ***Blacks/African Americans***

Overall, of the 4,374 uninsured and 8,947 on Medicaid blacks/African Americans in Cuyahoga County who had SUD in the past year:

- 651 received services for their SUD funded by the ADAMHS Board
- 343 received services for their SUD funded by Medicaid
- 757 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 11,570 blacks/African Americans with SUD who could benefit from publicly funded services for their SUD but did not receive treatment.

##### ***Asians***

Overall, of the 224 uninsured and 238 on Medicaid Asians in Cuyahoga County who had SUD in the past year:

- 6 received services for their SUD funded by the ADAMHS Board
- 1 received services for their SUD funded by Medicaid
- 7 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 448 Asians with SUD who could use publicly funded services for their SUD but did not receive treatment.

### ***Hispanics***

Overall, of the 1,348 uninsured and 1,670 on Medicaid Hispanics in Cuyahoga County who had SUD in the past year:

- 106 received services for their SUD funded by the ADAMHS Board
- 2 received services for their SUD funded by Medicaid
- 150 received services for their SUD funded by both the ADAMHS Board and Medicaid

This leaves an estimated 2,760 Hispanics with SUD who could use publicly funded services for their SUD but did not receive treatment.

#### **6.2.5.1.5 Estimated need for mental health services among publicly funded clients**

Table 6.2.16 shows the estimated number of people in Cuyahoga County who could benefit from publicly funded services for mental health (MH) based on the NSDUH 2018 by age, gender, and race/ethnicity separately for uninsured and on Medicaid. In addition, the table shows the actual number of people who received treatment for mental illness funded by the ADAMHS Board and/or Medicaid in 2019.

It is not easy to estimate the publicly funded clients with mental illness who need services because there are many kinds of mental illness. For this report, the need for mental health services was calculated using serious mental illness. Because the NSDUH 2018 only had the major depressive episode (MDE) as the mental illness measure for age 12 to 17, it is not possible to calculate the gap in service delivery for this age group.

Had other measures of mental illness such as “any mental illness” or “MDE,” been used, the estimated number of people who could benefit from publicly funded services for mental illness but did not receive treatment would be much higher.

The actual number of people who received services for mental illness includes people who received services for MH only and for both SUD and MH.

Of the 1.2 million people in Cuyahoga County, an estimated:

- 7,730 people were uninsured and had serious mental illness in the past year.
- 12,848 people were on Medicaid and had serious mental illness in the past year.

Overall, only a small fraction of the 7,730 uninsured and 12,848 on Medicaid age 18 and older in Cuyahoga County who had serious mental illness received any service for mental illness funded by the ADAMHS Board (N=3,490), Medicaid (N=5,467), or both (N=362). These numbers include both MH only and both SUD and MH clients.

Table 6.2.16 Frequency and percentage distributions of numbers of publicly funded clients who could benefit from mental health treatment and payer of service in 2019

MH		Estimated number of people who could benefit from publicly funded treatment based on the NSDUH 2018			Actual number of people who received treatment funded by the ADAMHS Board and/or Medicaid				Estimated number that could benefit from publicly funded services but did not get one
		Uninsured	Medicaid	Total	ADAMHS Board only	Medicaid only	Both ADAMHS Board and Medicaid	Total	
Total		7,730	12,848	20,578	3,490	5,467	362	9,319	11,259
Age	0/12 to 17	-	-	-	783	2,304	36	3,123	-
	18 to 64	7,730	12,791	20,521	2,280	2,947	316	5,543	14,978
	65+	0	57	57	427	216	10	653	0
Gender	Males	2,827	2,993	5,820	1,821	2,608	202	4,631	1,189
	Females	4,578	9,381	13,959	1,585	160	2,859	4,604	9,355
Race/ethnicity	Whites	4,805	7,269	12,074	1,733	1,795	120	3,648	8,426
	Blacks or African Americans	1,429	3,450	4,879	1,415	3,392	227	5,034	0
	Asian	78	202	280	26	20	1	47	233
	Hispanic	436	750	1,186	187	25	1	213	973



### **6.2.5.1.6 Publicly funded clients with mental illness based on primary diagnosis by age**

#### ***Age 18 to 64***

Overall, 7,730 uninsured and 12,791 on Medicaid age 18 to 64 in Cuyahoga County who had serious mental illness in the past year:

- 2,280 received services for their mental illness funded by the ADAMHS Board
- 2,947 received services for their mental illness funded by Medicaid
- 316 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 14,978 adults age 18 to 64 with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

#### ***Age 65 and over***

Overall, 0 uninsured and 57 on Medicaid age 65 and older in Cuyahoga County had serious mental illness in the past year, and:

- 427 received services for their mental illness funded by the ADAMHS Board
- 216 received services for their mental illness funded by Medicaid
- 10 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 0 adult age 65 and older with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

However, the numbers of adults age 65 and older who had any mental illness or a MDE in Cuyahoga County who could benefit publicly funded services for mental health are much higher than the number of individuals 65 and older with a serious mental illness.

### **6.2.5.1.7 Publicly funded clients with mental illness based on primary diagnosis by gender**

#### ***Males***

Overall, 2,827 uninsured and 2,993 on Medicaid males in Cuyahoga County had serious mental illness in the past year, and:

- 1,821 received services for their mental illness funded by the ADAMHS Board
- 2,608 received services for their mental illness funded by Medicaid
- 10 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 1,189 males with serious mental illness who could benefit from publicly funded services but did not receive treatment.

#### ***Females***

Overall, 4,805 uninsured and 9,381 on Medicaid females in Cuyahoga County had serious mental illness in the past year, and:

- 1,585 received services for their mental illness funded by the ADAMHS Board
- 160 received services for their mental illness funded by Medicaid
- 2,859 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 9,355 females with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

### **6.2.5.1.8 Publicly funded clients with mental illness based on primary diagnosis by race/ethnicity**

#### ***Whites***

Overall, 4,805 uninsured and 7,269 on Medicaid whites in Cuyahoga County had serious mental illness in the past year, and:

- 1,733 received services for their mental illness funded by the ADAMHS Board
- 1,795 received services for their mental illness funded by Medicaid
- 120 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 15,527 whites with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

#### ***Blacks/African Americans***

Overall, 1,429 uninsured and 3,450 on Medicaid blacks/African Americans in Cuyahoga County had serious mental illness in the past year, and:

- 1,415 received services funded by the ADAMHS Board
- 3,392 received services funded by Medicaid
- 227 received services funded by both the ADAMHS Board and Medicaid

This leaves an estimated 0 black/African American with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

However, once again, the numbers of blacks/African Americans who had any mental illness or a MDE in Cuyahoga County who could benefit from publicly funded services for mental health are much higher than the number of serious mental illness.

## ***Asians***

Overall, 78 uninsured and 202 on Medicaid Asians in Cuyahoga County had serious mental illness in the past year, and:

- 26 received services for their mental illness funded by the ADAMHS Board
- 20 received services for their mental illness funded by Medicaid
- 1 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 233 Asians with a serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

## ***Hispanics***

Overall, 436 uninsured and 750 on Medicaid Hispanics in Cuyahoga County had serious mental illness in the past year, and:

- 187 received services for their mental illness funded by the ADAMHS Board
- 25 received services for their mental illness funded by Medicaid
- 1 received services for their mental illness funded by both the ADAMHS Board and Medicaid

This leaves an estimated 973 Hispanics with serious mental illness who could benefit from publicly funded services for their mental illness but did not receive treatment.

### 6.2.5.2 Equitable service delivery

In order to examine the extent that service delivery and funding of services by the ADAMHS Board is equally distributed to the publicly funded population, the basic crosstab analysis was conducted. The crosstabs analysis compares client counts for each service payer by race/ethnicity, gender, and age categories.

Table 6.2.17 shows frequency and percentage distributions of publicly funded clients based on the payer of service.

Of 13,458 publicly funded clients in the dataset for 2019:

- 37.3% of them had services that were funded by the ADAMHS Board only
- 46.1% of clients were funded by Medicaid only
- the remaining 16.7% of clients had services funded by both the ADAMHS Board and Medicaid.

The table also shows the average sum payment made to each client in 2019 with a standard deviation (S.D.). Overall, when the ADAMHS Board is the only payer, the board paid considerably more on services than Medicaid did for each client. When the payer of service was both the ADAMHS Board and Medicaid, Medicaid paid more per client than the ADAMHS board.

Agencies that provided services for one client funded by the ADAMS Board only and 5,830 clients who received services funded by Medicaid only were either paid nothing for the services, or the amount of payment information is missing on these services. The mean payment and the standard deviation of payment shown in the table were calculated without these 5,830 clients.

Table 6.2.17 Frequency and Percentage distributions of publicly funded clients based on payer of service, 2019

Payer of service	Frequency	Percentage	Payer	Mean payment	S.D. Payment
Both Board and Medicaid	2,245	16.70%	ADAMHS Board	\$1,886	\$4,381
			Medicaid	\$2,314	\$2,812
Only Board	5,013	37.30%	ADAMHS Board	\$2,176	\$7,662
Only Medicaid	6,200	46.10%	Medicaid	\$828	\$1,832
Total	13,458	100%	-	-	-

### **6.2.5.2.1 Demographic characteristics by the payer of service**

The demographic characteristics of the 13,458 clients in the 2019 publicly funded dataset were examined by the payer of service. The tables include 5,830 clients who received services funded by Medicaid only were either paid nothing for the services, or the amount of payment information is missing on these services.

The following set of four tables show the demographic characteristics with the client as the unit of analysis for a total of 13,458 clients, including gender (Table 6.2.18), age (Table 6.2.20), race (Table 6.2.21), and ethnicity (Table 6.2.22).

Another set of four tables show the demographic characteristics with the service as the unit of analysis with a total of 421,938 service entries, including gender (Table 6.2.19), age (Table 6.2.21), race (Table 6.2.23), and ethnicity (Table 6.2.25).

## Gender

Table 6.2.18 shows frequency and percentage distributions of clients by gender, while Table 6.2.19 shows frequency and percentage distributions of services by gender.

Both tables indicate that males were more likely than females to receive services funded by the ADAMHS Board only and both ADAMHS Board and Medicaid. On the other hand, females were more likely than males to receive services funded by Medicaid only.

Table 6.2.18 Frequencies and percentage distributions of clients in the 2019 dataset by gender and payer in 2019

Payer of service	Gender			Total
	Males	Females	Unknown	
ADAMHS Board only	2,978 (40.0%)	1,920 (32.6%)	115 (100%)	5,013 (37.2%)
Both ADAMHS Board and Medicaid	1,458 (19.6%)	787 (13.4%)	0 (0%)	2,245 (16.7%)
Medicaid only	3,015 (40.5%)	3,185 (54.1%)	0 (0%)	6,200 (46.0%)
Total	7,451 (100%)	5,892 (100%)	115 (100%)	13,458 (100%)

Table 6.2.19 Frequencies and percentage distributions of services in the 2019 dataset by gender and payer in 2019

Payer of service	Gender			Total
	Males	Females	Unknown	
ADAMHS Board only	72,992 (30.4%)	41,029 (23.1%)	4,194 (100%)	118,215 (28.0%)
Both ADAMHS Board and Medicaid	113,088 (47.1%)	71,256 (40.1%)	0 (0%)	184,344 (43.7%)
Medicaid only	54,090 (22.5%)	65,289 (36.8%)	0 (0%)	119,379 (28.3%)
Total	177,574 (100%)	240,170 (100%)	4,194 (100%)	421,938 (100%)

## Age

Table 6.2.20 shows frequency and percentage distributions of clients by age, while Table 6.2.21 shows frequency and percentage distributions of services by age.

Both tables show that, of the three age groups, seniors age 65 and older were most likely to receive services that were funded by the ADAMHS Board only. Children age 0 to 17 were least likely to receive services funded by the ADAMHS Board only when client count is examined but not when service count is examined. Children age 0 to 17 were, on the other hand, most likely to receive services funded by Medicaid only.

Adults age 18 to 64 fell somewhere in between the two age groups in terms of the likelihood of receiving services that were funded by the ADAMHS Board, and they were more likely than youth or seniors to receive services funded by both.

Table 6.2.20 Frequencies and percentage distribution of clients in the 2019 dataset by age group and payer in 2019

Payer of service	Age group			Total
	0 to 17	18 to 64	65+	
ADAMHS Board only	798 (25.2%)	3,723 (39.1%)	492 (63.0%)	5,013 (37.2%)
Both ADAMHS Board and Medicaid	53 (1.7%)	2,162 (22.7%)	30 (3.8%)	2,245 (16.7%)
Medicaid only	2,311 (73.1%)	3,630 (38.2%)	259 (33.2%)	6,200 (46.1%)
Total	3,162 (100%)	9,515 (100%)	781 (100%)	13,458 (100%)

Table 6.2.21 Frequencies and percentage distribution of services in the 2019 dataset by age group and payer in 2019

Payer of service	Age group			Total
	0 to 17	18 to 64	65+	
ADAMHS Board only	10,474 (41.1%)	92,738 (25.2%)	15,003 (52.3%)	118,215 (28.0%)
Both ADAMHS Board and Medicaid	3,285 (12.9%)	178,945 (48.7%)	2,114 (7.4%)	184,344 (43.7%)
Medicaid only	11,715 (46.1%)	96,047 (26.1%)	11,581 (40.4%)	119,379 (28.3%)
Total	25,510 (100%)	367,730 (100%)	28,698 (100%)	421,938 (100%)



## Race

Table 6.2.22 shows frequency and percentage distributions of clients by race, while Table 6.2.23 shows frequency and percentage distributions of services by race.

The client level data (Table 6.2.22) show that whites were more likely than blacks/African Americans or Asians to receive services that were funded by the ADAMHS Board only, while blacks/African Americans were least likely among race groups to receive services that were funded by the ADAMHS Board only. On the other hand, blacks/African Americans were most likely among race groups to receive services that were funded by Medicaid only.

This does not mean, however, that the ADAMHS Board were more likely to fund services for whites than blacks/African Americans. Blacks/African Americans represented 40.6% of clients who received services that were funded by the ADAMHS Board only, a much higher percentage than the percentage of blacks/African Americans in the general population of Cuyahoga County (28.8%). Additionally, 48.9% of overall clients in the dataset are blacks/African Americans, indicating that the racial/ethnic group that received the largest amount of publicly funded services in Cuyahoga County was blacks/African Americans.

The higher likelihood of services received by blacks/African Americans to be funded by Medicaid is likely explained by the fact that a high proportion of African Americans are on Medicaid than the proportion of whites in Cuyahoga County. The same goes for the higher likelihood that services funded by Medicaid that are provided to youth or women.

Table 6.2.22 Frequencies and percentage distribution of clients in the 2019 dataset by race and payer in 2019

Payer of service	Race						Total
	Whites	Blacks/ African Americans	Asians	Other	Unknown	Missing	
ADAMHS Board	2,577 (42.4%)	2,037 (30.9%)	32 (53.5%)	157 (79.3%)	209 (96.3%)	1 (0.3%)	5,013 (37.2%)
Both ADAMHS Board and Medicaid	1,360 (22.4%)	837 (12.7%)	7 (11.7%)	33 (16.7%)	8 (3.7%)	0 (0%)	2,245 (16.7%)
Medicaid	2,148 (35.3%)	3,713 (56.4%)	21 (35.0%)	8 (4.0%)	0 (0.0%)	310 (100%)	6,200 (46.1%)
Total	6,085 (100%)	6,587 (100%)	60 (100%)	198 (100%)	217 (100%)	311 (100%)	13,458 (100%)

In addition, when service level data (Table 6.2.23) were examined, services received by blacks/African Americans compared to whites were more likely to be funded by the ADAMHS Board. The likelihood of services that were funded by Medicaid was about the same for whites and blacks/African Americans.

The differences found in the two tables with respect to race suggest that while at the client level, African Americans might be less likely than whites to receive services funded by the ADAMHS Board, each of the ADAMHS Board funded African American clients actually get more services funded by the ADAMHS Board than whites.

Overall the data suggest that while blacks/African Americans are more likely than whites to receive services funded by Medicaid because they are more likely than whites to be on Medicaid, when blacks/African Americans do receive services fund by ADAMHS Board, they receive more services that are funded by the ADAMHS Board than whites whose services are also funded by the ADAMHS Board.

Table 6.2.23 Frequencies and percentage distribution of services in the 2019 dataset by race and payer in 2019

Payer of service	Race						Total
	Whites	Blacks/ African Americans	Asians	Other	Unknown	Missing	
ADAMHS Board	61,187 (26.1%)	47,850 (29.2%)	670 (36.4%)	2614 (47.6%)	5889 (86.3%)	5 (0.1%)	118,215 (28.0%)
Both ADAMHS Board and Medicaid	108,674 (46.3%)	71,155 (43.5%)	1125 (61.1%)	2453 (44.7%)	937 (13.7%)	0 (0%)	184,344 (43.7%)
Medicaid	64,812 (27.6%)	44,697 (27.3%)	47 (2.6%)	426 (7.8%)	0 (0.0%)	9,397 (100%)	119,379 (28.3%)
Total	234,673 (100%)	163,702 100%	1842 (100%)	5493 (100%)	6826 (100%)	9,402 (100%)	421,938 (100%)

When examining the amount of payment the ADAMHS Board spent on clients by race, we found that:

- The ADAMHS Board funded an average of \$114.94 per service for black/African American clients and \$86.90 per service for white clients for mental health services.
- The ADAMHS Board funded an average of \$54.79 per service for black/African American clients and \$55.91 per service for white clients for SUD services.

### 6.2.5.4 Ethnicity

Finally, Table 6.2.24 shows frequency and percentage distributions of clients by ethnicity, while Table 6.2.25 shows the frequency and percentage distributions of services by ethnicity.

Both tables show that Hispanics<sup>199</sup> and non-Hispanics were equally likely to receive services that were funded by the ADAMHS Board. They were also equally likely to receive services funded by Medicaid. It should be noted that many more of clients who received services funded by Medicaid had a missing value on ethnicity than clients on the ADAMHS Board funding.

Table 6.2.24 Frequencies and percentage distribution of clients in the 2019 dataset by ethnicity and payer in 2019

Payer of service	Ethnicity				Total
	Hispanics	Non-Hispanics	Unknown	Missing	
ADAMHS Board	291 (62.6%)	4,527 (68.0%)	195 (98.0%)	0 (0%)	5,013 (37.2%)
Both ADAMHS Board and Medicaid	171 (36.8%)	2,070 (31.1%)	4 (2.0%)	0 (0%)	2,245 (16.7%)
Medicaid	3 (0.6%)	62 (0.9%)	0 (0.0%)	6,135 (100%)	6,200 (46.1%)
Total	465 (100%)	6,659 (100%)	199 (100%)	6,135 (100%)	13,458 (100%)

<sup>199</sup> Hispanic” includes 1 Cuban, 194 Hispanic with no specific origin specified, 21 Mexicans, 51 other specific Hispanics, and 257 Puerto Ricans.

Table 6.2.25 Frequencies and percentage distributions of services in the 2019 dataset by ethnicity and payer in 2019

Payer of service	Ethnicity				Total
	Hispanics	Non-Hispanics	Unknown	Missing	
ADAMHS Board	7,022 (33.6%)	105,368 (37.8%)	5,825 (97.1%)	0 (0%)	118,215 (28.0%)
Both ADAMHS Board and Medicaid	13,462 (64.5%)	170,708 (38.7%)	174 (2.9%)	0 (0%)	184,344
Medicaid	391 (1.9%)	2,505 (0.9%)	0 (0.0%)	116,483 (100%)	119,379 (28.3%)
Total	20,875 (100%)	278,581 (100%)	5,999 (100%)	116,483 (100%)	421,938 (100%)

### 6.2.5.5 Funding oversight

In order to examine the ADAMHS Board funding oversight, the average number of days between when a client enrolls in the GOSH system until the primary payer source transitions from ADAMHS Board to Medicaid were examined.

Because all clients were newly enrolled in the GOSH system when it was being implemented on July 1, 2019, we examined only those enrollments/payer spans for the ADAMHS Board beginning on or after July 1, 2019 to filter out the “new payer span” artifacts from implementing the new GOSH claims system.

Table 6.2.26 Time length between payer transition by sequence type, GOSH enrollments/payer spans for 07/01-19 to 12/31/19 <sup>200</sup>

Sequence type	Number	Variable	Mean	Median	Minimum	Maximum	Std Dev
Board	1,242	Time length1	.	.	.	.	.
		Time length2	.	.	.	.	.
		Time length3	.	.	.	.	.
Board-Medicaid	117	Time length1	47.93	30.00	0	243	41.36
		Time length2	.	.	.	.	.
		Time length3	.	.	.	.	.
Board-Medicaid-Board	32	Time length1	59.34	31.00	2	197	59.15
		Time length2	46.16	47.00	16	89	13.24
		Time length3	.	.	.	.	.
Board-Medicaid-Board-Medicaid	4	Time length1	34.75	25.00	10	79	31.64
		Time length2	49.50	46.00	30	76	19.49
		Time length3	28.50	28.50	28	29	0.58
Board-Medicaid-Medicaid	4	Time length1	77.75	69.50	53	119	29.41
		Time length2	56.25	51.50	32	90	25.28
		Time length3	.	.	.	.	.
Medicaid	1,433	Time length1	.	.	.	.	.
		Time length2	.	.	.	.	.
		Time length3	.	.	.	.	.
Medicaid-Board	74	Time length1	49.11	36.00	0	181	34.93
		Time length2	.	.	.	.	.
		Time length3	.	.	.	.	.
Medicaid-Board-Medicaid	8	Time length1	51.13	45.00	2	122	40.40
		Time length2	67.75	60.50	28	152	42.54
		Time length3	.	.	.	.	.

<sup>200</sup> <http://www.adamhscc.org/>

Sequence type	Number	Variable	Mean	Median	Minimum	Maximum	Std Dev
Medicaid-Board-Medicaid-Board	1	Time length1	30.00	30.00	30	30	.
		Time length2	107.00	107.00	107	107	.
		Time length3	44.00	44.00	44	44	.
Medicaid-Medicaid	23	Time length1	51.74	30.00	13	152	42.07
		Time length2	.	.	.	.	.
		Time length3	.	.	.	.	.
Medicaid-Medicaid-Board	1	Time length1	34.00	34.00	34	34	.
		Time length2	151.00	151.00	151	151	.
		Time length3	.	.	.	.	.
Medicaid-Medicaid-Medicaid	2	Time length1	21.00	21.00	12	30	12.73
		Time length2	38.00	38.00	29	47	12.73
		Time length3	.	.	.	.	.

A total of only 2,941 clients in the dataset received publicly funded services between July 1, 2019 through December 31, 2019. Of these, 1,399 clients started out with the ADAMHS Board funding, and 1,542 started out with the Medicaid funding.

Table 6.2.26 shows that there were 12 different sequence types. In this analysis, a sequence is defined as a pattern of moving from one form of primary payer to another.

There were two sequences where the primary payer does not change; that is, those who remained on the ADAMHS Board as the primary payer only, and those who remained on Medicaid as the primary payer only. In all, 1,242 clients out of 1,399 remained on ADAMHS Board as the primary payer, and 1,433 clients out of 1,542 remained Medicaid as the primary payer during the entire study period.

Six types of sequence involved a transition from ADAMHS Board to Medicaid (shaded in the table). 117 clients transitioned once from ADAMHS Board to Medicaid (see Board-Medicaid), and the average length before the transition was 47.9 days. 32 clients transitioned from ADAMHS Board to Medicaid to ADAMHS Board (see Board-Medicaid-Board), and the average length before the first transition was 59.34 days, and the average length before the second transition was 46.16 days.

Four clients transitioned from ADAMHS Board to Medicaid to ADAMHS Board to Medicaid (see Board-Medicaid-Board-Medicaid), and the average lengths before each transition were: 37.75 days, 49.50 days, and 28.50 days, respectively. Four clients transitioned from ADAMHS Board to Medicaid to Medicaid (see Board-Medicaid-Medicaid), and the average lengths before each transition were: 77.75 days and 56.25 days.

Eight people transitioned from Medicaid to ADAMHS Board to Medicaid (see Medicaid-Board-Medicaid), and the average lengths before each transition were: 51.13 and 67.75 days. Finally, only one client transitioned from Medicaid to ADAMHS Board to Medicaid to ADAMHS Board (see Medicaid-Board-Medicaid-Board), and the lengths before each transition were: 30 days, 107 days, and 44 days. The overall average of all transitions from the ADAMHS Board to Medicaid was 71.43 days.

This analysis of the funding sequences was conducted to respond to the question: Are clients moving into the Medicaid roles over time or do they remain board funded? The answer, as illustrated in Table 6.2.26, is straight-forward, in that publicly funded clients did not move to Medicaid from ADAMHS Board as the primary payer. In all, 1,242 people remained on ADAMHS Board as the primary payer. Only 166 clients moved from ADAMHS Board to Medicaid as the primary payer. Of these 166 clients, 37 came back to ADAMHS Board as the primary payer, and of these 166, 129 clients remained on Medicaid after moving from ADAMHS Board as the primary payer.

### **6.3 National Mental Health Services Survey (N-MHSS)<sup>201</sup>**

The National Mental Health Services Survey (N-MHSS), an annual survey of mental health treatment facilities within 50 states and the District of Columbia and the U.S. territories, has been conducted since 2014. In addition to collecting information on the services and characteristics of the facilities, the N-MHSS collects information on the characteristics of patients serviced by the facilities. This is the only data source at the national and state level that collects information from both private and public specialty mental health facilities.

In 2018, the N-MHSS collected information from 14,159 facilities throughout the U.S. This section summarizes the information on characteristics of mental health treatment facilities and characteristics of clients who received the services on April 20, 2018. Because the N-MHSS is based on clients who are in treatment, it is not a good data source for determining the prevalence of substance use or mental illness since not everyone who needs treatment gets it.

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<sup>201</sup> [https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/2017\\_National\\_Mental\\_Health\\_Services\\_Survey.pdf](https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/2017_National_Mental_Health_Services_Survey.pdf)



### 6.3.1 Facility characteristics and services

Table 6.3.1 shows that of the facilities that provided mental health services in 2018 in the U.S., 39.9% were outpatient mental health facilities, 21.9% were community mental health centers, 9.1% were general hospitals, 7.2% were residential treatment centers for adults, 5.9% were psychiatric hospitals, 5.0% were residential treatment centers for children, 3.3% were multi-setting mental health facilities, 3.1% were partial hospitalization/day treatment facilities, 3.9% were VA medical centers, and less than 1% were other types of facilities.

Table 6.3.1 Number and percentage distribution of type of facilities, 2018<sup>202</sup>

Type facilities	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total facilities	11,682	100.0%	563	100.0%
Psychiatric facilities	692	5.9%	23	4.1%
General hospitals	1,066	9.1%	43	7.6%
RTCs for children	580	5.0%	16	2.8%
RTCs for adults	840	7.2%	23	4.1%
Other types of residential treatment facilities	72	0.6%	2	0.4%
VA medical centers	459	3.9%	24	4.3%
Community mental health centers	2,553	21.9%	153	27.2%
Partial hospitalization/day treatment facilities	360	3.1%	11	2.0%
Outpatient mental health facilities	4,665	39.9%	239	42.5%
Multi-setting mental health facilities	382	3.3%	29	5.2%
Other	13	0.1%	-	-

Source: The N-MHSS, 2018

<sup>202</sup> Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Mental Health Services Survey (N-MHSS), 2018. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Of these facilities, Table 6.3.2 shows that 62.6% were private non-profit facilities, 18.3% were private for-profit facilities, 7.3% were regional/district authority facilities, 3.7% were other state government agency facilities, 3.5% were state mental health agency facilities, 4.3% were Department of VA facilities, and less than 1% were other types of facilities.

The N-HMSS 2018 indicates that 87% of facilities accept young adults age 18 to 25, 83% accept adults age 26 to 64, 80% accept seniors age 65 and older, 64% accept adolescents 13 to 17, 58% accept children age 12 or younger, and 43% accept all age groups.

Table 6.3.2 Number and percentage distribution of type of facility operations, 2018<sup>203</sup>

Type facility operations	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total facilities	13,688	100.0%	563	100.0%
Private for-profit	2,137	18.3%	80	14.2%
Private non-profit	7,311	62.6%	431	76.6%
Total public agency or department	2,234	19.1%	52	9.2%
State mental health agency (SMHA)	408	3.5%	12	2.1%
Other state government agency	438	3.7%	1	0.2%
Regional/district authority	848	7.3%	15	2.7%
Tribal government	13	0.1%	-	-
Indian Health Service	9	0.1%	-	-
Department of VA	516	4.4%	24	4.3%
Other	2	-	-	-

Source: The N-MHSS, 2018

<sup>203</sup> Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Mental Health Services Survey (N-MHSS), 2018. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Type payment and insurance accepted varies by the facility (see Table 6.3.3).

Table 6.3.3 Prevalence of type of payment or funding source by facility type, 2018<sup>204</sup>

	Total number of facilities	Cash or self-payment	Private health insurance	Medicare	Medicaid	State-financed health insurance	State mental health agency funds	State welfare or child and family services agency funds	State corrections or juvenile justice agency funds
Total	11,682	83.7%	80.8%	69.2%	88.5%	58.9%	57.3%	41.7%	30.1%
Psychiatric hospitals	692	91.3%	94.2%	87.9%	89.3%	62.6%	59.8%	36.0%	23.6%
Public	206	83.5%	91.3%	83.5%	85.9%	57.3%	69.4%	19.4%	17.5%
Private	486	94.7%	95.5%	89.7%	90.7%	64.8%	55.8%	43.0%	26.1%
General hospitals	1,066	95.3%	99.2%	97.8%	94.5%	71.5%	51.2%	26.3%	14.2%
RTC for children	580	60.5%	68.4%	10.3%	83.4%	47.1%	61.9%	71.7%	44.8%
RTCs for adults	840	72.6%	51.0%	50.8%	80.7%	39.9%	59.2%	16.7%	9.4%
Other types of residential treatment facilities	72	56.95%	54.2%	26.4%	76.4%	44.4%	54.2%	66.7%	37.5%
Veterans Administration medical centers	459	33.15%	59.7%	20.9%	15.9%	6.5%	2.2%	0.7%	0.2%
Community mental health centers	2,553	93.0%	88.5%	85.4%	97.9%	72.7%	78.8%	56.4%	47.2%
Partial hospitalization/day treatment facilities	360	82.5%	76.1%	51.7%	83.6%	46.7%	39.7%	23.9%	12.2%
Outpatient mental health facilities	4,665	84.45	79.8%	69.3%	91.7%	59.2%	52.3%	43.3%	30.8%
Multi-setting mental health facilities <sup>5</sup>	382	91.9%	84.3%	57.6%	87.4%	56.3%	58.9%	49.7%	37.4%
Other	13	100%	100%	92.3%	100.0%	69.2%	84.6%	30.8%	15.4%

<sup>204</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

	State education agency funds	Other state gov. funds	County or local gov. funds	Com- munity Service Block Grants	Com- munity Mental Health Block Grants	Federal military insurance	U.S. Dept. of Veterans Affairs funds	IHS/Tribal/U rban funds	Other
Total	17.2%	35.6%	47.4%	22.1%	31.4%	49.8%	23.1%	8.2%	0.8%
Psychiatric hospitals	17.8%	34.7%	37.7%	9.8%	15.2%	69.4%	40.9%	15.5%	0.1%
Public	13.1%	50.5%	33.5%	9.2%	13.6%	46.1%	25.2%	9.7%	--
Private	19.8%	28.0%	39.5%	10.1%	15.8%	79.2%	47.5%	17.9%	0.2%
General hospitals	7.7%	22.8%	33.8%	10.2%	13.9%	76.3%	37.3%	12.3%	0.3%
RTCs for children	50.0%	39.5%	42.4%	11.6%	13.4%	20.2%	2.9%	9.8%	0.5%
RTCs for adults	4.4%	29.4%	43.1%	15.6%	26.8%	13.6%	11.7%	6.1%	1.0%
Other types of residential treatment facilities	51.4%	37.5%	45.8%	19.4%	9.7%	15.3%	6.9%	9.7%	--
Veterans Administration medical centers	0.2%	0.9%	1.1%	1.1%	1.3%	54.5%	85.8%	2.2%	--
Community mental health centers	21.8%	50.5%	66.1%	40.4%	60.4%	62.9%	24.2%	6.7%	0.7%
Partial hospitalization/day treatment facilities	17.5%	15.3%	25.8%	11.1%	15.8%	33.9%	12.5%	3.6%	0.3%
Outpatient mental health facilities	15.3%	35.3%	48.8%	21.6%	29.3%	45.7%	16.8%	8.0%	1.1%
Multi-setting mental health facilities	27.0%	45.5%	54.5%	27.5%	33.2%	41.1%	14.9%	9.2%	0.5%
Other	7.7%	61.5%	92.3%	38.5%	53.8%	84.6%	7.7%	7.7%	23.1%

Source: The N-MHSS, 2018

According to the N-HMSS 2018 (see Table 6.3.4), the median number of clients per facility was 24 for inpatient, 15 for residential, and 182 for outpatient settings. Facilities varied in terms of the number of settings (inpatient, residential, or outpatient) and the median number of clients they serve.

Table 6.3.4 Median number of clients by type of facility, the U.S., 2018<sup>205</sup>

Type facility operation	Inpatient	Residential	Outpatient
Total	24	15	182
Psychiatric facilities	60	34	38
General hospitals	18	13	34
RTCs for children	14	22	5
RTCs for adults	9	10	5
Other types of residential treatment facilities	51	34	25
VA medical centers	16	38	383
Community mental health centers	19	13	292
Patricia hospitalization/day treatment facilities	18	1	39
Outpatient mental health facilities	17	11	190
Multi-setting mental health facilities	32	21	100
Other	16	0	954

Source: The N-MHSS, 2018

<sup>205</sup> Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Mental Health Services Survey (N-MHSS), 2018. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

### 6.3.2 Inpatient settings

A total of 129,115 clients received mental health treatment services in inpatient settings in 2018 in the United States (see Table 6.3.5).

Males (58.5%) were more likely than females to receive mental health treatment services in in-patient settings. Most clients who received mental health treatment services in in-patient settings at VA medical centers (92.6%) and public psychiatric hospitals (73%) were males. Of clients who received mental health treatment services in in-patient settings, 13.7% of them were age 17 or younger, 72.7% were age 18 to 64, and 13.6% were age 65 or older. VA served a much older age group than other services where 24.4% of clients were age 65 or older. Of the clients whose race was identified, 66.9% were whites and 22.3% were black or African Americans.

Table 6.3.5 Estimates of clients receiving mental health treatment services in inpatient settings on April 30, 2018, the U.S.<sup>206</sup>

Total clients in inpatient settings		Number of clients	Percentage distribution
		129,115	100.0%
Gender	Male	71,183	58.5%
	Female	50,594	41.5%
Age	0 to 17	16,657	13.7%
	18 to 64	88,552	72.7%
	65+	16,547	13.6%
Ethnicity	Hispanic or Latino	11,746	10.0%
	Not Hispanic or Latino	51,039	43.6%
	Unknown or not collected	54,346	46.4%
Race	American Indian Alaskan Native	764	0.7%
	Asian	1,482	1.3%
	Black or African American	17,326	14.9%
	Native Hawaiian or other pacific islander	463	0.4%
	White	35,370	31.5%
	Two or more races	3,237	2.8%
	Unknown or not collected	57,399	49.5%
Legal status	Voluntary	49,534	42.7%
	Involuntary- Non forensic	47,791	41.2%
	Involuntary-Forensic	18,802	16.2%

Source: The N-MHSS, 2018

<sup>206</sup> Source: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Mental Health Services Survey (N-MHSS), 2018. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

### 6.3.3 24-hour residential treatment settings

A total of 58,762 clients received mental health treatment services in 24-hour residential treatment settings in 2018 in the United States (see Table 6.3.6).

Males (61.3%) were once again more likely than females to receive mental health treatment services in 24-hour residential treatment settings. Of clients who received mental health treatment services in 24-hour residential treatment settings, 45.2% of them were age 17 or younger, 49.3% were age 18 to 64, and 5.5% were age 65 or older. Of the clients whose race was identified, 40.8% were whites and 19.1% were black or African Americans.

Table 6.3.6 Estimates of clients receiving mental health treatment services in 24-hour residential treatment setting on April 30, 2018, the U.S.<sup>207</sup>

Total clients in 24-hour residential treatment		Number of clients	Percentage distribution
		58,762	100.0%
Gender	Male	34,388	61.3%
	Female	21,733	38.7%
Age	0 to 17	25,269	45.2%
	18 to 64	27,552	49.3%
	65+	3,101	5.5%
Ethnicity	Hispanic or Latino	5,519	10.2%
	Not Hispanic or Latino	32,162	59.6%
	Unknown or not collected	16,260	30.1%
Race	American Indian Alaskan Native	1,010	1.8%
	Asian	605	1.1%
	Black or African American	10,421	19.1%
	Native Hawaiian or other pacific islander	146	0.3%
	White	22,290	40.8%
	Two or more races	2,888	5.3%
	Unknown or not collected	17,299	31.6%
Legal status	Voluntary	39,307	71.6%
	Involuntary- Non forensic	10,467	19.1%
	Involuntary-Forensic	5,142	9.4%

Source: The N-MHSS, 2018

<sup>207</sup> Table 6.3.6. Estimates of clients receiving mental health treatment services in inpatient settings on April 30, 2018, the U.S. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

### 6.3.4 24-hour outpatient or partial hospitalization/day treatment setting

A total of 3,937,407 clients received mental health treatment services in 24-hour outpatient or partial hospitalization/day treatment settings in 2018 in the United States (see Table 6.3.7).

Males (51.1%) were more likely than females to receive mental health treatment services in 24-hour outpatient or partial hospitalization/day treatment settings. Of clients who received mental health treatment services in 24-hour outpatient or partial hospitalization/day treatment settings, 25.8% of them were age 17 or younger, 63.0% were age 18 to 64, and 11.2% were age 65 or older. Of the clients whose race was identified, 45.2% were whites and 15.1% were black or African Americans.

Table 6.3.7 Estimates of clients receiving mental health treatment services in inpatient settings on April 30, 2018, the U.S.<sup>208</sup>

Total clients in 24-hour outpatient or partial hospitalization/day treatment		Number of clients	Percentage distribution
		3,937,407	100.0%
Gender	Male	1,792,051	51.1%
	Female	1,714,789	48.9%
Age	0 to 17	902,665	25.8%
	18 to 64	2,202,583	63.0%
	65+	390,082	11.2%
Ethnicity	Hispanic or Latino	446,306	13.0%
	Not Hispanic or Latino	1,979,912	57.7%
	Unknown or not collected	1,005,421	29.3%
Race	American Indian Alaskan Native	44,503	1.3%
	Asian	47,329	1.4%
	Black or African American	511,483	15.1%
	Native Hawaiian or other pacific islander	15,526	0.5%
	White	1,533,224	45.2%
	Two or more races	139,766	4.1%
	Unknown or not collected	1,533,224	32.4%
Legal status	Voluntary	3,258,732	95.9%
	Involuntary- Non forensic	84,909	2.5%
	Involuntary-Forensic	55,973	1.6%

Source: The N-MHSS, 2018

<sup>208</sup> Table 6.3.7. Estimates of clients receiving mental health treatment services in inpatient settings on April 30, 2018, the U.S. <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>



## 6.4 National Survey on Substance use treatment Services (N-SSATS)

National Survey on Substance use treatment Services (N-SSATS) began collecting data on “the location, characteristics, and use<sup>209</sup> of both public and private alcohol and drug use treatment facilities and services throughout the 50 states, the District of Columbia, and other jurisdictions” since 1970. The N-SSATS is administered by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services.

The 2018 N-SSATS data reported here include data from March 30, 2018 through December 7, 2018. A total of 18,058 facilities were surveyed for the N-SSATS in 2018. Because the participating in this study is voluntary, the data do not include 100% of the facilities (about 8% non-responsive).

Table 6.4.1 shows that a large majority of facilities in operation in the U.S. for alcohol and drug use treatment are private facilities. Only about 6% of facilities for alcohol and drug use treatment were operated by local, county, or community governments.

In 2018, 464 facilities in Ohio reported to the N-SSATS (3.1% of all facilities). Of these facilities, a much larger percentage of all facilities in Ohio were private non-profit facilities (75.4%) than the percentage of this type of facility nationally. About 1.7% of facilities for alcohol and drug use treatment operated in Ohio were local, county, or community government facilities.

Table 6.4.1 Number and percentage distribution of facilities operation, 2018<sup>210</sup>

Facility operation	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total	14,809	100%	464	100%
Private non-profit	7,642	51.6%	350	75.4%
Private for-profit	5,584	37.7%	82	17.7%
Local, county, or community government	690	4.7%	8	1.7%
State government	304	2.1%	5	1.1%
Federal government	327	2.2%	19	4.2%

Source: National Survey on Substance use treatment Services, 2018

<sup>209</sup> <https://www.dasis.samhsa.gov/dasis2/nssats/NSSATS-2018-R.pdf>

<sup>210</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Nationally and statewide, as Table 6.4.2 shows, the vast majority of substance use treatment facilities offered outpatient treatment (82.0% for the U.S. and 88.8% for Ohio), followed by residential (non-hospital) treatment (23.6% for the U.S. and 22.4% for Ohio), and hospital inpatient treatment (5.3% for the U.S. and 5.6% for Ohio).

The percentage of facilities that provide MAT has increased over time. Table 6.4.2 shows that 27.6% of facilities in the U.S. and 40.3% of facilities in Ohio offered outpatient methadone/buprenorphine maintenance or naltrexone treatment.

More detailed MAT treatment information is shown in Table 6.4.2 for both the U.S. as a whole and Ohio. About 33% of facilities nationally and 46.3% of facilities statewide provide some buprenorphine services and 28% of facilities nationally and 46.3% of facilities statewide offered any extended release injectable naltrexone treatment in 2018. Overall, the prevalence of facilities that offer MAT is higher in Ohio than the national prevalence, though the prevalence of facilities that offer opioid treatment programs (OTPs) is lower in Ohio than the national prevalence. Facilities that offer OTPs have also increased over time, however.

According to the SAMHSA (2018), “OTPs, certified by SAMHSA, provide medication-assisted therapy with Methadone, Buprenorphine, and Naltrexone<sup>211</sup>”. About 10.3% of facilities nationally and 6.0% of facilities in Ohio and provide OTPs offering methadone, buprenorphine, and injectable naltrexone in 2018.

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<sup>211</sup> <https://www.dasis.samhsa.gov/dasis2/nssats/NSSATS-2018-R.pdf>

Table 6.4.2 Number and percentage distribution of type of care offered, 2018<sup>212</sup>

Facility operation	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total	14,809	100%	464	100%
Outpatient total	1,411	71.8%	412	88.8%
Outpatient – Regular	11,394	76.9%	396	85.3%
Outpatient – Intensive	6,868	46.4%	273	58.8%
Outpatient - Day treatment or partial hospitalization	2,051	13.8%	73	15.7%
Outpatient – Detox	1,505	10.2%	54	11.6%
Outpatient - Methadone/buprenorphine maintenance or naltrexone treatment	4,087	27.6%	187	40.3%
Residential (non-hospital) total	3,500	23.6%	104	22.4%
Residential – Detox	84	5.5%	25	5.4%
Residential – Short-term treatment	96	6.3%	60	12.9%
Residential – Long-term treatment	76	5.0%	79	17.0%
Hospital inpatient total	785	5.3%	26	5.6%
Hospital inpatient – Detox	116	7.6%	23	5.0%
Hospital inpatient – Treatment	89	5.9%	18	3.9%

Source: National Survey on Substance use treatment Services, 2018

<sup>212</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.4.3 shows that a higher percentage of facilities in Ohio offered pharmacotherapy services for substance use treatment overall than the percentage nationally that offered such services. The most popular pharmacotherapy that almost half of facilities in Ohio offered in 2018 is medications for psychiatric disorders.

For substance use, many facilities offered Vivitrol (46.3%), followed by Revia (45.0%), Suboxone (41.2%), nicotine replacement (30.6%), Buprenorphine without Naloxone (28.2%), and Campral (23.9%).

Table 6.4.3 Number and percentage distribution of type of pharmacotherapies offered, 2018<sup>213</sup>

Facility operation	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total	14,809	100%	464	100%
Any MAT type	6,259	42.3%	256	55.2%
Total OTPs	1,519	10.3%	28	6.0%
Total buprenorphine	4,951	33.4%	199	42.9%
Total injectable naltrexone	4,178	28.2%	215	46.3%
Disulfiram (Antabuse®)	2,876	19.4%	84	18.1%
Naltrexone oral tablets (Revia®)	4,291	29.0%	209	45.0%
Extended-release injectable naltrexone (vivitrol®)	4,178	28.2%	215	46.3%
Acamprosate (Campral®)	3,039	20.5%	111	23.9%
Nicotine replacement	4,153	28.0%	142	30.6%
Non-nicotine smoking/tobacco cessation medication	3,302	22.3%	107	23.1%
Medications for psychiatric disorders	6,616	44.7%	225	48.5%
Methadone	1,447	9.8%	23	5.0%
Buprenorphine with naloxone (Suboxone®)	4,689	31.7%	191	41.2%
Buprenorphine without naloxone	3,140	21.2%	131	28.2%
Buprenorphine subdermal implant (Probuphine®)	296	2.0%	10	2.2%
Buprenorphine extended-release injectable	588	4.0%	29	6.3%
No pharmacotherapy services offered	8,550	57.8%	148	31.9%

Source: National Survey on Substance use treatment Services, 2018

<sup>213</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.4.4 shows the payment options and percentage of facilities in the U.S. and Ohio that accept each type of payment option.

Medicaid was accepted by 65.5% of facilities in the U.S. and 88.6% of facilities in Ohio, and Medicare was accepted by 35.8% of facilities in the U.S. and 50.0% of facilities in Ohio in 2018.

About 58.4% of facilities in the U.S. and 73.1% of facilities in Ohio indicated that they use a sliding fee scale, and 44.9% of facilities in the U.S. and 61.4% of facilities in Ohio indicated that they offer treatment at no cost for individuals who cannot afford to pay for the treatment.

Over half of facilities (53.0% in the U.S. and 67.9% in Ohio) received government funds for substance use treatment, including 87% of local government operated facilities and 72% of private non-profit facilities in the U.S.

Table 6.4.4 Number and percentage distribution of type of payments accepted, 2018<sup>214</sup>

Facility operation	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total	14,809	100%	464	100%
Cash or self-payment	13,297	89.8%	431	92.9%
Private health insurance	10,560	71.3%	349	75.2%
Medicare	5,297	35.8%	232	50.0%
Medicaid	9,706	65.5%	411	88.6%
State-financed health insurance	7,081	36%	210	45.3%
Federal military insurance	5,265	35.6%	200	43.1%
No payment accepted	443	3.0%	5	1.1%
HIS/trivial/urban funds	1,470	9.9%	6	1.3%
Other	86	0.6%	1	0.2%
Sliding scale	8,652	58.4%	339	73.1%
Treatment at no or min charge for clients who cannot pay	6,643	44.9%	285	61.4%

Source: National Survey on Substance use treatment Services, 2018

<sup>214</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.4.5 shows the number and percentage distribution of facilities in the U.S. and Ohio that offer special programs or groups for specific types of clients.

Almost half of facilities in Ohio (46.1%) offer special programs or groups for clients with co-occurring disorders in 2018. About 19.0% of facilities in Ohio (19.0%) offered special programs or groups for pregnant or post-partum women, and a quarter of facilities (27.2%) offered special programs or groups for adolescents. 33.4% of facilities in Ohio offered special programs or groups for trauma patients and 17.5% offered special programs or groups for sexual abuse victims.

Table 6.4.5 Number and percentage distribution of facilities that offer special programs or groups for specific client types in the U.S. and Ohio, 2018<sup>215</sup>

Facility operation	U.S.		Ohio	
	Number of facilities	Percentage distribution	Number of facilities	Percentage distribution
Total	14,809	100%	464	100%
Clients with co-occurring disorders	7,437	50.2%	214	46.1%
Adult women	7,239	48.9%	205	44.2%
DUI/DWI clients	3,768	25.4%	41	8.8%
Adolescents	3,752	25.3%	126	27.2%
Adult men	6,934	48.8%	179	38.6%
Criminal justice clients	5,191	35.1%	163	35.1%
Trauma patients	5,850	39.5%	155	33.4%
Pregnant or post-partum women	3,450	23.3%	88	19.0%
Clients with HIV or AIDS	2,685	18.1%	35	7.5%
Veterans	2,876	19.4%	60	12.9%
Seniors or older adults	3,046	20.6%	43	9.3%
LGBT	2,947	19.9%	55	11.9%
Active duty military	1,610	10.9%	23	5.0%
Members of military families	1,821	12.3%	32	6.9%
Young adults	4,420	29.8%	103	22.2%
Sexual abuse victims	3,833	25.9%	81	17.5%
IPV/domestic violence victims	3,821	25.8%	75	16.2%
Other	590	4.0%	21	4.5%
No program or group offered	2,519	17.0%	88	19.0%

Source: National Survey on Substance use treatment Services, 2018

<sup>215</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

## **6.5 Treatment Episode Data Set: Admissions (TEDS-A) and Treatment Episode Data Set: Discharges (TEDS-D)**

The Treatment Episode Data Set (TEDS) is an annual survey of alcohol and drug use treatment admissions and discharges collected from 50 states and the District of Columbia and the U.S. territories. The TEDS is administered by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services.

The TEDS for admissions and discharges collect information about alcohol and drug use treatment clients age 12 and older. Each record represents a treatment episode rather than a client and many clients are represented in more than one episode in the TEDS.

The TEDS collects information from only the facilities that are “licensed or certified by a state substance abuse agency” for substance use treatment, mainly those facilities that received public funding. TEDS report both national and state level data. This chapter primarily focuses on the TEDS-A (admissions) data.

Table 6.5.1 shows the number and percentage distribution of admissions by primary substance use for the U.S. and Ohio.

The table shows that there was a total of 2,005,395 admissions to substance use treatment facilities in the U.S. in 2017. In Ohio, there was a total of 48,547 admissions to substance use treatment facilities in 2017.

As the table shows, the largest proportion of admissions to substance use treatment facilities was for heroin use (26.6% for the U.S. and 31.3% for Ohio), followed by alcohol use (16.6% for the U.S. and 12.2% for Ohio) and marijuana/hashish (12.5% for the U.S. and 17.7% for Ohio).

Table 6.5.1 Number and percentage distribution of substance use treatment admissions among age 12 and older by primary substance use in the U.S. and Ohio, 2017<sup>216</sup>

Admissions among age 12 and older	U.S.		Ohio	
	Number of admissions	Percentage distribution	Number of admissions	Percentage distribution
Total	2,005,395	100.0%	48,547	100%
Alcohol only	333,732	16.6%	5,888	12.2%
Alcohol with secondary drug	256,949	12.8%	5,921	12.2%
Drug only	1,061,865	53.0%	-	-
Drug with secondly alcohol	260,092	13.0%	-	-
Heroin	533,394	26.6%	15,209	31.3%
Other opiates/synthetics	148,680	7.4%	4,758	9.8%
Cocaine	102,482	5.1%	3,502	7.2%
Marijuana/hashish	250,786	12.5%	8,607	17.7%
Stimulants	239,852	12.0%	2,139	4.4%
Tranquilizers	19,894	1.0%	300	0.6%
Sedatives/hypnotics	3,460	0.2%	49	-
Hallucinogens	2,225	0.1%	40	-
PCP	5,341	0.3%	77	-
Inhalants	918	-	22	-
Over the counter	813	-	-	-
Other	14,112	0.7%	2,035	4.2%
None reported	92,757	4.6%	-	-

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>216</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>



Table 6.5.2 shows the basic socio-demographic characteristics of patients admitted to substance use treatment facilities in 2017 in the U.S. and Ohio.

The table shows that males were more likely than females to be admitted to substance use treatment facilities in both the U.S. and Ohio. Most admissions to substance use treatment facilities were among people age 25 to 64.

Over half of all admissions for substance use treatment in the U.S. and Ohio in 2017 were non-Hispanic white patients. Those who were unemployed or not in the labor force made up more than half of all admissions in both the U.S. and Ohio in 2017.

Table 6.5.2 Number of percentage distribution of substance use treatment admissions among age 12 and older by demographic characteristics in the U.S. and Ohio, 2017<sup>217</sup>

Admissions among age 12 and older		U.S.		Ohio	
		Number of admissions	Percentage distribution	Number of admissions	Percentage distribution
Gender	Number of admissions	2,002,847	100%	48,532	100%
	Male	1,290,162	64.4%	29,090	59.9%
	Females	711,619	35.5%	19,442	40.0%
Age	Number of admissions	2,005,395	100%	48,547	100%
	12-17	75,950	3.8%	2,208	4.5%
	18-24	257,025	12.8%	7,232	14.9%
	25-64	1,645,779	82.2%	38,783	79.9%
	65+	24,093	1.2%	324	0.7%
Race/ethnicity	Number of admissions	1,970,294	100%	47,663	100%
	White (non-Hispanic)	1,194,597	62.6%	36,191	75.9%
	Black (non-Hispanic)	343,517	17.5%	9,304	19.2%
	Hispanic	278,040	14.1%	1,230	2.5%
	American Indian/Alaska Native	41,752	2.1%	94	-
	Asian Pacific Islander	20,311	1.0%	146	0.3%
	Other	89,536	4.6%	698	1.4%
Employment status	Number of admissions	1,536,079	100%	44,915	100%
	Full time work	447,322	17.8%	8,272	18.4%
	Part time work	315,821	7.4%	3,585	8.0%
	Unemployed	131,501	38.0%	21,568	48.0%
	Not in labor force	673,041	36.7%	11,940	25.6%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>217</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.3 shows that nationally, most admissions were people who had 9 to 11 years of education (71.9%). Homeless people made up 0.9% of total admissions, pregnant women made up 1.4% of all female admissions, and veterans made up 2.9% of all admissions for substance use treatment in 2017.

Table 6.5.3 Number of percentage distribution of substance use treatment admissions among age 12 and older by socio-economic characteristics in the U.S., 2017<sup>218</sup>

Treatment episode among age 12 and older	U.S.		
		Number of admissions	Percentage
Education level	Total	67,868	100%
	0-8 years	15,534	22.9%
	9-11 years	48,831	71.9%
	12 years+	3,503	5.2%
Total	68,101	100%	
Homeless	623	0.9%	
Total	20,931	100%	
Pregnant women	299	1.4%	
Total	1,677,846	100%	
Veterans	48,838	2.9%	

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>218</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.4 shows frequency of substance use, route of administration, and number of previous treatments received among patients admitted to substance use treatment facilities in the U.S. in 2017.

As the table shows, the frequency of use was evenly distributed among those admitted to substance use treatment facilities.

Of the route of administration of substance, smoking (44.2%) and oral (31.5%) routes of administration were most frequency cited among patients admitted to substance use treatment facilities in 2017.

The table also shows that the first-time patients (36.1%) was the largest proportion of admitted patients, followed by once before (23.3%) and five or more (14.8%).

Table 6.5.4 Number of percentage distribution of substance use treatment admissions among age 12 and older by type of substance use in the U.S., 2017<sup>219</sup>

Treatment admissions among age 12+		U.S.	
		Number of admissions	Percentage distribution
Frequency of use	Total	1,022,403	100.0%
	No use	329,849	32.3%
	Some use	384,219	37.6%
	Daily use	308,335	30.2%
Route of administration	Total	1,036,400	100.0%
	Oral	326,180	31.5%
	Smoking	457,731	44.2%
	Inhalation	123,096	11.9%
	Injection	121,879	11.8%
	Other	7,514	0.7%
Number of previous treatments	Total	1,729,583	100.0%
	None	624,506	36.1%
	1	402,301	23.3%
	2	226,711	13.1%
	3	138,885	8.0%
	4	81,206	4.7%
	5 or more	255,974	14.8%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>219</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.5 shows the number of treatment referral source for admissions to substance use treatment facilities in 2017 in the U.S. As the table shows, almost half of all admissions (42.7%) were self or individual referred admissions, and more than a quarter of all admissions (28.3%) were court or criminal justice system referred admissions.

Table 6.5.5 Number and percentage distribution of substance use treatment admissions among age 12 and older by treatment referral source in the U.S., 2017<sup>220</sup>

Treatment admissions among age 12 and older	Number of admissions	Percentage distribution
Total number of admissions	1,934,200	100%
Self or individual	826,104	42.7%
Court/criminal justice system	546,635	28.3%
Other community referral	229,041	11.8%
Substance use care provider	193,424	10.0%
Other health care provider	117,264	6.1%
School	13,943	0.7%
Employer/EAP	7,789	0.4%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>220</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.6 shows the number of admissions to substance use treatment facilities in the U.S. and Ohio in 2017 by the type of facilities.

There are three major types of facilities: ambulatory, rehabilitation/residential, and detoxification (shaded in the table). Each of these three major facility types has more specific facility types listed below in the table.

In both the U.S. (62.0%) and Ohio (69.9%), ambulatory type facility had the highest frequency of admissions for substance use treatment. Of the ambulatory type facility, outpatient had the most frequent admission for substance use treatment in both U.S. (48.4%) and Ohio (52.3%). Compared to the national prevalence (20.2%), Ohio (7.4%) had smaller proportion of admissions to a detoxification facility for substance use treatment.

Table 6.5.6 Number and percentage distribution of substance use treatment admissions among age 12 and older by type facilities in the U.S. and Ohio, 2017<sup>221</sup>

Treatment episode among age 12 and older	U.S.		Ohio	
	Number of admissions	Percentage distribution	Number of admissions	Percentage distribution
Number of admissions	2,005,395	100.0%	48,547	100%
Ambulatory total	182,586	62.0%	33,946	69.9%
Outpatient	141,297	48.4%	25,413	52.3%
intensive outpatient	37,261	12.5%	7,827	16.1%
Detoxification	4,028	1.1%	976	2.0%
Rehabilitation/residential total	49,647	17.8%	10,991	22.7%
Short-term	28,791	9.4%	210	0.4%
Long-term	19,217	8.1%	4,439	9.1%
Hospital (non-detox)	1,639	0.4%	-	-
Detoxification (24 hour) total	101,499	20.2%	3,610	7.4%
Free-standing residential	86,165	16.4%	3,330	6.9%
Hospital inpatient	15,334	3.7%	280	0.6%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>221</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.7 shows the number of substance use treatment facility admissions by planned medication-assisted opioid therapy use for treatment in the U.S. in 2017. About 15.3% of admissions had planned medication-assisted opioid therapy treatment.

Table 6.5.7 Number and percentage distribution of substance use treatment admissions among age 12 and older by MAT in the U.S., 2017<sup>222</sup>

Treatment episode among age 12 and older	U.S.	
	Number of admissions	Percentage distribution
Number of admissions	1,912,535	100.00%
Planned medication-assisted opioid therapy – Yes	292,819	15.30%
Planned medication-assisted opioid therapy – No	1,619,716	84.70%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

Table 6.5.8 shows the number of substance use treatment facility admissions among age 12 and older by dual diagnoses in the U.S. in 2017. About 39.1% of all admissions involved patients with co-occurring mental and substance use disorders.

Table 6.5.8 Number and percentage distribution of substance use treatment admissions among age 12 and older by dual diagnosis in the U.S., 2017<sup>223</sup>

Treatment episode among age 12 and older	U.S.	
	Number of admissions	Percentage distribution
Number of admissions	1,618,467	100%
Co-occurring mental and substance use disorders - Yes	632,173	39.1%
Co-occurring mental and substance use disorders - No	986,294	60.9%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>222</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

<sup>223</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.9 shows the number of substance use treatment facility admissions among age 12 and older by the type of diagnosis in the U.S. in 2017.

The most frequently cited diagnosis among all admissions for substance use treatment was opioid dependence (33.1%), where almost 1 in 3 admissions was for this disorder. Alcohol dependence (19.4%) was the second most frequently cited diagnosis, and cannabis dependence (7.5%) was the third most frequently cited diagnosis among all admission to substance use treatment facilities.

Table 6.5.9 Number and percentage distribution of substance use treatment admissions among age 12 and older by diagnosis in the U.S., 2017<sup>224</sup>

Treatment episode among age 12 and older	Number of admissions	Percentage distribution
Number of admissions	1,171,875	100%
Alcohol dependence	227,160	19.4%
Alcohol abuse	46,621	4.0%
Alcohol-induced disorder	8,224	0.7%
Opioid dependence	388,008	33.1%
Opioid abuse	16,251	1.4%
Cocaine dependence	47,868	4.1%
Cocaine abuse	8,058	0.7%
Cannabis dependence	87,457	7.5%
Cannabis abuse	42,313	3.6%
Other substance dependence	90,548	7.7%
Other substance abuse	15,890	1.4%
Substance-induced disorder	35,771	3.1%
Anxiety disorders	3,306	0.3%
Depressive disorders	4,816	0.4%
Bipolar disorders	2,383	0.2%
Attention deficit/disruptive disorders	401	-
Schizophrenia/other psychotic disorders	1,300	0.1%
Other mental health condition	101,635	8.7%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>224</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>

Table 6.5.10 shows the frequency of admissions to substance use treatment facilities among age 12 and older by source of income/support for the clients, type of health insurance, and payment source in the U.S. in 2017.

Having no source of income or support (35.3%) was the most frequent “source of income” among admissions to substance use treatment facilities, followed by wages/salary (31.0%). About 6.9% of admissions to substance use treatment facilities reported disability as the source of income/support.

Among type of health insurance, almost half of all admissions to substance use treatment facilities indicated Medicaid as the type of health insurance (47.5%), followed by no insurance (35.1%). Finally, Medicaid (47.4%) had the largest proportion for expected/accrual primary source of payment among admissions to substance use treatment facilities, followed by other government payments (27.1%).

Table 6.5.10 Number and percentage distribution of substance use treatment admissions among age 12 and older by source of income, type of health insurance, and primary payment source in the U.S., 2017<sup>225</sup>

Source of income/support		Number of admissions	Percentage distribution
Source of income/support Type of health insurance	None	1,076,523	100%
	Wages/salary	380,218	35.3%
	public assistance	322,498	30.0%
	Disability	99,896	9.3%
	retirement/pension	74,710	6.9%
	Other	9,139	0.8%
	Number of admissions	190,062	17.7%
Type of health insurance Expected/actual primary source of payment	Private insurance	790,093	100%
	Medicare	64,950	8.2%
	Medicaid	17,160	2.2%
	HMO	375,580	47.5%
	Other	7,741	1.0%
	None	47,318	6.0%
	Number of admissions	277,344	35.1%
Expected/actual primary source of payment	Self-pay	718,274	100%
	Private insurance	60,557	8.4%
	Medicare	45,582	6.3%
	Medicaid	9,442	1.3%
	Other government payments	340,376	47.4%
	Worker's compensation	194,847	27.1%
	No charge	61	-
	Other	18,016	2.5%

Source: Treatment Episode Data Set: Admissions (TEDS-A), 2017

<sup>225</sup> <https://www.samhsa.gov/data/report/national-mental-health-services-survey-n-mhss-2018-data-mental-health-treatment-facilities>



## 6.6 Conclusion

This chapter first reviewed publicly funded client data provided by the ADAMHS Board. This chapter then reviewed the National Survey on Substance use treatment Services (N-SSATS), Treatment Episode Data Set: Admissions (TEDS-A), and Treatment Episode Data Set: Discharges (TEDS-D).

### Publicly funded client data

- The publicly funded client dataset contained the information on 207 agencies with a total of 694,884 service entries for a total of 33,601 clients for 2019.
- Males and females were equally distributed; blacks or African Americans represented the largest proportion of clients; and single/never married clients constituted the largest group of the clients, while “married/living together as married” clients constituted a relatively small proportion of the clients. The mean age of clients was 38.21 (with a standard deviation of 18.0) with the peak age at around age 11 to 20.

Three major analyses of the publicly funded client records in the dataset requested by the ADAMHS Board were reported.

### ***Gap in service delivery:***

- Of the 13,458 clients, 5,013 received services funded by the ADAMHS Board only (37.2%), 6,200 received services funded by Medicaid only (46.1%), and 2,245 received serviced funded by both the ADAMHS Board and Medicaid (16.7%).
- Of the 13,458 clients, 4,139 received services for substance use disorder (SUD) only (31.8%), 8,345 received mental health (MH) services only (66.5%), and 374 received services for both (2.8%).
- The ADAMHS Board is more likely to fund MH services (67.7%) than SUD services (30.4%), while Medicaid is even more likely to fund MH services (87.5%) than SUD services (11.8%). When services are funded by both the ADAMHS Board and Medicaid, it is more likely for SUD services (83.9%) than for MH services (5.6%).

- Of the 15,860 uninsured and 19,186 on Medicaid age 12 and older in Cuyahoga County who had SUD in the past year (see Table 6.2.6), only a small fraction of them received any service for substance use funded by the ADAMHS Board (N=1,619), Medicaid (N=774), or both (N=2,116) – these numbers include both SUD only and both SUD and MH clients.
  
- Of the 26,963 uninsured and 42,968 on Medicaid age 18 and older in Cuyahoga County who had any mental illness, or of the 7,730 uninsured and 12,848 on Medicaid in Cuyahoga County who had serious mental illness, only a small percentage received treatment for mental illness funded by the ADAMHS Board (N=3,490), Medicaid (5,467), or both (N=362) – once again these numbers include both MH and SUD and MH clients.
  
- More specifically by age group:
  - An estimated 1,481 youth age 12 to 17 with SUD could benefit from publicly funded services but did not receive treatment.
  
  - An estimated 30,443 adults age 18 to 64 with SUD could benefit from publicly funded services but did not receive treatment.
  
  - An estimated 7,410 adults age 65 and older with SUD could benefit from publicly funded services but did not receive treatment.
  
  - An estimated 14,978 adults age 18 to 64 with serious mental illness could benefit from publicly funded services for mental health but did not receive treatment.
  
  - An estimated 0 adult age 65 and older with serious mental illness could benefit from publicly funded services but did not receive treatment. However, the numbers of adults age 65 and older who had any mental illness or a major depressive episode (MDE) in Cuyahoga County who could benefit publicly funded services for mental health are much higher.

### ***Equitable service delivery:***

- Of 13,458 publicly funded clients in the dataset for 2019, 37.3% of them had services that were funded by the ADAMHS Board only, and 46.1% of clients were funded by Medicaid only, and the remaining 16.7% of clients had services funded by both the ADAMHS Board and Medicaid in 2019.
- Overall, the ADAMHS Board pays considerably more on services than Medicaid for each client, especially when the ADAMHS Board is the only payer.
- Males were more likely than females to receive services funded by the ADAMHS Board only and both ADAMHS Board and Medicaid. On the other hand, females were more likely than males to receive services funded by Medicaid.
- Of the three age groups, seniors age 65 and older were most likely to receive services that were funded by the ADAMHS Board. Children age 0 to 17 were least likely to receive services funded by the ADAMHS Board when client count is examined. Children age 0 to 17 are, on the other hand, were most likely to receive services funded by Medicaid.
- The client level data show that whites were more likely than blacks/African Americans or Asians to receive services that were funded by the ADAMHS Board. Blacks/African Americans were least likely among race groups to receive services that were funded by the ADAMHS Board. On the other hand, blacks/African Americans were most likely to among race groups to receive services that were funded by Medicaid.
- The high likelihood of services funded by Medicaid among blacks/African Americans might be explained by the fact that a very high proportion of African Americans are on Medicaid than the proportion of whites in Cuyahoga County.
- When examined service level data, blacks/African Americans were more likely than whites to receive services that were funded by the ADAMHS Board. The likelihood of receiving services that were funded by Medicaid was about the same for whites and blacks/African Americans.
- While at the individual client level, African Americans might be less likely than whites to receive services funded by the ADAMHS Board, each of the ADAMHS Board funded African Americans actually get more services per individual funded by the ADAMHS Board than whites.

- Hispanics and non-Hispanics were equally likely to receive services that were funded by the ADAMHS Board. They were also equally likely to receive services funded by Medicaid.

***Funding oversight:***

- Publicly funded clients did not move to Medicaid from ADAMHS Board as the primary payer. In all, 1,242 people remained on ADAMHS Board as the primary payer. Only 166 clients moved from ADAMHS Board to Medicaid as the primary payer. Of these 166 clients, 37 came back to ADAMHS Board as the primary payer. Of these 166, 129 clients remained on Medicaid after moving from ADAMHS Board as the primary payer.

**National Mental Health Services Survey (N-MHSS)**

- Of the facilities that provided mental health services in 2018 in the U.S., 39.9% were outpatient mental health facilities, 21.9% were community mental health centers, 9.1% were general hospitals, 7.2% were residential treatment centers for adults, 5.9% were psychiatric hospitals, 5.0% were residential treatment centers for children, 3.3% were multi-setting mental health facilities, 3.1% were partial hospitalization/day treatment facilities, 3.9% were VA medical centers, and less than 1% were other types of facilities.
- Inpatient settings: Nationally, a total of 129,115 clients received mental health treatment services in inpatient settings in 2018. Males (58.5%) were more likely than females to receive mental health treatment services in in-patient settings.
- 24-hour residential treatment settings: Nationally, a total of 58,762 clients received mental health treatment services in 24-hour residential treatment settings in 2018. Males (61.3%) were once again more likely than females to receive mental health treatment services in 24-hour residential treatment settings.
- 42-hour outpatient or partial hospitalization/day treatment settings: Nationally, a total of 3,937,407 clients received mental health treatment services in 24-hour outpatient or partial hospitalization/day treatment settings in 2018. Males (51.1%) were more likely than females to receive mental health treatment services in 24-hour outpatient or partial hospitalization/day treatment settings.

## **National Survey on Substance use treatment Services (N-SSATS)**

- Of 464 facilities, a larger percentage of all facilities in Ohio were private non-profit facilities (75.4%) than the percentage of this type of facility nationally. About 1.7% of facilities for alcohol and drug use treatment operated in Ohio were local, county, or community government facilities.
- The vast majority of substance use treatment facilities offered outpatient treatment (82.0% for the U.S. and 88.8% for Ohio), followed by residential (non-hospital) treatment (23.6% for the U.S. and 22.4% for Ohio), and hospital inpatient treatment (5.3% for the U.S. and 5.6% for Ohio).
- About 27.6% of facilities in the U.S. and 40.3% of facilities in Ohio offered outpatient methadone/buprenorphine maintenance or naltrexone treatment.
- A higher percentage of facilities in Ohio offered pharmacotherapy services for substance use treatment overall than the percentage nationally that offered such services.
- Medicaid was accepted by 88.6% of facilities in Ohio, and Medicare was accepted by 50.0% of facilities in Ohio in 2018. About 73.1% of facilities in Ohio indicated that they use a sliding fee scale, and 61.4% of facilities in Ohio indicated that they offer treatment at no cost for individuals who cannot afford to pay for the treatment. Over half of facilities (67.9% in Ohio) received government funds for substance use treatment.

## **Treatment Episode Data Set: Admissions (TEDS-A) and Treatment Episode Data Set: Discharges (TEDS-D)**

- In Ohio, there was a total of 48,547 admissions to substance use treatment facilities in 2017. The largest proportion of admissions to substance use treatment facilities was for heroin use (31.3% for Ohio), followed by alcohol use (12.2% for Ohio) and marijuana/hashish use (17.7% for Ohio).
- Males were more likely than females to be admitted to substance use treatment facilities in Ohio. Most admissions to substance use treatment facilities were among people age 25 to 64. Over half of all admissions for substance use treatment in Ohio in 2017 were non-Hispanic white patients. Those who were unemployed or not in the labor force made up more than half of all admissions in Ohio in 2017.

- Nationally, most admissions were people who had 9 to 11 years of education (71.9%). Homeless people made up 0.9% of total admissions, pregnant women made up 1.4% of all female admissions, and veterans made up 2.9% of all admissions for substance use treatment in 2017.
- Nationally, almost half of all admissions (42.7%) were self or individual referred admissions, and more than a quarter of all admissions (28.3%) were court or criminal justice system referred admissions.
- In Ohio (69.9%), ambulatory type facility had the highest frequency of admissions for substance use treatment.
- Nationally, having no source of income or support (35.3%) was the most frequent “source of income” among admissions to substance use treatment facilities, followed by wages/salary (31.0%). About 6.9% of admissions to substance use treatment facilities reported disability as the source of income/support.
- Nationally, almost half of all admissions to substance use treatment facilities indicated Medicaid as the type of health insurance (47.5%), followed by no insurance (35.1%). Finally, Medicaid (47.4%) had the largest proportion for expected/accrual primary source of payment among admissions to substance use treatment facilities, followed by other government payments (27.1%).

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## **CHAPTER 7: ASSESSMENT OF EVIDENCE-BASED INTERVENTION AND PRACTICE**

### **7.1 Background and Introduction**

Beginning in 2006, substance use and mental health providers have turned to the NREPP, developed by SAMHSA, for information on evidence-based practices. However, based on recent changes, SAMHSA is no longer a source for reliable information on evidence-based practices. As stated by Green-Hennessy, "...SAMHSA has recently replaced the National Registry of Evidence-Based Programs and Practices (NREPP) with its Evidence-Based Practices Resource Center, which is heavily populated by guidelines and contains a series of agency generated webpages which lack any reference to justify their assertion that various mental health treatments are evidence-based. Such actions appear to be at odds with the 21<sup>st</sup> Century Cures Act, which mandates that substance use and mental health prevention and treatment keep pace with science and that the Assistant Secretary provide on the agency's website a listing of evidence-based practice whose evaluation metrics have been made publicly available." (Green-Hennessy, 2018) (p.3).

Prior to its suspension, NREPP had served as a tool to assist organizations and providers in selecting interventions for the organizations. Initiated in 2006 with 25 interventions, NREPP had grown to over 300 interventions which met criteria by 2013 (Gillen et al., 2013).

Since SAMHSA is no longer a reliable resource, researchers drew upon research in the peer-reviewed literature to locate studies that would indicate the extent that an identified intervention or prevention modality was evidence-based, or had some evidence of being efficacious, and thus a promising practice. A complete review of the research supporting these interventions is beyond the scope of this report. Instead, researchers selected sources that appeared to be the most salient and current for a given intervention.

### **7.2 Survey of Executive Directors and Participants**

Of the 34 Executive Directors and Key Administrators, 26 responded to the question regarding evidence-based interventions for mental health interventions. It is important to note that some respondents' agencies may provide substance use treatment and prevention services only, and therefore would not respond to this question.

Overall, the interventions cited in surveys as being used in ADAMHS Board-funded agencies are either evidence-based or can be cited as having demonstrated some

efficacy and thus may be considered a solid, if not promising practice. The interventions reported in the surveys are divided into three groups; interventions that are:

- 1) evidence-based and are frequently used
- 2) evidence-based and are used by a few or one agency
- 3) promising practices, some with support in the research literature for their efficacy

In considering these rankings, it is important to note that many of the interventions in the second category have just as strong research demonstrating that they are an evidence-based intervention. Given the solid research supporting many of these interventions a case may be made for their wider use.

It is important to note that we did not exclude any intervention that respondents included in their survey. Additionally, we cannot guarantee that we have identified the intervention that respondents intended. For example, respondents may have listed an acronym only, or a shortened title for an intervention. In these few circumstances we did our best to determine the exact intervention and provide a full title and description.

After the initial grouping, interventions are listed in alphabetical order.

For those interventions listed as promising practices, it's possible that some are equally effective, and that research is needed to demonstrate their efficacy or benefits.

The following charts illustrate responses from Executive Directors and providers indicating the evidence-based interventions and prevention approaches at their agency. In reviewing these charts, it is important to note that there may be more than one respondent from a given agency, especially when considering provider responses. Nonetheless, the charts roughly illustrate the prevalence of evidence-based interventions at ADAMHS Board funded agencies. Additionally, we categorized the interventions as indicated in the surveys, meaning they may or may not accurately illustrate the goal or intent of an intervention. The charts, as well as the descriptions below, illustrate the scope of interventions reported.

Table 7.2.1 Mental Health Interventions and Preventions Used by Agencies, 2020

Intervention	Executive Directors (n=26)		Providers (n=55)		Group
	MH Intervention	MH Prevention	P MH Intervention	P MH Prevention	
12 Step AA NA			8	1	1
Art Therapy			1		3
Assertive Community Treatment	1		12		2
Bibliotherapy				1	3
Clubhouse Model	1		1		2
Cognitive Behavior Therapy	20		36	1	1
Cognitive Processing Therapy	1		14		2
Connections (Creating Lasting Connections)			1		2
Conscious Discipline	1		1	1	3
Contingency Management			1		2
Dialectical Behavior Therapy	6		16		1
Drop-in Model			1		2
ECMH (Early Childhood MH)				6	2
EMDR	6		11	2	1
Ending the Silence		1			2
Family Preservation			1		2
Family to Family		1	1		3
Filial Therapy	1		1		2
FIRST	1				
Flip It				1	
Gay Straight Alliance		1			2
Georgetown Consultation Model				1	
Gorski Relapse Prevention					3
Illness Management & Recovery	1			1	3
Incredible Years				1	
In our Own Voice		1			2
Insight				1	
Integrated Primary & Behavioral Healthcare	1				2
LEAP		1			3
Lions Quest					2
Living in Balance CBT				1	2
Locally Developed Model (Not specified)					
MAT					2
Mental Health Aid Training		1			2
MMPI Testing	1				3

	Executive Directors (n=26)		Providers (n=55)		Group
Intervention	MH Intervention	MH Prevention	P MH Intervention	P MH Prevention	
Motivational Interviewing	20		34	2	1
MST, IHBT	2		1		2
Needle Exchange Program					2
Neurofeedback					3
Parent Infant Massage	1		1		2
Parent Infant Psychotherapy			1		3
Parent Child Interaction Therapy					2
Parenting Strong Willed Children				1	
Peer Support/Peer to Peer		2	3	1	2
Play Therapy	1		1		3
Poison Prevention				1	
Preschool PTSD	1	1			2
Prolonged Exposure Therapy	1				2
Psycho-Education				1	3
Reality Therapy				1	
Reconnecting Youth					3
Role Play				1	
SBIRT		1			2
Seeking Safety			6		2
Self-Talk				1	
Sex Education in Schools				1	
Smoking Cessation					2
Social Emotional Learning		1			3
Social Model of Recovery	1	1			3
Social Support Prevention Approaches					
Solution Focused			21		2
Somatic Experiencing					3
Stewards of Children		1			2
Stress Reduction				1	
SUD Discovery	1				
TALK (Trusted Adults Listening to Kids)				1	
Thinking for a Change					2
Trauma Focused CBT	1	1	4	4	2
Trauma Informed Care/Trauma Groups			1	1	2
Triple P				1	2
Wellness, Meditation				1	2

Table 7.2.2 Substance Use Interventions and Preventions Used by Agencies, 2020

	Executive Directors (n =32)		Providers (n=57)		
Intervention	SA Intervention	SA Prevention	P SA Intervention	P SA Prevention	Group
12 Step AA NA	13		14		1
Art Therapy	1				3
Assertive Community Treatment					2
Bibliotherapy					3
Clubhouse Model					2
Cognitive Behavior Therapy	16	1	30		1
Cognitive Processing Therapy					2
Connections (Creating Lasting Connections)		1	1		2
Conscious Discipline					3
Contingency Management	1				2
Dialectical Behavior Therapy	3		17		1
Drop-in Model			1		2
ECMH (Early Childhood Mental Health)					2
EMDR					1
Ending the Silence					2
Family Preservation					1
Family to Family					2
Filial Therapy			1		3
FIRST					
Gay Straight Alliance		1			2
Gorski Relapse Prevention		1			3
Illness Management & Recovery	1				3
In our Own Voice					2
Insight					
Integrated Primary & Behavioral Healthcare					2
LEAP					3
Lions Quest		1			2
Living in Balance CBT		1			1
Locally Developed Model (Not specified)			1		
MAT		1	1		2
Mental Health Aid Training					2
MMPI Testing					3
Motivational Interviewing	18	1	28	1	1

	Executive Directors (n =32)		Providers (n=57)		
Intervention	SA Intervention	SA Prevention	P SA Intervention	P SA Prevention	Group
Needle Exchange Program		1			2
Neurofeedback					3
Parent Infant Massage					2
Parent Infant Psychotherapy	1				2
Parent Child Interaction Therapy (PCIT)					2
Peer Support/Peer to Peer	2				2
Play Therapy					3
Preschool PTSD					2
Prolonged Exposure Therapy					1
Psycho-Education					3
Reconnecting Youth				1	3
Role Play					
SBIRT					2
Seeking Safety	7		10		2
Sex Education in Schools					
Smoking Cessation	1				2
Social Emotional Learning					3
Social Model of Recovery	1				3
Social Support Prevention Approaches				1	
Solution Focused	6		17		2
Somatic Experiencing			1		3
Stewards of Children					2
Stress Reduction					
SUD Discovery		1			
TALK (Trusted Adults Listening to Kids)				1	
Thinking for a Change	1				2
Trauma Focused CBT					2
Trauma Informed Care	1		4		2
Wellness, Meditation			1		2

### **7.3 Evidence-Based Interventions as Reported in Surveys**

The most frequently reported evidence-based interventions were:

- Motivational Interviewing (76.9%)
- Cognitive Behavior Therapy (76.9%)

Following these were:

- 12-step self-help
- Solution-Focused Therapy
- EMDR
- Seeking Safety

Three respondents reported ACT was used at their agency.

Several evidence-based interventions were mentioned by one respondent, including:

- Prolonged Exposure Therapy
- Social Model of Recovery Housing
- Narcotics Anonymous (NA)
- Parent-Infant Psychotherapy
- MMPI testing
- Parent Infant Psychotherapy
- Multisystemic Therapy, or MST
- Trauma-Focused CBT (TFCBT)
- Preschool PTSD.

Respondents were asked what other evidence-interventions they provided. Here Gay Straight Alliance, Conscious Discipline, Filial Therapy, Play Therapy, Parent Infant Massage, Social Learning and Trauma Informed Care were mentioned.

### **7.4 Evidence-Based Interventions Most Frequently Used**

#### **7.4.1 AA, NA, 12 Step**

AA, NA, and other 12 Step models have beneficial effects predominantly by social, cognitive, and affective mechanisms. AA's original main text (the Big Book, 1939) proposes that recovery is achieved through quasi-religious/spiritual means. However, while this may be the case for some, AA, NA and other self-help groups appear to be an effective clinical and public health ally that aids addiction recovery through its ability to mobilize therapeutic mechanisms similar to those mobilized in formal treatment, but is



able to do this for free over the long term in the communities in which people live (Kelly et al., 2017) (Kelly et al., 2012).

#### **7.4.2 Cognitive Processing Therapy**

CPT is a manualized, trauma-focused psychotherapy which includes a primary component of exposure and/or cognitive restructuring. CPT is one of the trauma-focused psychotherapies with the strongest evidence from clinical trials, validated by research teams other than the developers. CPT has been shown to be effective in working with victims of rape and sexual assault in addressing their trauma (Regehr et al., 2013). Overall, CPT is effective in addressing the negative cognitions related to trauma (Holliday et al., 2018).

#### **7.4.3 Dialectical Behavior Therapy**

Dialectical Behavior Therapy (DBT) is a comprehensive, evidence-based treatment for borderline personality disorder (BPD). The client population for which DBT has the most empirical support include parasuicidal women with BPD, but there have been promising findings for clients with BPD and SUDs, persons who meet criteria for binge-eating disorder, and depressed elderly patients. Critical elements of DBT include serving the five functions of treatment; the biosocial theory and focusing on emotions in treatment; a consistent dialectical philosophy; and mindfulness and acceptance-oriented interventions. DBT has been shown to be effective in reducing suicidal behavior (DeCou et al., 2019); and to have sustained benefits over time (Lopez & Blanco, 2019). DBT may also be effective in working with individuals with intellectual disabilities (McNair et al., 2017). Finally, though alternative, related interventions were not mentioned in the survey, a recent review explored the active components of DBT, and suggests that similar interventions, such as schema-focused and mentalization-focused may have similar benefits in working with individuals with borderline personality disorder (Byrne & Egan, 2018).

#### **7.4.4 Eye Movement Desensitization and Reprocessing (EMDR)**

EMDR is one of the trauma-focused psychotherapies with the strongest evidence from clinical trials, validated by research teams other than the developers. EMDR incorporates imaginal exposure through narration and visualization to process the worst image, emotion, and negative cognition associated with the traumatic event, along with a more-healthy cognitive reappraisal with bilateral eye movements or other form of bilateral stimulation intended to create a dual awareness environment to facilitate

processing and relaxation (Schubert et al., 2011)(Letizia et al., 2007)(Rosas Uribe et al., 2010)(Seidler & Wagner, 2006).

#### **7.4.5 Motivational Interviewing**

Motivational Interviewing is an evidence-based intervention that address ambivalence to change. It is a way of interacting with clients and counseling that help resolve ambivalence that prevents clients from reaching their goals. Its effectiveness has been demonstrated through at least one meta-analysis of controlled clinical trials (Burke et al., 2003). <https://www.integration.samhsa.gov/clinical-practice/motivational-interviewing>

#### **7.4.6 Prolonged Exposure Therapy (PE)**

Prolonged Exposure Therapy is a manualized, trauma-focused psychotherapy which includes a primary component of exposure and/or cognitive restructuring. PE is one of the trauma-focused psychotherapies with the strongest evidence from clinical trials, validated by research teams other than the developers. PE emphasizes imaginal exposure through repeatedly recounting the traumatic narrative out loud (often in present tense eyes closed, reinforced by being asked to listen to an audio recording of the narrative process between treatment sessions). This is combined with in vivo exposure, and emotional processing of the narrative experience (Rizvi et al., 2009)(Nishith et al., 2002).

### **7.5 Evidence-Based Practices Less Frequently Used**

#### **7.5.1 Assertive Community Treatment (ACT)**

ACT is an evidence-based practice that improves outcomes for people with severe mental illness who are most at-risk of psychiatric crisis and hospitalization and involvement in the criminal justice system. It is one of the oldest and most widely researched evidence-based practices for persons with severe mental illness. ACT has been shown to improve engagement with care, having a direct impact on substance misuse (Morandi et al., 2017). There is strong evidence for its efficacy and cost effectiveness (Rosen A & Teesson M, 2001). Further, a clinical trial demonstrated that ACT increased the number of days clients were abstinent, when compared to the treatment as usual (TAU) group, though they reported a lower quality of life than the TAU group. The ACT group also had less unplanned healthcare. The TAU group had access to the full range of services during the clinical trial (Drummond et al., 2017).

### **7.5.2 Clubhouse Model**

The Clubhouse model has been in existence for over sixty-five years. It is a model of psychosocial rehabilitation that offers support to persons with mental illness and opportunities to find a job and return to a normal social life. The model is consistent with recovery practices with its emphasis on member choice, self-determination, community integration, equal partnerships with members and staff, offering hope, and helping individuals live a meaningful life (Bouvet et al., 2015). A systemic review demonstrated that Clubhouse members find more salaried work, find higher quality jobs, and have fewer hospitalizations than people in other psychosocial rehabilitation programs Bouvet. Peer-driven, recovery-oriented models of psychiatric rehabilitation are needed and expected as part of the supports for individuals living with mental illness. A recent systemic review assessed studies examining the following outcomes: employment, quality of life, hospitalizations social relationships, education and health promotion. Based on findings in a recent systemic review of the literature, Clubhouses are a promising practice. Additional studies using rigorous methods which report the strength of outcomes are needed to evaluate Clubhouse programs with fidelity (McKay et al., 2018).

### **7.5.3 Contingency Management (CM)**

Contingency Management is an evidence-based treatment for substance use disorder which consists of frequent drug testing, an extensive reward system, functional analysis of triggers for drug use, plans to address triggers for drug use, and drug refusal skill training. It has been used effectively with adolescents (Randall et al., 2018) and adults alike (Petry et al., 2014).

### **7.5.4 Early Childhood Mental Health (ECMH)**

ECMH is a generic term for a range of programs focusing on young children's mental health. These are services that can be provided in the home. The goal is to promote health socioemotional functioning in infants and young children and prevent longer term mental health challenges. A randomized control study found that preschool children had significant decrease across several domains of teacher-rated externalizing and problem behaviors and is a viable and potentially cost-effective means for providing mental health services for young children (Gilliam et al., 2016).

### **7.5.5 Ending the Silence (ETS)**

A study conducted in three high schools in California found that ETS can result in immediate and substantial improvements in mental health knowledge, and positive shifts in emotional responses and attitudes toward people with mental health challenges. ETS may be an important program provided by NAMI with respect to stigma reduction interventions in high school settings (Wong et al., 2015).

### **7.5.6 Family Preservation**

Family Preservation, or Intensive Family Preservation Services (IFPS) are in-home crisis intervention services designed to help families with children at imminent risk of out-of-home placement. A systemic review and meta-analysis found that there were significant reductions in relative risk of out-of-home placements in children who received IFPS compared with controls at three, six, 12- and 14- month follow-up. The available evidence suggests that IFPS are effective in preventing children from entering care up to 24 months after the intervention. Placement outcomes reported at family level did not demonstrate a significant reduction in out-of-home placements. The existing evidence further suggests that IFPS could be cost-saving though a full economic evaluation is needed (Bezeczky et al., 2020).

### **7.5.7 Filial Therapy**

There are three evidence-based models that fit the definition of filial therapy and are often used in clinical practice. These models are: Attachment and Biobehavioral Catch-up (ABC), Child-Parent Psychotherapy (CPP) and Parent-Child Interaction Therapy (PCIT). These three evidence-based models differ widely. They vary in terms of number of sessions, ages of children targeted, the therapeutic techniques used, equipment needed, and treatment goals (Horton et al., 2017). In Group Filial therapy, therapists train parents to conduct play sessions with their own children to help meet children's therapeutic needs, and to transfer appropriate skills to family life (Boyle-Toledo, 2019) (Guerney & Ryan, 2012).

### **7.5.8 Gay Straight Alliance**

Gay Straight Alliance are school clubs led by students with support from faculty sponsors, where students can talk, learn about and educate others on sexual orientation. There are currently at least 4,000 GSAs across the country. Research shows that students in GSAs report feeling greater self-esteem, an ability to accomplish goals, and an improved sense of purpose, agency, and empowerment (Poteat, 2016). In

a recent review, researchers noted that of all reviewed interventions, GSAs are supported by the most consistent evidence showing that they improve school climate and academic outcomes for LGBTQ youth. Specifically, GSAs reduced homophobic victimization (Parris & Stratford, 2019).

### **7.5.9 Family to Family (FTF)**

NAMI Family to Family is an 8-session educational program for family, significant others and friends of people with mental health conditions. It is identified by NAMI as an evidence-based practice. A recent study found that despite lack of a control group and small sample size, the FTF model was demonstrated to have efficacious benefits with a diverse urban population. Participants had improved family empowerment, family functioning, engagement in self-care activities, self-perception of mental health knowledge, and emotional acceptance as a form of coping (Mercado et al., 2016). An earlier study found that participants had improved family empowerment and worried less about their family member (Dixon et al., 2004)(Dixon et al., 2001).

### **7.5.10 Fostering Connections**

Fostering Connections is a manualized trauma-informed psychoeducational intervention. It is facilitated by two trained practitioners and one trained foster care parent, over six weeks in a community setting. The content is cumulative, based on information on trauma, attachment, fostering resilience and collaborative working. The format is based on experiential exercises, videos, demonstration role-play, discussion and at-home exercises. There is promising research evidence to support the effectiveness of Fostering Connections, though there is need for further research to support the program's effectiveness (Lotty et al., 2020).

### **7.5.11 In Our Own Voice**

In Our Own Voice is a knowledge-contact intervention that provides knowledge about mental illness to improve mental health literacy and facilitates intergroup contact with persons with mental illness as a means to reduce mental illness stigma. Findings to support the efficacy among adolescents who participated in In Our Own Voice to reduce stigma and improve mental health literacy are mixed as these outcomes were not improved at one-week follow-up. At 4 and 8 weeks, the intervention had improved mental health literacy (Pinto-Foltz et al., 2011). A systemic review of client led programs such as In Our Own Voice found that client-led programs can be equally as effective as traditional mental health services with equally positive outcomes (Doughty & Tse, 2011).

### **7.5.12 Learning Experiences – An Alternative Program for Preschoolers and Parents (LEAP)**

LEAP is a comprehensive, multi-component, educational program where small groups of children on the autism spectrum disorder are taught alongside a small number of typically developing children. LEAP is based on the idea that children on the autism spectrum disorder will learn better in integrated settings. A systemic review of such programs showed that they can be implemented at a fraction of the cost of specialized programs and have similar results in terms of addressing children's social, emotional and communication deficits (Naveed et al., 2019). Another study found that LEAP can improve children's academic performance (Boyd et al., 2014).

### **7.5.13 Lions Quest**

Lions Quest is a social and emotional learning program available for those who work with children and young adults. A study conducted across nine countries found that Lions Quest had a positive effect on participants, and that teachers benefited from continuous training on social and emotional learning (SEL). Successful SEL enables teachers and their students to face challenges more easily, inside and outside school (Talvio et al., 2019). Another study indicated that Lions Quest had a positive impact on school climate, students' behaviors, and conflict resolution skills (Gol-Guven, 2017).

### **7.5.14 Living in Balance (LIB)**

Living in Balance CBT is a research-based program developed by Hazelden that is designed to help practitioners deliver treatment programs to multiple clients at the same time. It contains 12 core sessions, 25 sessions for recovery management and 10 sessions for co-occurring disorders. Living in Balance was evaluated using an RCT design. When compared to 12-step only, LIB clients had fewer number of days of alcohol use and fewer number of days of cocaine use from intake to follow-up (Hazeldon, n.d.).

### **7.5.15 Medication Assisted Treatment (MAT)**

Medication assisted treatment (MAT) is the use of medications in combination with counseling and behavioral therapies for the treatment of substance use disorders. A combination of medication and behavioral therapies is effective in the treatment of substance use disorders and can help some people to sustain recovery (Bell & Strang, 2020).

### **7.5.16 Mental Health Aid Training**

Mental Health Aid Training's objective is to increase knowledge of mental health, enhance sensitivity, and raise confidence to intervene and assist individuals experiencing a mental health issue. A systemic review and meta-analysis examined the effects of the training on mental health knowledge, stigma and helping behavior. The review supported the effectiveness of Mental Health First Aid Training in improving mental health literacy and appropriate support for those with mental health problems, up to six months after training (Morgan et al., 2018).

### **7.5.17 Multisystemic Therapy (MST)**

Multisystemic therapy (MST) is an intensive home-based intervention for youths with psychosocial and behavioral problems. It is recommended under the National Institute for Health and Clinical Excellence guidelines for conduct disorder. A systemic review of MST found that MST is an efficacious intervention for severe antisocial behaviors in reducing delinquency and should be included in clinical practice. In the systemic review, four studies demonstrated that MST was less costly in the short term than treatment as usual. Further research is needed to assess cost over the long-term. MST was shown to have a positive effect on emotional disorder, but further research is needed to evaluate the efficacy of MST with emotional disorder (Tan & Fajardo, 2017).

### **7.5.18 Needle Exchange Program**

Based on a recent systemic review and meta-analysis pharmacy-based needle exchange programs appear to be effective in reducing risk behaviors among people who inject drugs. The program's effect on HIV/HCV prevalence and economic outcomes is unclear (Sawangjit et al., 2017). A more recent report in the American Journal of Public Health writes that there is "...overwhelming evidence that using a new syringe with every injection prevents injection-related blood-borne disease transmission. Additionally, there is promising research which suggests that distributing fentanyl test strips to people who inject drugs changes people's injection decisions. This enables safer drug use and reduces the risk of fatal overdose (Davis et al., 2019).

### **7.5.19 Parent Child Interaction Therapy (PCIT)**

Parent Child Interaction Therapy is a dyadic behavioral intervention for children from two to eight years of age, and their parents that focus on decreasing externalizing child behavioral problems, increasing child social skills and cooperation, improve children's emotional regulation, improving parent-child interactions intervention targeting parents'

socialization practices. A meta-analysis found PCIT to be an efficacious intervention for children with disruptive behavior disorders (Ward et al., 2016). Another study found that PCIT is efficacious in improving parenting behaviors but that there was limited evidence to suggest its efficacy in improving emotional regulation (England-Mason & Gonzalez, 2020).

### **7.5.20 Parent Infant Massage**

Infant massage is an ancient technique used across the globe. Research suggests that for infants in the NICU, can have shorter lengths of stay, reduced pain and improved weight gain. Parents performing infant massage in the NICU reported less stress, anxiety and depression (Afand et al., 2017) (Pados & McGlothen-Bell, 2019).

### **7.5.21 Preschool PTSD**

Preschool PTSD is a manualized, 12-session cognitive behavioral therapy protocol to treat very young children with PTSD and trauma related symptoms. It adapts many of the Trauma-Focused CBT components for use with younger children, ages 3 through 6. Parents participate throughout each PPT session. A recent randomized control trial (n = 62) showed significant improvements in young participants' PTSD symptoms when compared to controls. It appears that Preschool PTSD is potentially effective and also developmentally appropriate (Schneider et al., 2013).

### **7.5.22 Screening, Brief Intervention, and Referral to Treatment (SBIRT)**

SBIRT is used to identify, reduce and prevent problematic use, abuse, and dependence on alcohol and illicit drugs. As described by SAMHSA, SBIRT is a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders and for those who are at risk for developing these disorders (SAMHSA, 2020). Community settings and primary care centers provide opportunities for early intervention. SBIRT presumes that brief interventions are efficacious in linking clients to higher levels of care, especially for alcohol abuse. While a meta-analysis of RCTs of brief alcohol intervention in general health care settings, concluded that there was a lack of evidence that SBIRT had any efficacy for increasing the receipt of alcohol-related services (Glass et al., 2015); a subsequent review of this meta-analysis revealed that there were three RCTs that were not included in Glass and colleagues' meta-analyses. All three of these RCTs exhibited favorable findings for the effectiveness of brief interventions in increasing subsequent alcohol treatment utilization (Simioni et al., 2016). Glass and colleagues subsequently provided a rebuttal, defending their original conclusions (Glass et al., 2016). One



important take-away from this discussion is the potential limitations of meta-analyses. In meta-analyses, the parameters researchers set for determining which studies to include in the meta-analysis shapes the conclusions that are drawn.

### **7.5.23 Seeking Safety**

Seeking Safety is a therapeutic program for women suffering from trauma, substance use, and/or posttraumatic stress disorder (PTSD). Seeking Safety is present-focused and is specifically designed for early recovery. Its central goal is to help clients attain safety from both PTSD and SUD. It remains one of the most empirically studied models to date (Najavits, 2002).

### **7.5.24 Smoking Cessation**

Smoking Cessation interventions are generally most effective when they include supportive counseling, some form of nicotine replacement, and a medication to ameliorate the effects of withdrawal. When enacted, the ACA included requirements for tobacco cessation services as an essential health benefit. A recent study, examining electronic health records found disparities in who received smoking cessation assistance in safety-net settings. Odds of assistance were higher for women, those with more visits, those who were ready to quit, and patients with asthma and other pulmonary diseases. Odds of receiving both counseling and medication were lower among uninsured patients, those of a race/ethnicity other than non-Hispanic White, and those with diabetes (Bailey et al., 2018). A pilot study, addressing both tobacco use and binge-drinking among adolescents demonstrated benefits in both enhancing smoking cessation and decreasing binge-drinking among adolescents in the pilot (Ames et al., 2014).

### **7.5.25 Solution Focused Therapy (SFT)**

Solution Focused Therapy has increasingly been shown to be an effective treatment for a range of mental health and behavioral problems. SFT is a workable and empirically supported alternative to other approaches that are more driven by deficit thinking and labeling of clients. SFT when incorporated in working with families as part of a substance use rehabilitation program, was shown to increase family resilience, strengthen family structure, increase problem-solving skills, and coping (Bailey et al., 2018). Several studies have illustrated that SFT is efficacious in working with family of adolescents (Hopson & Kim, 2004). Overall, there is preliminary support for the efficacy of SFT. More studies are needed to strengthen a more definitive conclusion in this regard (Gingerich & Eisengart, 2000).



### **7.5.26 Stewards of Children Curriculum**

Stewards of Children is an adult-focused child sexual abuse prevention training program that aims to educate adults, specifically childcare professionals to prevent, recognize, and react responsibly. The National Institute of Justice rated this program as a promising practice. This rating is based on evidence that includes at least one high-quality randomized control trial (Ulaş & Ekşi, 2019).

### **7.5.27 Trauma Focused CBT**

Trauma-focused Cognitive Behavior Therapy (TF-CBT) is a conjoint parent-child treatment developed by Cohen, Mannarino, and Deblinger (Cohen et al., 2018; Cohen & Mannarino, 2019) that uses cognitive-behavioral principles and exposure techniques to prevent and treat posttraumatic stress, depression, and behavioral problems. Based on meta-analyses, reviews, and individual studies from 1995 to 2013, TF-CBT is a viable treatment for reducing trauma-related symptoms among some children who have experienced trauma and their nonoffending caregivers (Ramirez de Arellano et al., 2014).

### **7.5.28 Trauma-Informed Care (TIC)**

Trauma-Informed Care (TIC) is the adoption of principles and practices, as well as organizational culture change, that promotes a culture of safety, empowerment, and healing. Based on what is known about the prevalence and impact of trauma, widespread adoption of trauma-informed care can assist in addressing the impact of trauma. One study has found TIC to be effective in a psychoeducational program for foster care parents (Lotty et al., 2020).

### **7.5.29 Meditation**

Meditation has demonstrated efficacy in working with adolescents and youth in addressing mental health concerns, and with youth and adults to prevent relapse and reduce substance use. A meta-analysis of randomized control trials found significant positive effects, relative to controls for outcomes of mindfulness, executive functioning, attention, depression, anxiety/stress and negative behaviors of youth (Dunning et al., 2019). A school-based efficacy study showed that mindfulness was beneficial for low-income ethnic minority youth in reducing perceived stress and internalizing problems and improving emotional regulation outcomes (Fung et al., 2019). A systemic review found that yoga, mindfulness and meditation may be beneficial for youth with ADHD (Chimiklis et al., 2018). Mindfulness-based relapse prevention may be more effective than relapse prevention in preventing drug use relapse among racial and ethnic minority

groups (Greenfield et al., 2007). Based on a systemic review, overall mindfulness-based treatments hold promise as treatments for substance use disorders (Katz & Toner, 2013).

## **7.6. Promising Practices, Some with Support in the Research Literature for their Efficacy**

### **7.6.1 Art Therapy**

Art therapy has been shown to be beneficial in working with older adults to facilitate a sense of purpose and direction and foster meaningful relationships with others (Poulos et al., 2019). A review of studies found inconclusive evidence for the effectiveness of art therapy for persons with psychosis. However, qualitative studies indicated that therapists and clients found art therapy to be beneficial and meaningful (Attard & Larkin, 2016).

### **7.6.2 Bibliotherapy**

Bibliotherapy is one of at least 132 approaches or interventions that are designed to address or manage depression or anxiety without the need to involve mental health professionals. A scoping review of research examining the effectiveness of bibliotherapy for children and young adults as one of 132 interventions found that there is a disparity between the extensive range of approaches identified and the restricted number of studies focusing on the effectiveness of bibliotherapy for young adults. More research is needed to evaluate self or approaches to addressing depression without a mental health professional (Wolpert et al., 2019). One study found that cognitive bibliotherapy may be efficacious in addressing subthreshold depression and may be a potential alternative or addition to psychotherapy for mildly depressed adults (Moldovan et al., 2013).

### **7.6.3 Conscious Discipline**

Conscious Discipline is a comprehensive classroom management program and a social-emotional curriculum. It is based on current brain research, child development information and developmentally appropriate practice. Conscious Discipline has been designed to make changes in the lives of adults first. The adults in turn change the lives of children. A recent study found no significant differences in teachers' sense of self-efficacy or burnout (Cooper, 2019). Another study suggested some preliminary evidence that Conscious Discipline improved parent-child relations, as reported by parents (Darling et al., 2019).

#### **7.6.4 Family to Family (F2F)**

Family to Family is a peer-driven family to family support, providing outreach, engagement, knowledge, care coordination, and support to family members of children and youth with mental health challenges. Examination of one program showed significant improvements in key indicators of benefit for F2F families. F2F holds promise as an approach in helping families achieve self-advocacy, recognizing their needs, activating coping skills to cope with stress, enhancing resilience, and developing and carrying out plans of care (Anthony et al., 2019).

#### **7.6.5 FIRST**

Not able to identify this intervention.

#### **7.6.6 Gorski Relapse Prevention Therapy (RPT)**

Terence T. Gorski is one of the pioneers in the field of relapse prevention. As described by Gorski in an interview, the relapse prevention model integrates Aaron Beck's work on brief cognitive therapy into the relapse prevention approach. Rather than waiting for a relapse history to develop, the model stresses using a set of treatment principles that can be immediately used at the first sign of potential relapse. Gorski describes studies which contribute to a reduction in recidivism as well as good responses from organization who have tried RPT (\_\_\_\_\_, 1999). Relapse prevention builds on the work of Alan Marlatt and colleagues which emphasizes understanding the factors contributing to and maintaining addictions. There are many manualized relapse prevention strategies. Further research is needed to assess RPT (Donovan & Witkiewitz, 2012).

#### **7.6.7 Illness Management and Recovery (IMR)**

Illness Management and Recovery (IMR) is a psychoeducational intervention for people with severe mental illness, to enable them to manage their illness effectively to improve prognosis for recovery. One randomized control trial found that IMR was no better than treatment as usual in any of the outcomes (Dalum et al., 2018). An earlier study among older persons with severe mental illness found that clients made gains in illness self-management and self-perceived ability to manage their disorders (Mueser et al., 2012). Further research is needed, as well as a systemic review of existing trials to assess whether the program is effective.

### **7.6.8 Insight**

This intervention was listed in the survey but the researchers were not able to identify any additional information on this intervention.

### **7.6.9 (CompuLsive Exercise Activity TheraPy) LEAP**

CompuLsive Exercise Activity TheraPy (LEAP) is a relatively new approach to compulsive exercise for individuals with anorexia nervosa. Once study compared LEAP with CBT-AN to CBT-AN alone. The study found no significant differences between treatment groups in primary outcome measures. The researchers concluded that CBT-AN and LEAP, added to CBT-AN resulted in improved attitudes and beliefs toward exercise and general improvements in BMI and eating disorder psychopathology in people with anorexia nervosa (Hay et al., 2018).

### **7.6.10 MMPI Testing**

Psychological testing, though not in itself an intervention, can structure the intervention and shorten the process of therapy. While there is little research pointing to the efficacy or cost/benefits of the MMPI or other psychological testing in treatment planning, there can be detrimental effects of conducting treatment without an objective personality evaluation (Butcher, 1997). MMPI testing can assist the therapist in understanding the client, in selecting the appropriate treatment for bringing about behavior change, serve as a baseline for later treatment, provide the therapist with information on the client's motivation for treatment, identify likely source of resistance, extent of problems, and clues to possible personality characteristics that might undermine treatment. From a legal perspective, testing can document that the therapy was an appropriate psychological practice (Klump & Butcher, 1997).

### **7.6.11 Neurofeedback**

Neurofeedback, also known as electroencephalogram (EEG) biofeedback is a therapeutic intervention that provides immediate feedback from a computer-based program that assesses a client's brainwave activity. The program then uses sound or visual signals to reorganize or retrain these brain signals. It has been used in working with children with ADHD as well as with individuals with PTSD. One study found that neurofeedback protocols in treating ADHD may be considered as a well-established treatment and sustained effects after 6-12 months (Arns et al., 2020). Another study concluded that more research is needed to assess its efficacy in working with adults with ADHD (Boyle-Toledo, 2019). One case study and a pilot study found positive

benefits in working with an individual with PTSD (Gapen et al., 2016)(Morga et al., 2019).

#### **7.6.12 Parent Infant Psychotherapy**

Parent Infant Psychotherapy or PIP, recent research suggests that PIP is a promising model of improving infant attachment security in high-risk families. In a review of studies, there were no significant differences compared with no treatment or treatment-as-usual for other parent-based or relationship-based counseling.(Jane Barlow et al., 2015).

#### **7.6.13 Play Therapy**

Play therapy has become less popular and has less prestige than it once did, especially during the era of managed care and emphasis on evidence-based treatments. Although there is some preliminary evidence to suggest that play therapy is an effective treatment for certain presenting problems, it lacks the evidence of other treatment modalities (Boyle-Toledo, 2019). Nonetheless, it has been suggested that play therapy can be helpful when children do not yet have the ability to express their thoughts, feelings and behavior in an abstract manner. It may also be used when an evidence-based treatment does not exist for particular presenting problems (Boyle-Toledo, 2019).

#### **7.6.14 Psycho-education**

Psycho-education has been used with a range of populations. For example, a systemic review found that psycho-education is a promising intervention in addressing stigma experienced by persons living with HIV/AIDS and their family members (Ma et al., 2019). In another study, psycho-education was less effective than CBT in working with persons with borderline personality (Ayidh et al., 2018). Similarly, psycho-education was less effective than a meta-cognitive approach in working with individuals experience recent onset of psychosis (Ochoa et al., 2017).

#### **7.6.15 Reconnecting Youth**

Reconnecting Youth is a drop-out prevention program designed to increase academic achievement of at-risk youth. An independently evaluated effectiveness study in two diverse school districts found mixed effects immediately after the intervention was completed and only negative effects at six-month follow-up. The study provided evidence that clustering high risk youth in preventive interventions has the potential for iatrogenic effects (Cho et al., 2005). A later evaluation study found that Reconnecting

Youth had the most benefit for youth with the lowest levels of prior achievement (Dougherty & Sharkey, 2017).

#### **7.6.16 Social Emotional Learning**

Social Emotional Learning (SEL) is a promising approach to develop social and emotional competencies for all students. According to a systemic review, core components of SEL are social skills, identifying others' feelings, identifying one's own feelings, and behavioral coping skills relaxation. By identifying the core components, it may be possible to develop and evaluate modularized SEL programs. (Lawson et al., 2019). Overall, more research is needed to develop the evidence to support SEL and its widespread adoption in school settings (Balfanz & Whitehurst, 2019).

#### **7.6.17 Social Model of Recovery**

The Social Model of Recovery address both the social support and housing needs of those in recovery. The Social Model of Recovery incorporates 12 step principles into their structure and are staffed exclusively by recovering alcoholics. While research examining their efficacy is lacking, there is some evidence to suggest that the Social Model of Recovery achieves similar outcomes to other residential programs while being more cost effective (Borkman et al., 1998). A recent study demonstrates some success with incorporating Seeking Safety, an evidence-based intervention, with the Social Model of Recovery (Lange-Altman, 2014).

#### **7.6.18 Somatic Experiencing**

Somatic Experiencing is an integrative body-focused therapy that may be used for treating people with PTSD. Somatic Experiencing is based on body responses to threat and fear, especially thwarted attempts to enact fight or flight when faced with threat. The modality has a promising but still limited evidence base (Holt & McLean, 2019). A recent randomized control study of SE showed positive results, indicating that SE may be an effective therapy method for PTSD. Further research is needed to demonstrate who can benefit most from Somatic Experiencing (Brom et al., 2017).

#### **7.6.19 Thinking for a Change (T4C)**

Thinking for a Change is an integrated cognitive behavioral change aftercare program. T4C is designed for justice-involved adults and youth, males and females. It is intended for groups of eight to twelve, as a closed group format (Bush et al., 2016).



## **7.7 Factors That May Affect Treatment Implementation and Efficacy**

In addition to adopting an evidence-based intervention, several factors may affect the extent that the intervention is actually effective in bringing about change. Some of the most salient of these include the extent that the intervention is implemented with fidelity, whether it has been shown to be effective among racial and ethnically diverse populations and is culturally-appropriate, as well as health disparities, stigma, and individuals' own perceived sense of self-efficacy to adopt a positive health behavior.

### **7.7.1 Treatment fidelity**

It should be noted that a thorough review of research examining the efficacy of these interventions for a range of populations, is beyond the scope of the current study. Several of the interventions, especially those identified in group 1, have in fact, a plethora of research supporting their efficacy with a range of populations, such as diversity of race, ethnicity, social class, and sexual orientation.

Though an intervention has been shown to be efficacious among a range of populations, treatment fidelity is essential. To assure treatment fidelity, training, monitoring, and supervision of providers is needed.

Some of the interventions listed below, especially those in groups two and three, have limited research behind them. In general, interventions that have been evaluated through a range of studies, with various populations, have more "weight" to support their efficacy across populations. Thus, systemic reviews and meta-analyses can be extremely helpful in assessing the extent that a given intervention may be beneficial across populations. A more in-depth review of the studies included in the meta-analyses and/or systemic review would shed light on the populations included in the studies.

### **7.7.2 Culturally-appropriate Interventions**

Several researchers have called for the cultural adaptation of evidence-based interventions (Vazquez, Sabri). For example, Sabri and colleagues suggest that more research is needed to adapt interventions for Black survivors of violence, who also experience mental health concerns. (Sabri

### **7.7.3 Health Disparities, Stigma, the Helping Relationship, and Self-Efficacy**

In addition to assuring interventions are efficacious across racial and ethnic groups and other under-served populations, health disparities and stigma, and individuals' perceptions of self-efficacy impact the extent that individuals can access treatment. Further, individuals' perceptions of self-efficacy affect the extent that once in treatment, individuals believe that they can in fact, change, or adopt a more positive health behavior, such as adhering to a medication regime for a mental illness or engaging in a process of recovery from substance use.

These factors were highlighted in interviews and focus groups that were conducted as part of this need assessment study. Interviews with Executive Directors pointed out the social, economic, and community factors that contributed to differences in health outcomes and the ease in which individuals may access treatment. Participants in focus groups who had received treatment for mental health concerns emphasized how the stigma they experienced in the African-American community and in their churches made it extremely difficult for them to take the first step in seeking help for their mental health concerns. They described a fear of being ostracized and of being seen as “the crazy one.”

In terms of the helping relationship, once a decision has been made to seek help, the individual must believe, or come to believe, that the services offered will actually help them. As pointed out by providers in one focus group, many clients have a history of helping relationships that from their point of view, didn't help. When told so many times before that the provider could help them, they may have difficulty in engaging with the latest provider, who is telling them that they can help.

Some clients, who may seek treatment, may not perceive themselves to be able to make the needed change. Providers may need to focus on clients' sense of self-efficacy as part of the mental health or substance use intervention. While not an intervention, the Health Belief Model can help to understand the relationship between stigma, self-efficacy, and planning to change (Rosenstock et al., 1988). For example, stigma, violence, and poverty that contribute to health disparities, and beliefs about their own ability to reduce risk-behaviors may affect the extent that African-American women reduce HIV risk behaviors (Lewandowski et al., 2011).

Motivational Interviewing includes specific strategies that have been shown to be efficacious across populations to make the decision to engage in treatment; that is, clients who are in the pre-contemplation or contemplation phases of change. However, as pointed out in an interview with one Executive Director, providers may pay little

attention to these stages, holding the view that clients need to be ready to change. Further research would be needed to assess the extent that motivational interviewing, though widely reported to being used, is being implemented with fidelity.

## **7.8 Conclusion**

This chapter described the interventions Executive Directors and providers reported as being used by them or their agency. Overall, following are the most reported mental health interventions:

- Assertive Community Treatment
- Cognitive Behavioral Therapy
- Cognitive Processing Therapy
- Dialectical Behavior Therapy
- EMDR
- Motivational Interviewing
- Solution-Focused Therapy

Following are the most reported substance use interventions being used:

- 12-Step
- Cognitive Behavioral Therapy
- Dialectical Behavior Therapy
- Motivational Interviewing
- Seeking Safety
- Solution-Focused Therapy

The chapter also included brief descriptions of these interventions and cites research literature providing support for the extent that the interventions are efficacious. When describing the interventions, the chapter grouped the interventions based on the extent that they are used, and the degree of research documenting the efficacy of the intervention. Finally, the chapter discusses factors that may affect the effectiveness of the intervention, such as treatment fidelity and the extent that interventions, when implemented, are culturally-appropriate.

More research would be needed to assess the extent that interventions are being implemented with fidelity and the extent that each of these respective interventions are culturally-appropriate and have been demonstrated to be efficacy across a wide range of populations.

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## **CHAPTER 8: ASSESSMENT OF THE IMPACT OF OBH REDESIGN**

### Medicaid Behavioral Health Redesign in Cuyahoga County

The survey asked Executive Directors and providers an open-ended question on how the Medicaid Redesign impacted their services. The following background is provided as context for these responses.

#### **8.1 Introduction**

The Medicaid Redesign Initiative began in Ohio in 2017. Medicaid Redesign in Ohio has been designed to modernize the community behavioral health benefit package to align with national standards and to expand services to those most in need. An additional goal was to integrate behavioral health into Medicaid managed care. The vision and desired outcomes of Medicaid Redesign are:

- All providers practice at the top of their scope of professional practice
- Integrate behavioral and physical health services
- Make high intensity services available for those with SPMI and SED, and addiction
- Improve health outcomes for those with mental illness and/or addiction
- Services and supports that are sustainable with budgeted resources
- Implement a value-based payment method
- Coordinate benefits across payers
- Expand community-based rehabilitation

#### **8.2 The Medicaid redesign changed how behavioral health is funded**

During the initial period when the emphasis of treatment modalities shifted from State Mental Hospitals to community-based treatment, agencies received annual grants, with minimal reporting requirements. This was followed by a move towards fee-for-service billing, with a minimal service code set, to align community behavioral health funding more closely with private sector healthcare reimbursement practices.

At the beginning of the fee-for service initiatives, both Medicaid and non-Medicaid claims flowed through the ADAMHS Board utilizing a State mandated system call MACSIS. During this era, the ADAMHS Board noted that the fee-for-service billing requirements exposed service delivery inefficiencies and some poor business practices. To put this in perspective, many smaller agencies tend to focus on service delivery

rather than billing systems, and were not prepared, and perhaps even resisted assuming a “business” perspective to their operations.

In 2009, the Health Information Technology for Economic and Clinical Health Act (HITECH Act) was passed, as part of the American Recovery and Reinvestment Act of 2009 (ARRA). Provider billing requirements in MACSIS were modified to align with the HITECH Act’s electronic billing standards. In addition, the “Money Follows the Person” demonstration, included as part of the Patient Protection and Affordable Care Act (P.L. 111-148), the Sustaining Excellence in Medicaid Act of 2019 (P.L. 116-39) impacted the way agencies were reimbursed for services. Through this demonstration, states, including Ohio, could rebalance their long-term services and supports system so that individuals have a choice of where they live and receive services. The “Money Follows the Person/Client” (MFP) initiative may be seen as helpful to Ohio in balancing its budget, and to clients, by allowing them more choice in where they receive services. From the agencies’ perspectives, the MFP means they may receive less than their annual contract. By this time, electronic billing, and fee-for-service had become routine.

Following passage of the Affordable Care Act, the State gives notice that only claims for non-Medicaid eligible clients and locally funded non-Medicaid billable services will be billed directly to the ADAMHS Board. The State of Ohio assumed responsibility for Medicaid match requirements and mandated all Medicaid-eligible services were to be billed through Medicaid HMO’s. Medicaid claims are billed using the BH Redesign code set.

In July 2019, the ADAMHS Board deployed a new claims processing system named GOSH. Providers were required to bill for services back to January 1, 2019. Effective July 1, 2019, the Board fully implemented the Behavioral Health Redesign code set. This code set replicates the Medicaid code set, and the Board’s payment structure mirrors the Medicaid rate structure. Non-Medicaid non-treatment services retained the previous MACSIS code set. Billing complexity for behavioral health providers now roughly approximates those of physical health providers.

### **8.3 Responses from executive directors (N=34)**

All Executive Directors and key administrators participating in the survey responded to the question on the extent that Medicaid Redesign impacted service delivery. Most Executive Directors (74%) indicated that Medicaid Redesign impacted the delivery of services either quite a lot (47%), or somewhat (27%).

Respondents were also asked to comment on how they perceived Medicaid Redesign to have impacted service delivery. Not all respondents provided feedback on this

question. While most comments spoke to the increased complexity and cumbersome billing, there were some positive responses. Specifically, Medicaid redesign allows for improved reimbursement for ancillary care and care management services. One agency reported having more flexibility in hiring and that TBS services could be offered as either a stand-alone or support for some outpatient clients. Allowing psychiatric nurse practitioners to be once more billed at the same rate as psychiatrists was seen as helpful. Rate change for psychotherapy and Day Treatment was also welcome change, and the addition of family therapy is a plus for many programs. Additionally, it was noted that the Redesign allowed more individuals to receive Medicaid benefits.

In terms of drawbacks, most focused on billing and reimbursement, though there were some drawbacks noted in terms of services as well.

Regarding billing, it was noted Medicaid HMOs are not paying enough for residential treatment. Additionally, one respondent noted that residential treatment centers do not get paid on days where patients have appointments for other medical or mental health needs. This comment may reflect the “money follows the person” initiative, included as part of the Patient Protection and Affordable Care Act (P.L. 111-148), and the Sustaining Excellence in Medicaid Act of 2019 (P.L. 116-39). When Ohio implemented these changes, it provided the state with more opportunity to balance its budget, and overall, allows clients more choice in where they receive services. From agencies’ perspective, the MFP means they may receive less than their annual contract.

Residential treatment centers are not able to complete intake assessments while patients are admitted. In terms of billing, the assumption may be that an intake occurs before admission, providing rationale for such an admission.

There is less community provider contact when patient is hospitalized due to billing constraints - much more focus on medical necessity. Reduced reimbursement to the point that it threatens the financial viability of many agencies. Heavily strained the few IT resources that non-profit agencies have. Slowed reimbursement down so severely that many agencies are teetering on the edge and may close. It has become more cumbersome and time intensive to bill. The impact has been both positive and negative. On the negative side it significantly limited what we can bill under assessment. Assessments are now more streamlined than before Medicaid Redesign and we do continued assessment under psychotherapy. This has left many clinicians feeling like they could not take the time or multiple sessions to get a thorough assessment up front. With psychological testing they did start allowing us to bill some hours for writing but their significant cuts to the rates have made it harder to break even on testing. Their removal of RNs from billing psychotherapy has eliminated our ability to allow Psychiatric

NP students (they all have RNs) to do a treatment placement while working on their degree. Our services are not Medicaid billable. Reduced reimbursement rates, MCOs do not adhere to rates, MCO's cut short length of services through redesign, difficulty in billing, lack of consistency, information varies. The redesign has allowed for the further implementation of the Clubhouse Model of Psychiatric Rehabilitation which is potentially transformative to our community mental health care system. the need for Prior Authorization with MCOs. we stopped billing due to the challenges. Qualifications and credentialing of those allowed to provide the service. The change in reimbursement rates.

#### **8.4 Responses from providers (N= 61)**

Almost all respondents (61 of 64) responded to the question regarding the extent that Medicaid Redesign impacted service delivery. Of these, over 70% of providers indicated that Medicaid Redesign impacted the delivery of services either quite a lot (48%), or somewhat (23.3%). Twenty-eight providers provided additional feedback on how Medicaid Redesign affected services.

In terms of assessment, it changed how they were able to bill for assessment. Reimbursement for assessments decreased significantly. Clients are high-risk and high need and our assessments are done for the court. These usually takes two to three hours to gather quality clinical information to make an informed diagnosis and wealth of information for the court, but we are only paid for one hour. We are capped at 60 minutes for Diagnostic Assessment.

It impacts who can be served and for how long. It limits the number of sessions. They want short sessions and more results.

Many services had to be realigned for the benefit of the funder rather than for the benefit of the client needs or could benefit from. Medicaid Redesign changed our target population strategy as more providers were retaining Medicaid clients and not referring to us.

Reimbursement has always been a strain; just waiting for reimbursement. Now it is worse because the amount that can be charged for services has decreased. Pre-authorization and concurrent reviews affect reimbursement. We are now billing under individual practitioner NPIs and are spending administrative time ensuring all practitioners have valid and active NPIs and Medicaid numbers.



The MCOs were not ready to reimburse. They do not have the reports aligned with the EHR that my agency is using. Billing is more complex. There is a loss of funding. We have been given different information at different times. We are at the mercy of the MCOs and they are not being held to the standards that the State thinks they are saying.

Medicaid Redesign has been a fiasco, has rendered reimbursement ridiculous. There seems to be a higher presence of awareness about opioid addiction. One benefit is that there is now access to a broader array or needed specialty services. We can bill for individuals who were not billable in the past. We are grateful that residential treatment and other previously not paid services are now covered. However, MCO's are applying adult models of care to youth. While 30 days of treatment may be sufficient for an adult, that number of days is not often the number that youth need. We have to spend multiple hours to complete paperwork, have doctor to doctor reviews, appeal denials that are arbitrary just to get a few days of treatment covered. We are also able to connect clients to psychiatry who we were not able to connect in the past. The ability to provide psychiatric services (medication management) via telephone has dramatically improved our attendance rates. It has greatly improved access to much needed services and removed the barrier of transportation. We have many success stories of people with agoraphobia or the like who would never come into the office but have now been receiving services. Overall, many more Ohio residents can access mental health and substance use services.

## **8.5 Conclusion**

This chapter provided a brief overview of Medicaid Redesign and rationale for Medicaid Redesign in Ohio. Following this, the chapter summarizes feedback from Executive Directors and providers on how they perceive the Redesign impacted services. Most Executive Directors and Providers indicated that Medicaid Redesign had impacted service delivery quite a lot, or somewhat. Both groups identified what they see as drawbacks, and also described benefits for clients.

- The main drawback was how Redesign impacted the reimbursement process and the way services were able to be reimbursed.
- The main benefit for both groups is that more services were being provided and more clients now have access to services.

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## CHAPTER 9: SYSTEM OF CARE: THE ROLE OF ADAMHS BOARD AND PARTICIPANTS' RECOMMENDATIONS TO IMPROVE THE SYSTEM OF CARE

### 9.1 Introduction

This section provides a narrative summary of the open-ended responses of both the Executive Directors and providers. To begin the table below shows the frequency a role or function was mentioned in respondents' comments. Here, it is important to note that this table reflects the number of times a role or function was mentioned as respondents may have mentioned more than one in their response. Additionally, it is not possible to discern whether respondents were thinking of the Board's actual role, or the role(s) they thought the ADAMHS Board should fulfill. Regardless, responses can provide insight into how respondents view the Board.

### 9.2 Role or function of the ADAMHS Board

Table 9.2.1 Role/Function of ADAMHS Board<sup>226</sup>

Role or Function of the ADAMHS Board	ED N=34 (%)	Providers N=52 (%)
Funding/Resources Fill the Medicaid Gap; funder of last resort, grant funding	18 (53%)	30 (58%)
Oversight/Accountability, Audits, quality Improvement, licensing	5 (15%)	11 (21%)
Advocacy	5 (15%)	7 (13%)
Planning	4 (12%)	6 (12%)
Coordinate services for agencies and "hub" for clients	3 (9%)	5 (10%)
Support/Support Innovation/Guidance, assist in delivery, help agencies	5 (15%)	15 (29%)
Evaluation, collecting data, Epidemiology; assess community need, monitoring	5 (15%)	5 (10%)
Training, Guidance	4 (12%)	11 (21%)
Access/Assure services available for all, treatment	4 (12%)	2 (4%)
Leadership in times of crisis/Provide Direction/Lessen impact on Economy	1 (3%)	3 (6%)
Provide Referrals	1 (3%)	1 (2%)
Integrate services. Enhance system operations (system of care), efficiency, system support	2 (4%)	3 (6%)
Ethical Services/Investigate allegations of client abuse/client rights	0 (0%)	3 (6%)
Dispenses funds from federal, state and county to county agencies	1 (3%)	1 (2%)

Both the Executive Directors and providers found that providing funding and resources was the primary purpose of the ADAMHS Board. Several respondents indicated that the ADAMHS Board's purpose was to fill the Medicaid gap, for example, by serving as the funder of last resort. Oversight, accountability, and advocacy, especially with the state,

<sup>226</sup> <http://www.adamhsc.org/>

was each mentioned by 5 respondents. Planning, coordinating services and providing support and guidance were mentioned by three. Evaluation, training, assessing community needs for services and monitoring was mentioned by 5 respondents. Increasing access were each identified by two respondents. One respondent indicated that the role of the ADAMHS Board was to dispense funds from various levels of government (federal, state, and county) to county agencies.

Some of the feedback from executive director surveys were less than positive. For example, one respondent suggested that there was a healthy dose of animosity that existed between the ADAMHS Board and the agencies. Another suggested that perhaps the Board was less relevant, following Medicaid Redesign, since most of the agency's funding came from Medicaid, that was managed by the state and the MCOs, with the ADAMHS Board having less control over funding.

While providers' comments also reflected the role of the ADAMHS Board in funding, there seemed to be more of an emphasis on the role of the ADAMHS Board in supporting agencies, quality improvement, training and enhancing and integrating services. Three providers suggested that it was the ADAMHS Board's role to make services as ethical as possible, to support client rights, and to investigate allegations of abuse of clients' rights. One respondent suggested that the ADAMHS Board could think about being more of a "cheerleader" for agencies, to inspire and motivate them. Generally, when hearing from the ADAMHS Board, they brace themselves for criticism. According to one respondent agencies are doing the best they can with what they have, and the Board is often expressing disappointment with the outcomes.

In a more aspirational tone, one respondent indicated that the ADAMHS Board's role was to assure services were available to all, while another simply used the word, "treatment." Here, it wasn't clear whether the respondent meant assure that treatment was provided, or that the ADAMHS Board was a treatment provider. To close, one provider clearly saw the ADAMHS Board as playing a crucial role, by stating that the ADAMHS Board was "...the voice of reason and the hope for the community of mentally ill persons and those who suffer from chemical dependency."

### **9.3 Recommendations to address needs for substance use and mental health services**

Following is a summary of recommendations to improve Cuyahoga County's response and capacity to address mental health and substance use. These summary recommendations are gleaned from focus groups, provider and executive director surveys, and executive director interviews. They are grouped into three broad areas,

individual needs, agency and provider needs and recommendations, and system-wide needs and recommendations.

### **9.3.1 Individual needs**

Several participants in focus groups and interviews discussed attitudes and support, that may contribute to a sense of self-efficacy. These include hope and or spirituality, and acceptance. In terms of hope, individuals need to believe and know that the help they are being offered will actually help them; that the help being offered will be worth the time and effort and make a difference.

In terms of support and treatment, individuals need to know where to go, a better understanding of treatment, and an open ear, or someone who will listen to them. Individuals could benefit from stability, or continuity in how short and long-term services are provided and a road map to success. Others mentioned skills, such as learning how to be productive, life skills, finance skills, work training and employment skills, and how to keep a job. Individuals also need to learn how to manage their own impulsivity.

### **9.3.2 What individuals need from agencies and service providers**

Several respondents mentioned concrete services such as providing basic hygiene products and other amenities (clothing, food). They need stable, sober housing before they can move on. Once they are finished with treatment, they need more long-term services, such as services SNAP benefits, housing assistance and Medicaid. Supportive literature such as AA/NA and other associated readings are needed. Several respondents indicated individuals needed a Universal Basic Income; they need resources, childcare, help around the house and having basic needs met.

Adolescents may also need academic help. Providers may try to make recommendations for their academic needs, but the advocacy doesn't always come through or result in getting adolescents the academic help they need.

Families need education on the treatment process. For example, families need help understanding how to cope with their emotions when their loved one is receiving services, and the next steps in treatment. Families of young children need support groups, and education on how to find programs. Overall, families need more support services.

Providers of MAT need to be comfortable in their role as they prescribe medications. When providers are anxious, or appear anxious, patients may sense their anxiety and may

themselves become anxious. Providers of MAT could use a graphic presentation of what they can do, to assist them in conveying confidence to their patients. Providers may not be as well-versed on Vivitrol (naltrexone) when compared to Suboxone (buprenorphine-naltrexone). Overall, providers of MAT may need more education. One respondent indicated that MAT could have a force magnifier effect. There are probably a lot of providers who could provide MAT, but who don't.

It was noted that we, as providers have lots of rules and we are working with individuals who are not necessarily rule-bound. We need to focus more on meeting the client/patient within the parameters of what they are willing to do. For example, the rule may be that clients must be in IOP in order to receive MAT, but what if they are not willing to do IOP at this point? There is a lot of rigidity in providing MAT but this is the population that doesn't need rigidity. For example, they still need Suboxone but what if they are still using other substances?

In addition, many clients first express their mental health and substance use concerns with their primary care provider (PCP). The PCP might feel uncomfortable, may not know what to do, and may have own attitudes, biases. Many individuals trust their PCP the most and struggle when this person is not supportive. This can also happen in the ER room, where the health care provider may "punt" and look for the social worker. There is little ownership of this aspect of health.

#### **9.4 Community, system of care**

There were three major themes that came through, from surveys, focus groups, and interviews: funding and reimbursement, more emphasis on prevention, and a greater need for coordination, collaboration, and integrated behavioral health care. Harm reduction approaches also emerged as a theme, as illustrated in the comments above, regarding balancing clients' needs with system requirements.

When reviewing these comments, it is important to note that information provided here reflect participants' comments. Thus, they reflect their perceptions and their reflections on their own experiences and may or may not reflect actual circumstances or policy.

##### **9.4.1 Funding reimbursement, and staffing**

In terms of reimbursement and funding, some of the comments were: the importance of paying providers and professionals more, and consideration of a third-party payer system which may deny services. Raising the salary of providers could contribute to workforce stability and overall quality of care. There was concern expressed by several

respondents regarding the role of MCOs in determining the level and type of services that were authorized for reimbursement. As an example, providers were recommending residential treatment for an adolescent, and the residential service was denied because the adolescent was “only using weed.” Providers believed they were justified in recommending residential treatment and did not agree with the rationale for service denial.

While there were several suggestions for specific increases in funding, there was a general sentiment that all could benefit from more services. Specifically, it was suggested that there be increased funding for 1) CDCAs and counselors to obtain higher education and licensure to provide accessible and higher quality service, 2) funding for more holistic services like art and music therapy and entire continuum of care; and 3) an Increase in rate of reimbursement for OP services; 4) supportive housing options for OP clients to provide a safe sober stable place to live while attending treatment 5) more funding support to bridge the gap between actual cost of MAT and current Medicare reimbursement, 6) Per diem increases, 7) more detox beds and diversion of jails to detox, 8) more funded positions in schools to allow multidisciplinary teams to treat families, 9) need a respite center as some shelters are not safe for vulnerable homeless, 10) more crisis stabilization beds, 11) increase funding for IOP. Reimbursement for IOP has not gone up since 1997); 12) an increase in services for pregnant women and women who have children; 13) Increased discretionary resources to agencies to allow agencies to better pay staff.

In terms of the workforce, at least one respondent suggested that the shortage of professionals in this area is due to the lack of attractiveness (and money) of the field. There is also a shortage of bi-lingual professionals, and there may be more need for a bi-lingual psychiatrist. It was recommended that the county recruit a provider from another country to meet this need.

In terms of funding agencies and programs, one respondent noted that there still seems to be a “good ol boy” network in the county. Agencies who are favored by funders or who employ friends/family of those in power receive an inordinate number of referrals and or funding from county courts and agencies.

#### **9.4.2 Prevention**

For prevention, it was suggested that providers be more flexible with individuals. Different things may work for different individuals. For example, maybe a TV show or a book might be helpful. The system needs to be more flexible with individuals who might never step foot into a psychiatrist’s office.

Prevention should start with children and young adults. Teach children in school what to do with those “big feelings”. This may also reduce the stigma around mental health, and people making jokes about it. Why not have mental health check-up or as part of a physical check-up. The earlier we’re able to pursue issues developmentally the more able we are to teach people how to manage feelings going forward. Overall, prevention seems to have been abandoned, according to the point of view of one respondent.

### **9.4.3 Accessibility**

Regarding accessibility, just getting into the door can be problematic, especially when needing MAT. The buildings themselves can be intimidating. They can be loud, big, chaotic, and with a lot of people in waiting areas. Systemic racism and neighborhood blight also make it hard to access services. We need to get people in right when they want it and have the ability to capitalize when they ask for help and get them right in. First people have to overcome the limitation to seek help, and then are told to wait. When the window of perceived crisis ends, they are less likely to follow through with seeking services.

Lots of people who need services aren’t able to come in due to family and work commitments and other possible constraints. There needs to be more outreach to those who are not able to make it into the office, as well as some way to identify people and provide services, even if they aren’t able to come in during prescribed times.

To increase accessibility, we could create a booth at homeless shelters. Patients can access care there and are able to call and get telehealth at the moment. Physicians could be reimbursed and talk with a psychiatrist and clients could have their needs met. There are places in the country who have this model. But it is harder to implement strategies such as this when sticking with fee for service as a model for reimbursement. There are ways to leverage Medicaid to allow for such innovations. “Tell Scott this is a good idea.” We need to move away from fee for service and focus more on population-based services

It was noted that there are not many psychiatrists available after 5, outside of ER. The ER is more expensive. But clients may find it difficult, as they have to take time off from work, which may not be allowed by their supervisor; plus they may not get paid when taking time off and could fear losing their job. Later in the day would be very helpful and often not available. This is where telehealth could also benefit. This is magnified when providing services to children, youth and adolescents, who have to come out of school, and parents must come out of work. A Saturday clinic could help.



#### 9.4.4 Coordination and integrated care

Regarding coordination, there were several recommendations. To start, one respondent suggested that all providers should become dually certified so that issues are not treated in silos. There should be more collection and sharing of data associated with treatment and better medical record sharing.

Several comments suggested the need for increased care coordination, the development of a more systematic continuum of care, and the development of additional integrated behavioral health care approaches. By keeping mental health and substance use in silos, we emphasize the stigma. Clients with co-occurring disorders may be better served in an integrated system of care. Overall, there needs to be more substance use treatment centers that can treat individuals with mental illness. Many locations will not accept patients who are on antidepressants or mood stabilizers. Persons with co-occurring disorders continue to fall through the cracks.

The system is set up so that providers deal with person in front of them; the person who is able to come in, and reimbursement is consistent with this approach. As we move into a more population health direction, this will change.

One respondent asked whether services would be more beneficial if they were more centralized and we had fewer providers? Do we need to restructure the system?

Consider implementing a Center of Excellence for Evidence-based interventions. Evidence-based therapies are incredibly expensive and there is a high turnover among staff. (Researcher's Note: information on the model for such centers can be found at the website for the Agency for Healthcare Research and Quality.

<https://www.ahrq.gov/research/findings/evidence-based-reports/overview/index.html>).

One of the key functions of such a service is to provide technical assistance to professional organizations, employers, providers, policymakers, and to translate research reports on evidence-based interventions into quality improvement tools, evidence-based curricula, and reimbursement policies.

Rather than fee for service, we need a value-based payment system, that is similar to what is happening in physical health care. Mental health and substance use need to get on board.

#### **9.4.5 Social determinants of health**

In terms of society and the community, there is a lack of serious representation of substance use in the media; and denial of the issues associated with substance use.

More attention needs to be paid to the social determinants of health, such as childcare for mothers and parents. There should be more of a recognition that clients are also responsible for other people; they themselves are caregivers of children, and others.

#### **9.5 Conclusion**

This chapter began with a discussion of respondents' perceptions of the role of the ADAMHS Board. It is apparent that executive directors and providers largely viewed the Board as fulfilling a myriad of roles. The next section summarizes participants' perspectives on how services could be improved. Many participants recognized a need to support individuals, agencies, and providers and that all have a role in recovery and providing individuals what they need to get better. Major themes that emerged were the need for an increased emphasis on prevention, care coordination and developing integrated behavioral health or service delivery models, and consideration of the social determinants of health, especially for at risk and vulnerable populations.

## **STUDY CONCLUSION AND RECOMMENDATIONS**

Each chapter in this report includes a conclusion, summarizing key findings. The purpose of this concluding statement is to provide researchers' recommendations, based on the assessment of data from both primary and secondary sources.

It is important to note that needs assessment is not an exact science. The best assessment of need includes more than one data source or type of data so that data may be triangulated (Mechanic, 2003). This study includes all four types of needs assessment data: epidemiological data, utilization data, and the perceptions of both clients and family members and experts, or providers and administrators.

Following are our recommendations, based on overall findings of both primary and secondary data sources. Readers of this report may identify other recommendations, based on their own assessment of the report's findings. We do not intend for these recommendations, or our report to be the "final and definitive word" on the need for mental health and substance use services in Cuyahoga. The question is complex, and even we, as researchers, only have this study and our somewhat limited understanding of the behavioral health system of care in Cuyahoga County. It is our sincere hope that the report's findings and these recommendations provide useful information and "food for thought" for strategically planning the way forward.

In presenting these recommendations, we are aware that some of these approaches or strategies may already exist. Where that is the case, it may be that more of such strategies could be beneficial. For example, if there is only one agency offering a given model or program, would it be helpful to offer the program in another location? It may also be the case that there is a plethora of a type of program mentioned below. If so, providers, clients and potential clients may benefit from being aware of the program. With these caveats in mind, following are our recommendations.

### **Role of the ADAMHS Board**

Our primary recommendation is that the ADAMHS Board consider this as an opportunity to work collaboratively with agencies and community leaders to develop a strategic plan that uses the report findings as well as other data sources to enhance the ability of the County overall to address the needs of residents for substance use and mental health services. As described in this report, findings from participants reported a wide range of roles for the ADAMHS Board, in addition to funding. These roles include leadership, support, advocacy, and training. This seems to be an excellent opportunity for the ADAMHS Board to continue to build on its leadership role, and work with the community to engage in a meaningful strategic planning process.

## **Tele-health, service delivery, and COVID-19**

Continue to support and grow tele-health as a viable option for mental health and substance use service delivery, as appropriate.

Soon after 2020 began, agencies had to adjust to the realities of social distancing and lock down as a result of COVID-19. When thinking about planning for future services, it remains to be seen whether some of the service delivery changes made to adjust to COVID-19 endure. Or, will all agencies and service providers go back to business as usual once COVID-19 is no longer a threat? Currently, 67.6% of Executive Directors and 77% of providers strongly agreed that their agency will be seeking to purchase additional personal protective equipment such as masks and disposable gloves in response to COVID-19. 14.7% of Executive Directors and 22% of providers agreed that they would be purchasing additional PPE. This is at least a short-term impact.

Many agencies began or increased their use of tele-health and are finding for the most part it is working well. For some, it is a challenge in serving clients who do not have access to the internet, or a smart phone. At the same time, telehealth can be a viable strategy to increase access and acceptability of services.

In terms of funding, at least one provider of residential treatment indicated their agency is taking a loss as there are fewer individuals in detox, yet costs are the same. Adjusting to the loss of income may be temporary and short-term. Beyond funding, the community may see a rise in the amount of mental health and substance use concerns as community members continue to cope. Understanding how COVID-19 is impacting agencies and the communities they seek to serve is beyond the scope of this current study. Given this, we recommend that the impact of COVID-19 on service delivery, agency viability, and community needs for mental health and substance use treatment be monitored and/or assessed.

## **Consider Integrated Behavioral Health Models**

Health is multi-dimensional. The population served by agencies funded by the ADAMHS Board is largely one with multiple risk factors for poor behavioral and physical health outcomes. This is illustrated in the demographic data. Additionally, the ACE Pyramid, presented in the chapter on risk factors illustrates how adverse childhood experiences contributes to mental health and substance use concerns in adulthood, leading to an early death. Integrating mental health and substance use treatment to the extent possible, can have many benefits toward reducing health disparities, improving substance use and mental health outcomes, especially among the most underserved

populations, improving outcomes and increasing efficiency. This is especially relevant for individuals with co-occurring disorders and those with multiple and/or chronic concerns. Based on findings in this report, persons with co-occurring disorders, the homeless, immigrants, and persons who have been incarcerated were identified as being underserved. Organized around the extent and complexity of an individual's mental health and substance use concern, the Four Quadrant Model can be a useful framework and collaborative planning tool to address the needs of underserved populations. (Mauer & Druss, 2010). This model suggests that services may be organized depending on whether mental health or substance use is the primary concern.

In considering opportunities for strengthening integration, the ADAMHS Board, along with providers, may need to take into account its unique operational factors such as: services that are currently available and accessible, client preferences, workforce capacity, agency and providers' support for collaborative services, and the extent that reimbursement allows for collaborative care.

### **Culturally-competent and culturally-appropriate evidence-based interventions: Adaptation**

While identified in surveys, interviews, and focus groups, the research literature also supports the necessity of implementing interventions that are culturally-competent and culturally-appropriate as well as being evidence-based. Such strategies can enhance service acceptability and improve outcomes. Even interventions that are supported in the research literature often must be adapted for a given community. For example, an intervention that may have been adapted for the African-American community in South Carolina may not directly translate to the African-American community in Cuyahoga County. Similarly, an intervention developed for the LGBTQ population in California may also need to be adapted for the local community.

### **Client-engagement and client-based practice research**

To address the need for culturally-competent services and services that are acceptable to a wide range of populations, engage clients in developing models from the ground up, and keep them involved throughout. Models such as client-based practice research (CBPR) are designed to incorporate clients as research and evaluation partners and can quickly address the growing problem of racial and cultural disparities and the disconnect between clients and the means to recovery (Minkler & Wallerstein, 2003).

## **Evidence-based interventions**

As pointed out by at least one respondent, training for evidence-based interventions can be expensive, and staff turnover can add an additional wrinkle to maintaining a work force qualified to provide an evidence-based intervention. Consideration may be given to providing more centralized education, training, and resources to agencies and providers to support the implementation of evidence-based interventions. In addition to this suggestion, there may be other strategies to support implementing and sustaining evidence-based interventions county-wide.

## **Treatment fidelity**

Once implemented, evidence-based interventions, such as Motivational Interviewing, have very specific fidelity measures that must be accomplished in order to continue to be considered an evidence-based practice. Treatment fidelity is an ongoing process to assess the extent that an evidence-based intervention has been implemented as designed and that providers adhere to the components of the intervention. Assessing fidelity on an ongoing basis can be time-consuming, and perhaps is not a reimbursable activity. Dissemination of strategies for resource-efficient methods to assess fidelity could support agencies and providers in monitoring fidelity.

## **Increase access to medication assisted treatment (MAT)**

MAT has been shown to be safe, cost-effective, reduce overdose risk, increase treatment retention, reduce transmission of infectious diseases, and reduces criminal activity. While MAT is supported in Cuyahoga County, there is an ongoing need to increase access and reduce barriers to access. This may include increasing provider and community knowledge of the full spectrum of available medications, including buprenorphine-naloxone (Suboxone) and naltrexone (Vivitrol), among others.

## **Harm reduction**

Harm reduction includes a set of strategies aimed at reducing the negative consequences associated with drug use. It is a public health strategy developed initially for adults with substance use problems for whom abstinence was not feasible. Examples include needle exchange programs, managed alcohol programs, shelter first approaches to homelessness, and increased flexibility in treatment to “meet clients where they are,” as opposed to requiring them to adhere to 100% of rules in order to get services. Harm reduction approaches have been effective in reducing morbidity and mortality in adult populations with substance-abusing populations when abstinence

does not work. They have also been shown to lower risky alcohol use and risky behaviors associated with HIV transmission.

### **Medical marijuana and substance use treatment**

With the passage of House Bill 523, the state of Ohio made medical marijuana legal in 2016, for a specific list of health and mental health conditions. The law also established the Ohio Medical Marijuana Control Program (Ohio Medical Marijuana Control Program, 2016). With this in mind, substance use treatment providers should continue to assess how the legalization of medical marijuana is impacting treatment and the extent that legalization has changed clients' and the public's perceptions of the risks associated with cannabis use. While available medically to treat certain conditions, individuals may still develop cannabis use disorder, and youth and adolescents may especially be at-risk for experiencing negative consequences. Further, extensive cannabis use may be especially harmful for children and youth's cognitive, emotional, educational, and social development (Lewandowski, in press).

### **Prevention and public health strategies**

Several respondents mentioned the value and importance of prevention and we urge that prevention and public health approaches to addressing substance use and mental health be increasingly adopted to address disparities and improve outcomes. Today, there are numerous evidence-based prevention models to address mental health and substance use concerns. These include both community-based prevention models, and models that target identified populations, such as children and youth, and the prevention of risk-behaviors among those with mental health concerns and who may be engaged in substance use.

### **Addressing the needs of persons who are homeless**

Persons who are homeless experience higher rates of mental illness and substance use disorders than the general population. They are also less likely to have access to evidence-based interventions for these difficulties (Sauer-Zavala et al., 2019). In addition to adults, youth who are homeless also face myriad challenges (Bassuk et al., 2015). With the fallout from COVID-19, it is anticipated that homelessness will increase, due to higher unemployment rates. Given that persons who are homeless have multiple concerns and face challenges in accessing treatment, we recommend that a range of strategies be examined to identify best and promising practices that may be adapted for Cuyahoga County.

## **Programs for women with children**

As shown in the data, women tend to be under-represented in residential treatment programs, both nationally, and in Cuyahoga County. Having responsibility for children and even other caregiving responsibilities are frequently a barrier for women in accessing treatment. Further, women who have children and who use substances are often reluctant to engage in treatment out of concern that they may lose custody of their children (Sauer-Zavala et al., 2019; Lewandowski & Hill, 2009). There are few services in the County for women who are mothers, especially residential services where they may also bring their children. We recommend considering looking specifically at strategies to increase access and acceptability of programs for women, especially for women who have children and/or who may be pregnant. In addition to increasing services, other strategies include outreach, education, co-location, and tele-health and/or week-end hours.

## **Wrap-around service delivery models for youth and a system of care**

Wrap-around is an empirically supported, family-driven, strengths-based planning approach to services for youth that provides individualized care using an array of formal services and natural supports (Winters & Metz, 2009). It is especially designed to help families with the most challenging children and youth to function more effectively in the community. It is a team-based process and families are full-service partners. Plans are developed based on interagency, community-based collaborative process.

## **Engaging transition-age youth**

The findings suggest that transition-age youth may be underserved and are an at-risk population. It can be difficult for transition-age youth to be engaged in treatment. We recommend continuing and strengthening strategies to enhance a coordinated system of care while emphasizing flexibility in services and across organizations. Strategies and interventions that engage youth and caregivers in planning of services, focusing on educational advancement and employment have shown evidence of positive outcomes. Meeting the mental health and substance use treatment needs of transition age youth requires a multi-level approach, including the system of care overall, organizations, and programs. Evidence-based interventions that are adapted to the unique needs of youth and the community in which they live is the most ideal approach (Sukhera et al., 2015).



## **Co-location of services**

While co-located services may already be provided, consideration may be given to increasing co-located services. In addition to substance use and mental health providers, individuals and families are often receiving services from child welfare agencies, schools, public child welfare offices, domestic violence shelters, and criminal justice systems, including law enforcement, parole and probation offices, and juvenile justice. Individuals and families may have more than one case manager or service provider, to the extent that being a client becomes a full-time job (Lewandowski & Hill, 2008a). A pre-dominant model of co-location models is co-locating substance use counselors in child welfare offices, where multiple traumas and inter-related concerns of addiction, behavioral health, and/or child abuse/neglect may be addressed in a team-based approach.

## **Study limitations**

One of the primary limitations of the study is the small number of providers, administrators, and consumers (clients, advocates, and family members) who participated in the focus groups and responded to the survey. We note that less than half of the agencies funded by the ADAMHS Board participated in the survey. Only a small percentage of providers overall participated, and they represent less than half of agencies as well. The small number of participants, relative to the number of agencies, providers and clients in the county reflects in part, the impact of COVID-19 on the study. Similar to agencies, researchers also had to adjust, from an initial plan of conducting focus groups face to face, to one where focus groups were conducted online, taking away from valuable recruitment time, as well as the potential opportunity to conduct focus groups at pre-planned meetings, and at agencies. Once implemented, participants seemed to be able to participate fairly well in the online environment.

Regarding the assessment of evidence-based interventions, the description of evidence-based interventions does not include in-depth assessment of the extent they have demonstrated efficacy across a broad-ranges of populations. Though it cannot be ascertained, meta-analyses and system reviews are more likely to include studies using different populations in their samples than interventions that, to date, do not have a body of research large enough to merit a meta-analysis or systemic review. Further investigation into the research literature could reveal the demographics of populations in the identified studies.

Two of the major limitations of the NSDUH are the exclusion of the population under 12 years old and the people who are not included at the household level. In particular, the

NSDUH's exclusion of homeless and institutionalized populations (such as in prisons or mental institutions) is problematic given the high prevalence of substance use and mental illness among these populations.

In terms of the ADAMHS Board client data, it has limitations characteristic of all administrative data. Overall, variables are pre-defined, and the data were collected to serve an administrative rather than a research function. Having said this, the ADAMHS Board data is fairly robust and designed in a way to be able to answer the questions included in the utilization analysis portion of this study.

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## **APPENDIX A: ORIGINAL RFP**

### **Background Information**

The Alcohol, Drug Addiction and Mental Health Services (ADAMHS) Board of Cuyahoga County is issuing this Request for Proposal (RFP) to identify qualified, independent evaluation contractor to conduct a comprehensive Needs Assessment. The Needs Assessment project will assist the ADAMHS Board in identifying areas of greatest need for client services for planning, funding, evaluating, and advocacy purposes.

The ADAMHS Board is responsible for the planning, funding and monitoring of public mental health and substance use disorder treatment, prevention and recovery services delivered to the residents of Cuyahoga County. Under Ohio law, the ADAMHS Board is one of 50 Boards coordinating the public mental health and addiction treatment and recovery system in Ohio. The Board contracts with provider agencies to deliver services that assist clients on the road to recovery.

The local behavioral health system continues to adapt to an environment of Behavioral Health redesign. In order to provide a system of care that enables clients to access high quality, culturally competent, behavioral health services to manage their illness and improve their lives, it is necessary to conduct a comprehensive interdisciplinary needs assessment.

### **Areas to be Included**

1. Analysis of most current county census data (including demographics of age, gender, ethnicity, residence areas, poverty levels, and risk factors), analyses of national prevalence data, and calculation of local prevalence rates.
2. Comparison of local prevalence rates to local service rates to establish unmet needs.
3. Estimations of mental illness and substance use prevalence.
4. Estimation of the size of the population needing publicly-funded mental health and/or substance user services.
5. Estimation of unmet needs for mental health and addiction treatment, prevention, and recovery services by specific populations and levels of care.
6. Collection of key survey data where needed.
7. Assessment of the use of evidence-based practices.
8. Assessment of the impact of Ohio's Behavioral Health redesign on the Board's service mix and provider funding strategies.

9. Conduct focus group with key community stakeholders and analyze results throughout project.

### **Community Benefit**

This process will ultimately enable the ADAMHS Board and other funders to invest resources in the areas of greatest client need, strengthen safety net services and support the use of Evidence-Based Practices. This will create a system of superior services which is client focused, cost efficient, and which improves the lives of clients and Cuyahoga County residents.

## **APPENDIX B: STUDY DESIGN**

### **Introduction**

As shown on the timeline of the project, most data collected for the project are secondary quantitative data with supplemental qualitative data collected using focus groups and interviews. This is not ideal but is an acceptable method for needs-assessment research to inform policy. The results could also be used for future, more in-depth and targeted research projects, as discussed in the recommendations. Collecting primary data through focus groups and structured interviews for some needs-assessment questions involved non-probability samples (because of the nature of the population of the project). Random sampling of agencies receiving ADAMHS Board funding was used to select a sample of agencies for structured interviews.

## Timeline

Areas/Type of Needs Assessment	Type of Needs Assessment	Objectives
1. Analysis of most current county census data (including demographics of age, gender, ethnicity, residence areas, poverty levels, and risk factors), analyses of national prevalence data, and calculation of local prevalence rates.	Comparative: Secondary national, state, and local data	Collect the current county census data and data on national/state prevalence of substance abuse and mental health disorders.
		Calculate local prevalence rates and write up a report.
2. Comparison of local prevalence rates to local service rates to establish unmet needs.	Utilization/expressed needs: ADAMHS Board administrative data	Collect local service rates.
		Calculate unmet needs and write up a report.
3. Estimations of mental illness and substance use prevalence.	Comparative: Secondary national, state, or local data	Collect national/state mental health illness and substance use prevalence.
		Estimate local mental health illness and substance use prevalence and write up a report.
4. Estimation of the size of the population with substance abuse and/or mental health disorder who may need publicly funded mental health and/or substance user services	Comparative: Secondary national, state, or local data	Collect national/state incidence of substance abuse and/or mental health disorders who [for those] who may need publicly funded mental health and/or substance user services
		Estimate the size of the local population with substance abuse and/or mental health disorders who may need publicly funded mental health and/or substance user services and write up a report.
5. Estimation of unmet needs for mental health and addiction treatment, prevention, and recovery services by specific populations and levels of care.	Experts interview/survey data	Conduct structured interviews (or surveys) with Executive Directors and/or key administrators of Cuyahoga County mental health and addiction treatment, prevention, and recovery agencies, to assess unmet need by specific populations and levels of care.
		Analyze interview data to estimate local incidence of unmet needs for mental health and addiction treatment, prevention, and recovery services by specific populations and levels of care; write up a report.
6. Assessment of the use of evidence based practices.	Experts interview/survey data	Conduct structured survey interviews (or surveys) with Executive Directors and/or key administrators of Cuyahoga County mental health and addiction treatment, prevention, and

		recovery agencies, to identify evidence-based interventions being used and barriers to implementing evidence-based interventions.
		Analyze data from <i>drughelp.care</i> to assess availability of evidence-based interventions
		Assess the local use of evidence-based practices and write up a report, based on data from structured interviews and <i>drughelp.care</i> database.
		Conduct structured interviews (or surveys) with Executive Directors and/or key administrators of Cuyahoga County mental health and addiction treatment, prevention, and recovery agencies, to assess impact of Ohio's Behavioral Health redesign on the Board's service mix and provider funding strategies.
7. Assessment of the impact of Ohio's Behavioral Health redesign on the Board's service mix and provider funding strategies.	Utilization data before and after; survey	Plan focus group/interview
8. Conduct focus groups with key community stakeholders and consumers to assess need for substance abuse and mental health prevention and treatment services (Perceived Need).	Perceived need through focus group studies	Focus group of providers
		Focus groups of clients and family members
		Focus group with key community stakeholders (community organizations and other county agencies)

## RATIONALE FOR STUDY DESIGN

As with other types of needs assessments, studies assessing substance abuse and mental health counseling demonstrate that the amount of services needed depends on the way need is measured. The need for substance abuse and mental health services may be defined in four ways, felt need, expressed need, expert need, and comparative need (Bradshaw, 1972).

Felt need indicates the amount of need for services individuals report that they need. Expressed need, also reported in utilization studies, indicates the amount of need based on the extent that individuals use substance abuse and mental health services. Expert assessments of individuals' need for substance abuse and mental health services rely on the assessments of professionals to determine the amount and type of services needed. Finally, comparative studies of need use epidemiological data to assess the need for services, based on the prevalence of certain conditions in the population.

When using comparative need as a framework researchers and policymakers rely on demographic and epidemiological data, such as prevalence of substance use and mental health disorders among a given population to estimate the amount of services needed. Comparative, or epidemiological studies are among the most commonly found needs assessment.

When using felt need, researchers seek to measure consumers' perceptions of their own need for substance abuse services. In the fields of substance abuse and mental health services, consumers can be the individuals themselves, family members, or their partners. One way to assess individuals' need for substance abuse and mental health services is to compare individuals' responses to their perceived or felt need for substance abuse services with the number of individuals who received substance use treatment from providers who are supported by the ADAMHS Board, Cuyahoga County. For example, this approach has been used to assess the need for children's' mental health services. In 2002, Kataoke et al (2002) used parents' responses to the Child Behavior Checklist to indicate whether children needed a mental health evaluation and compared this need to the number of children who received an evaluation. From this measure, the researchers estimated that 7.5 million children, or 21% of all children in the United States, had an unmet need for a mental health evaluation. Further, minority children and children who were uninsured had an even greater rate of unmet need (Kataoka, Zhang, & Wells, 2002).

As discussed by Lewandowski (2018), one limitation of felt need is that individuals, especially individuals who use or abuse substances, may not be aware of their need for substance abuse and/or mental health treatment, due to being in denial, or in the

precontemplation stage of change. Because they observe their family members in their natural environments, one might argue that family members are in the best position to make an accurate assessment of their family members' need for substance abuse and/or mental health treatment services. On the other hand, family members may either underestimate or overestimate their family member's need, perhaps out of concern for the stigma their family member may acquire by receiving treatment, being diagnosed with a disorder, or as a consequence of themselves being in a precontemplation stage of change regarding their own, or their family member's need for services. Further, having a disorder does not automatically equate with needing services. Some individuals recover on their own or may avail themselves of self-help approaches only. Similarly, some individuals with a substance abuse or mental health disorder may be in recovery, and in the maintenance stage of change.

Thus, given the limitation of these four strategies to assessing need, using more than one approach and comparing, triangulating findings may provide a more accurate picture of actual need.

## **PROJECT OVERVIEW**

We proposed four types of needs assessment studies: focus groups to examine perceived need, structured interviews (or surveys) with administrators to examine expert need, utilization studies to examine need for services based on service usage patterns, and epidemiological assessment, or comparative needs assessment using secondary datasets to compare prevalence of substance abuse and mental health disorders nationally and regionally with local trends. The statistical methods/tests that are used in data analysis depended on the type of data collected and the scope of the analysis (e.g., describe, estimate, compare, etc.), including descriptive statistics (e.g., frequencies and rates) displayed in graphs and inferential statistics (confidence intervals and p-values).

The CBHS research team worked with ADAMHS Board staff to identify agencies where focus groups could be conducted. The team also collaborated with ADAMHS Board staff in developing the final focus group questions.

Expressed need was assessed by analyzing service utilization data in ADAMHS Board databases in coordination with the ADAMHS Board staff. Expert need was assessed by conducting structured interviews or surveys of executive directors and/or administrators of service providers identified by ADAMHS Board staff. Similar to needs assessment of need for child psychiatrists in New York (Kaye, Lewandowski, Rose, Acker, & Chiarella, 2006), executive directors or key administrators are in a good position to be aware of trends in demands for services, populations that may be most underserved, and



waitlists (as a measure of unmet need). Administrators were asked about their perceptions of consumer groups who may be underserved (age, gender, sexual orientation, parents with children, geographic area, etc.); services for types of substance abuse and/or addiction (e.g. alcohol, opioid, cocaine, marijuana, etc.); and type and level of services (e.g. outpatient, intensive outpatient, residential, medication assisted treatment; etc.). Agency administrators were also be asked about the use of evidence-based interventions, and barriers to implementing evidence-based interventions. Finally, the CBHS team coordinated with the ADAMHS Board to conduct a comparative, or epidemiological assessment of need for substance abuse and mental health treatment services using local, regional, and national databases.

The primary data collected through focus groups and interviews are qualitative data based on non-probability samples, though structured interviews include some quantitative data, such as estimates of numbers of consumers served. Qualitative content analysis was used to analyze the information collected to supplement the findings based on the quantitative data throughout the report. See Appendix A for questions for focus groups that the team used for this project. There were three targeted population groups: 1) providers, 2) clients and family members, and 3) community organizations and other country agencies. Focus groups can be divided into two large groups: one focusing on substance use treatment services and the other focusing on mental health treatment services. We had between 5 to 10 participants in each focus group for a total of 50 participants.

## **APPENDIX C: METHODS AND SAMPLING**

We used both primary qualitative and secondary quantitative data for this project. Primary qualitative data consist of online surveys of executive directors and providers (IRB-FY2020-203), focus groups of clients, family members, and providers (IRB-FY2020-131), and interviews of executive directors as a follow-to the survey (IRB-FY2020-203). Secondary, quantitative data consist of the GOSH claim system data and publicly available secondary datasets collected by various government agencies (IRB-FY-2020-214). All studies to collect the primary data and utilize the secondary data were approved by the CSU's Institutional Review Board (IRB) with the IRB number in the parentheses.

The ADAMHS Board sent out an email to all agencies funded by the ADAMHS Board to participate in the online survey using Google Forms. We also received a list of emails of executive directors of these agencies from the ADAMHS Board. In addition to the email from the ADAMHS Board, we sent out a recruitment email to all agencies. In the end, 34 executive directors and 63 providers participated in the online surveys. We completed a total of four focus groups with a total of 26 participants. One focus group was recruited through NAMI, two focus groups were a combination of clients, family members, and providers. They were recruited through the ADAMHS Board. One focus group was recruited through the University Hospital, and participants were a combination of psychiatric residents and some faculty. Originally, we had planned to hold focus groups face to face, but due to the stay-home-order resulting from COVID-19, we had to hold all focus groups by Zoom. Survey participants were asked if they were willing to participate in a follow-up interview. In the end, we interviewed seven executive directors to get more information and clarification on their survey responses. These interviews lasted about 30 minutes each.

The secondary quantitative data consist of the GOSH data collected by the ADAMHS Board during the period January 1, 2019 through December 31, 2019. The GOSH data were deidentified, stripped of any personal, identifying information, and uploaded to the secure, HIPPA-approved sever (HCP Anywhere) provided by Cleveland State University. We requested and received the population estimates for Cuyahoga County for 2018 from the U.S. Census. Most of the census data from Chapter 1 come from the census.gov interactive data search engine, and the majority of Census data we used in this report are from the American Community Survey (ACS) 2018.

Other secondary data include the 2018 National Survey on Drug Use and Health (NSDUH), the 2018 National Mental Health Services Survey (N-MHSS), the 2018 National Survey on Substance use treatment Services (N-SSATS), and the 2017 Treatment Episode Data Set: Admissions (TEDS-A) and Discharges (TEDS-D), which

are all available through the Substance Abuse and Mental Health Data Archive (SAMHDA) (<https://datafiles.samhsa.gov/info/browse-studies-nid3454>). The 2019 Youth Risk Behavior Surveillance System (SRBSS) data are available at the Centers for Disease Control and Prevention data management website (<https://www.cdc.gov/healthyyouth/data/yrbs/data.htm>). The 2018 National Crime Victimization Data are available at the Bureau of Justice Statistics of the U.S. department of Justice Website (<https://www.bjs.gov/index.cfm?ty=dcdetail&iid=245>). The Cuyahoga County arrest data were requested to and provided by the Office of Criminal Justice Services of Ohio Department of Public Safety. The 2018 National Survey of Children's Health (NSCH) data are available at the Data Resource Center for Child and Adolescent Health of the Child and Adolescent health measurement Initiative website (<https://www.childhealthdata.org/learn-about-the-nsch/NSCH>). The 2018 National Health Interview Survey (NIS) is available at the National Center for Health Statistics of the Centers for Disease Control and Prevention website ([https://www.cdc.gov/nchs/nhis/nhis\\_questionnaires.htm](https://www.cdc.gov/nchs/nhis/nhis_questionnaires.htm)). The 2019 Monitoring the Future survey data are available at the National Institute on Drug Abuse (NIDA) website (<https://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future>).

The secondary data used in this report that are not mentioned here come from reports published by the agencies collecting the information, and we did not analyze the original data. When the original quantitative data were analyzed, we primarily used the SPSS, R, or SAS statistical software, depending on the individual investigator's preference. Most analyses were conducted using the recoded variables provided in the datasets, though in some cases, we created our own variables for the purpose of the report.

## APPENDIX D: SURVEY INSTRUMENTS

### Appendix D.1 Executive director survey

**Online Survey  
Executive Directors/Key Administrators  
ADAMHS Board Needs Assessment**

**Need for Mental Health Services**

Please indicate the type of mental health services your agency provides (Check all that apply)

- Prevention
- Education
- Outreach
- Peer Support
- Crisis intervention
- Short-term individual treatment (six sessions or less)
- Long-term treatment (More than six sessions)
- Group therapy or group support
- Self-Help Groups (e.g. NAMI, etc.)
- Residential Care
- Medication Management/monitoring
- Other

Other mental health services (Please specify)

Please indicate the evidence-based interventions that are used in your agency. (Check all that apply)

- Motivational Interviewing
- Dialectical Behavior Therapy
- ACT (Assertive Community Treatment)
- Cognitive Behavior Therapy
- Solution-Focused Therapy
- EMDR (Eye Movement Desensitization and Reprocessing)
- Prolonged Exposure Therapy
- Cognitive Processing Therapy
- Seeking Safety
- Twelve-Step Self-Help

\_\_\_ Other

Other Evidence- Based Mental Health Services. Please specify

We would like information on the mental health prevention evidence-based interventions or practices at your agency. Please indicate below.

We would like information on the mental health treatment evidence-based interventions or practices at your agency. Please indicate below.

### **Barriers to Mental Health Service**

**Please indicate the extent to which you believe each of the following is a barrier to receiving mental health services at your agency.**

1. Please indicate the extent to which each one is a perceived barrier for clients served by your agency for mental health services. The responses are

“1= Strongly Disagree, 2=Disagree, 3= Unknown/Undecided, 4= Agree, 5= Strongly agree

- \_\_\_ Number of professionals qualified to assess mental health needs
- \_\_\_ Ability hiring qualified workplace personnel
- \_\_\_ Care coordination across providers and organizations
- \_\_\_ Availability of public funds
- \_\_\_ Reimbursement procedures
- \_\_\_ Provider follow up on referrals within the organization
- \_\_\_ Provider follow up on referrals outside the organization
- \_\_\_ Individual follow-up on upcoming appointments
- \_\_\_ Family or guardian follow up on upcoming appointments
- \_\_\_ Transportation
- \_\_\_ Available childcare
- \_\_\_ Parent/family knowledge of mental health problems
- \_\_\_ Parent/family information about available services
- \_\_\_ Stigma
- \_\_\_ Turnover rate of personnel
- \_\_\_ Other – Please specify

Other (please specify)

### **Top 3 Barriers to Mental Health Access**

Please rate the extent that the following are barriers to receiving mental health services at your agency. (Number 1, 2, or 3).

- Number of qualified professionals
- Ability hiring qualified personnel
- Difficulty with care coordination
- Availability of public funds
- Reimbursement procedures
- Referral follow-up within the agency
- Referral follow-up outside agency
- Individual follow-up on appointments
- Family follow-up on appointments
- Transportation
- Office hours of providers
- Childcare
- Family knowledge of mental illness
- Family information about services
- Stigma
- Turn-over rate of personnel
- Other

Other barriers to mental health services (please specify)

It would be helpful if you could provide examples of how these are barriers for your clients seeking mental health services.

### **Waitlists at your Agency**

Do you maintain a waitlist at your agency for any mental health service at your agency?

Yes

No

Not sure

## Access and Barriers to Mental Health Services in Cuyahoga County

Which age group do you perceive faces the greatest barriers to receiving mental health services?

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18 – 24)
- Adults (26 – 64)
- Seniors (65 and older)

Please rank the extent that these age groups can access mental health services.

1=least difficulty, 2= mild difficulty, 3= unknown /uncertain, 4=moderate difficulty, 5=greatest difficulty

- Children (birth to age 10)
- Youth (11 – 17)
- Young Adults (18 – 25)
- Adults (26 – 54)
- Seniors (55 and older)

Which gender do you perceive faces the greatest barriers to receiving mental health services?

- Men
- Women
- Transgender
- No difference
- Not sure

What are the system-wide barriers to providing mental health to these individuals (e.g. the gender identified as facing the greatest barriers)?

What are your agencies' barriers to providing mental health to these individuals (e.g. the gender identified as facing the greatest barriers)?

To what extent do you perceive that the following populations of adults and youth have adequate access to mental health services?

1=Not well served, 2= mildly served 3= unknown /uncertain, 4= moderate served,  
5=adequately served

- Hispanic/Latino
- White
- Black or African-American
- Asian
- American Indian
- Alaska Native
- Chinese
- Filipino
- Korean
- Japanese
- Other Asian
- Native Hawaiian
- Samoan
- Chamorro
- Other Pacific Islander
- Other race
- Immigrants
- Children (age 5 – 10)
- Youth/adolescent (age 11- 18)
- Young adults (age 19-30)
- Adults (31-60)
- Seniors (61 and Older)
- LGBTQ
- Women with children
- Pregnant women
- Parolees
- Persons with co-occurring conditions
- Persons with Severe and Persistent Mental Illness
- Persons at risk for suicide
- Persons who are homeless
- Persons with difficulty with English
- Persons who have been incarcerated
- Persona with co-occurring mental illness/ disorders



## Professional Groups

Which professional groups are responsible for rendering mental health services in your agency? (Select all that apply).

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- Other

Which professional groups are responsible for medication-related mental health services in your agency? (e.g. prescribing and monitoring). Select all that apply.

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- Other

Other (please specify)

Which professional group is facing the greatest shortage in supply to meet demand for mental health services in Cuyahoga County?

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors

- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- All of the above
- None, no shortage
- Other

Other (please specify)

### **Population Trends at Your Agency**

Are there any trends or changes in the individuals who are currently receiving mental health services as compared to individuals who were receiving mental health over the past 10 years?

Yes

No

Don't Know/ Not sure

If so what sort of trends or changes have you witnessed? Please describe.

### **Mental Health Funding and Improving Services**

Please indicate the funding streams your agency receives for mental health services. (Check all that apply.)

- Cuyahoga County ADAMHS Board
- Other ADAMHS Board
- Medicaid
- Medicare
- CHIP
- Private Insurance
- Contributions
- Foundations/Grants
- Charity Care (services you provide but are not reimbursed)
- Other County Funding
- None
- Other

Other (Please specify)

1. What are your recommendations for improving the mental health system of care in Cuyahoga County?
2. Is there anything you'd like to add regarding the need for mental health services in Cuyahoga County?

## NEED FOR SUBSTANCE ABUSE SERVICES

The following questions address the need for substance abuse services in Cuyahoga County.

### Substance Abuse Services & Evidence-Based Practice

Please indicate the type of substance abuse services your agency provides (Check all that apply).

- Prevention
- Education
- Outreach
- Peer Support
- Crisis intervention
- Intensive Outpatient
- Outpatient
- Group therapy or group support
- Self-Help Groups (AA, NA, etc.)
- Residential Treatment
- Needle Exchange
- Medication Management/monitoring (e.g., for dual diagnosis)
- Medication Assisted Treatment
- Other (Please specify)
- None

Other Services? Describe the other substance abuse services your agency provides.

Please indicate the evidence-based interventions that are used in your agency for substance abuse. (Check all that apply).

- Motivational Interviewing
- Dialectical Behavior Therapy
- Cognitive Behavior Therapy
- Solution-Focused Therapy
- Twelve-Step Self Help
- Seeking Safety
- Locally Developed Model (please specify)
- Other (Please specify)

We would like information on the substance abuse prevention evidence-based interventions or practices at your agency. Please indicate below.

We would like information on the substance use treatment evidence-based interventions or practices at your agency. Please indicate below.

### **Barriers to Substance Abuse Services**

Please indicate the extent to which you believe each of the following is a barrier to receiving substance services at your agency.

The responses are:

“1=Strongly Disagree, 2=Disagree, 3=unknown/ undecided, 4= agree 5 =Strongly Agree

- Number of professionals qualified to assess substance use treatment needs
- Ability hiring qualified workplace personnel
- Care coordination across providers and organizations
- Availability of public funds
- Reimbursement procedures
- Provider follow up on referrals within the organization
- Provider follow up on referrals outside the organization
- Individual follow-up on upcoming appointments
- Family or guardian follow up on upcoming appointments
- Transportation
- Office hours of substance abuse service providers
- Available childcare
- Parent/family knowledge of substance abuse problems
- Parent/family information about substance abuse
- Stigma
- Turnover rate of personnel
- Other

Other barrier to receiving substance abuse services. (Please specify).

It would be helpful if you could provide examples of how these are barriers for your clients seeking substance abuse services.

## Access and Barriers to Substance Abuse Services in Cuyahoga County

Which age group do you perceive faces the greatest barriers to receiving substance use treatment and prevention services in Cuyahoga

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18-24)
- Adults (26-64)
- Seniors (65 and older)

How long do individuals usually wait? This would depend on the service see comment above

“1=Least Difficult, 2=Mild Difficulty 3=Unknown/ Uncertain, 4= Moderate Difficulty 5 =Greatest Difficulty

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18-24)
- Adults (26-64)
- Seniors (65 and older)

Which gender do you perceive faces the greatest barriers to receiving substance abuse services?

- Men
- Women
- Transgender
- No difference
- Not sure

What are the system-wide barriers to providing substance abuse services to these individuals (e.g. the gender identified as facing the greatest barriers)?

What are your agencies' barriers to providing substance abuse services to these individuals (e.g. the gender identified as facing the greatest barriers)?

## Access and Barriers to Substance Abuse Services in Cuyahoga County

To what extent do you perceive that the following populations of adults and youth have adequate access to substance abuse services?

1=Not well served, 2= mildly served 3= unknown /uncertain, 4= moderately served, 5=adequately served

- Hispanic/Latino
- White
- Black or African-American
- Asian
- American Indian
- Alaska Native
- Chinese
- Filipino
- Korean
- Japanese
- Other Asian
- Native Hawaiian
- Samoan
- Chamorro
- Other Pacific Islander
- Other race
- Immigrants
- Children (age 5 – 10)
- Youth/adolescent (age 11- 18)
- Young adults (age 19-30)
- Adults (31-60)
- Seniors (61 and Older)
- LGBTQ
- Women with children
- Pregnant women
- Parolees
- Persons with co-occurring conditions
- Persons with Severe and Persistent Mental Illness
- Persons at risk for suicide
- Persons who are homeless
- Persons with difficulty with English
- Persons who have been incarcerated
- Persona with co-occurring mental illness/ disorders

Please rank the extent that you think the following are barrier to access substance use treatment and prevention services at your agency.

(Number 1, Big barrier 2, Somewhat of a Barrier or 3 Not a barrier).

- Number of qualified professionals
- Ability hiring qualified personnel
- Difficulty with care coordination
- Availability of public funds
- Reimbursement procedures
- Referral follow-up within the agency
- Referral follow-up outside agency
- Individual follow-up on appointments
- Family follow-up on appointments
- Transportation
- Office hours of providers
- Childcare
- Family knowledge of mental illness
- Family information about services
- Stigma
- Turn-over rate of personnel
- Other

Other (please specify)

It would be helpful if you could provide examples of how these are barriers for your clients seeking substance abuse services. \*

### **Waitlist for substance abuse services**

Do you maintain a waitlist at your agency for any substance abuse services?

Yes

No

Not sure/NA



## Professional groups for Substance Abuse Services

Which professional groups are responsible for NON- MEDICATION related substance abuse services in your agency? (Select all that apply).

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- Not Sure
- Other

Other Professional groups (please specify)

Which professional group is there a shortage of in rendering substance abuse services?

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Other
- Not Sure

Other professional groups (please specify)

When considering medication-assisted treatment, which professional groups are responsible for prescribing and/or monitoring medications assisted treatment? (Select all that apply).

- Psychiatrists
- Primary care physicians

- Pediatricians (for children and youth)
- Nurse practitioners
- Neurologists
- Psychiatric Pharmacist
- Not Sure
- Other

Other professional group for medication- assisted treatment (Please specify)

When considering medication-assisted treatment, which of these groups is there a shortage of?

- Psychiatrists
- Primary care physicians
- Pediatricians (for children and youth)
- Nurse practitioners
- Neurologists
- Psychiatric Pharmacist
- Not Sure
- All of Above
- None of the above- no shortage
- Other

**Population Trends within your agency  
MEDICAID REDESIGN/ROLE OF ADAMHS BOARD**

Are there any trends or changes in the individuals who are currently receiving substance use treatment as compared to individuals who were receiving substance use treatment services over the past 10 years?

- Yes
- No
- Unknown/Uncertain
- Not applicable to the organization

If so what sort of trends or changes have you witnessed?

## Substance Abuse Funding and Improving Services

Please indicate the funding streams your agency receives for substance abuse services. (Select all that apply.)

- Cuyahoga County ADAMHS Board
- Other ADAMHS Board
- Medicaid
- Medicare
- CHIP
- Private Insurance
- Contributions
- Foundations/Grants
- Charity Care (services you provide but are not reimbursed)
- Other County Funding
- None; our agency does not provide substance abuse services
- Don't know; not sure
- Other

Other funding (please specify)

What are your recommendations for improving the substance abuse system of care in Cuyahoga County?

Is there anything you'd like to add regarding the need for substance abuse services in Cuyahoga County?

## Plans for Future Services

Please indicate the services your agency is planning to start or enhance now or in the near future. Check all that apply.

- Online Chat
- Tele-health
- Video Conferencing
- Webinars
- Online app
- Other

Other services (Please describe)

## COVID-19

The next questions relate to how COVID-19 is affecting service delivery in your agency.

Our agency will be seeking to purchase additional personal protective equipment such as masks and disposable gloves in response to COVID-19.

- Strongly Disagree
- Disagree
- Neither Disagree or Agree
- Agree
- Strongly agree

### Medicaid Redesign and Role of ADAMHS Board

These next few questions will ask you about Medicaid redesign and the role of the ADAMHS Board in general. They apply to both mental health and substance abuse.

To what extent has Medicaid redesign impacted the delivery of mental health and substance abuse services in Cuyahoga County?

- Not at all
- A little
- Unknown/ Uncertain
- Somewhat
- Quite a lot

Please describe how you perceive the Medicaid Redesign impacted the delivery of mental health and substance abuse services.

### Role of the ADAMHS Board

What do you think is the role of the ADAMHS Board?

### TELEPHONE FOLLOW-UP

We would like to follow-up with some respondents with a telephone interview to further explore responses to this survey. Please indicate whether you would be willing to be contacted by the research team for a follow-up interview.

I would be willing to be contacted by the research team for a follow-up telephone interview.

Yes/No

If yes, please provide your contact information.

Name

Agency

Position

Telephone

Email

## Appendix D.1 Provider survey

### Online Survey Provider ADAMHS Board Needs Assessment

#### Need for Mental Health Services

Please indicate the type of mental health services your agency provides (Check all that apply)

- Prevention
- Education
- Outreach
- Peer Support
- Crisis intervention
- Short-term individual treatment (six sessions or less)
- Long-term treatment (More than six sessions)
- Group therapy or group support
- Self-Help Groups (e.g. NAMI, etc.)
- Residential Care
- Medication Management/monitoring
- Other

Other mental health services (Please specify)

Please indicate the evidence-based interventions that are used in your agency. (Check all that apply)

- Motivational Interviewing
- Dialectical Behavior Therapy
- ACT (Assertive Community Treatment)
- Cognitive Behavior Therapy
- Solution-Focused Therapy
- EMDR (Eye Movement Desensitization and Reprocessing)
- Prolonged Exposure Therapy
- Cognitive Processing Therapy
- Seeking Safety
- Twelve-Step Self-Help
- Other

Other Evidence- Based Mental Health Services. Please specify

We would like information on the mental health prevention evidence-based interventions or practices at your agency. Please indicate below.

We would like information on the mental health treatment evidence-based interventions or practices at your agency. Please indicate below.

### **Barriers to Mental Health Service**

**Please indicate the extent to which you believe each of the following is a barrier to receiving mental health services at your agency.**

1. Please indicate the extent to which each one is a perceived barrier for clients served by your agency for mental health services. The responses are

“1= Strongly Disagree, 2=Disagree, 3= Unknown/Undecided, 4= Agree, 5= Strongly agree

- Number of professionals qualified to assess mental health needs
- Ability hiring qualified workplace personnel
- Care coordination across providers and organizations
- Availability of public funds
- Reimbursement procedures
- Provider follow up on referrals within the organization
- Provider follow up on referrals outside the organization
- Individual follow-up on upcoming appointments
- Family or guardian follow up on upcoming appointments
- Transportation
- Available childcare
- Parent/family knowledge of mental health problems
- Parent/family information about available services
- Stigma
- Turnover rate of personnel
- Other – Please specify

Other (please specify)

### **Top 3 Barriers to Mental Health Access**

Please rate the extent that the following are barriers to receiving mental health services at your agency. (Number 1, 2, or 3).

- Number of qualified professionals
- Ability hiring qualified personnel
- Difficulty with care coordination
- Availability of public funds
- Reimbursement procedures
- Referral follow-up within the agency
- Referral follow-up outside agency
- Individual follow-up on appointments
- Family follow-up on appointments
- Transportation
- Office hours of providers
- Childcare
- Family knowledge of mental illness
- Family information about services
- Stigma
- Turn-over rate of personnel
- Other

Other barriers to mental health services (please specify)

It would be helpful if you could provide examples of how these are barriers for your clients seeking mental health services.

### **Waitlists at your Agency**

Do you maintain a waitlist at your agency for any mental health service at your agency?

Yes

No

Not sure



## Access and Barriers to Mental Health Services in Cuyahoga County

Which age group do you perceive faces the greatest barriers to receiving mental health services?

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18 – 24)
- Adults (26 – 64)
- Seniors (65 and older)

Please rank the extent that these age groups can access mental health services.

1=least difficulty, 2= mild difficulty, 3= unknown /uncertain, 4=moderate difficulty, 5=greatest difficulty

- Children (birth to age 10)
- Youth (11 – 17)
- Young Adults (18 – 25)
- Adults (26 – 54)
- Seniors (55 and older)

Which gender do you perceive faces the greatest barriers to receiving mental health services?

- Men
- Women
- Transgender
- No difference
- Not sure

What are the system-wide barriers to providing mental health to these individuals (e.g. the gender identified as facing the greatest barriers)?

What are your agencies' barriers to providing mental health to these individuals (e.g. the gender identified as facing the greatest barriers)?

To what extent do you perceive that the following populations of adults and youth have adequate access to mental health services?

1=Not well served, 2= mildly served 3= unknown /uncertain, 4= moderate served, 5=adequately served

- Hispanic/Latino
- White
- Black or African-American
- Asian
- American Indian
- Alaska Native
- Chinese
- Filipino
- Korean
- Japanese
- Other Asian
- Native Hawaiian
- Samoan
- Chamorro
- Other Pacific Islander
- Other race
- Immigrants
- Children (age 5 – 10)
- Youth/adolescent (age 11- 18)
- Young adults (age 19-30)
- Adults (31-60)
- Seniors (61 and Older)
- LGBTQ
- Women with children
- Pregnant women
- Parolees
- Persons with co-occurring conditions
- Persons with Severe and Persistent Mental Illness
- Persons at risk for suicide
- Persons who are homeless
- Persons with difficulty with English
- Persons who have been incarcerated
- Persona with co-occurring mental illness/ disorders

## Professional Groups

Which professional groups are responsible for rendering mental health services in your agency? (Select all that apply).

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- Other

Which professional groups are responsible for medication-related mental health services in your agency? (e.g. prescribing and monitoring). Select all that apply.

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- Other

Other (please specify)

Which professional group is facing the greatest shortage in supply to meet demand for mental health services in Cuyahoga County?

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists

- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Social Workers
- All of the above
- None, no shortage
- Other

Other (please specify)

### **Population Trends at Your Agency**

Are there any trends or changes in the individuals who are currently receiving mental health services as compared to individuals who were receiving mental health over the past 10 years?

Yes

No

Don't Know/ Not sure

If so what sort of trends or changes have you witnessed? Please describe.

### **Mental Health Funding and Improving Services**

Please indicate the funding streams your agency receives for mental health services. (Check all that apply.)

- Cuyahoga County ADAMHS Board
- Other ADAMHS Board
- Medicaid
- Medicare
- CHIP
- Private Insurance
- Contributions
- Foundations/Grants
- Charity Care (services you provide but are not reimbursed)
- Other County Funding
- None
- Other

Other (Please specify)

1. What are your recommendations for improving the mental health system of care in Cuyahoga County?
2. Is there anything you'd like to add regarding the need for mental health services in Cuyahoga County?

## NEED FOR SUBSTANCE ABUSE SERVICES

The following questions address the need for substance abuse services in Cuyahoga County.

### Substance Abuse Services & Evidence-Based Practice

Please indicate the type of substance abuse services your agency provides (Check all that apply).

- Prevention
- Education
- Outreach
- Peer Support
- Crisis intervention
- Intensive Outpatient
- Outpatient
- Group therapy or group support
- Self-Help Groups (AA, NA, etc.)
- Residential Treatment
- Needle Exchange
- Medication Management/monitoring (e.g., for dual diagnosis)
- Medication Assisted Treatment
- Other (Please specify)
- None

Other Services? Describe the other substance abuse services your agency provides.

Please indicate the evidence-based interventions that are used in your agency for substance abuse. (Check all that apply).

- Motivational Interviewing
- Dialectical Behavior Therapy
- Cognitive Behavior Therapy
- Solution-Focused Therapy
- Twelve-Step Self Help
- Seeking Safety
- Locally Developed Model (please specify)
- Other (Please specify)

We would like information on the substance abuse prevention evidence-based interventions or practices at your agency. Please indicate below.

We would like information on the substance use treatment evidence-based interventions or practices at your agency. Please indicate below.

### **Barriers to Substance Abuse Services**

Please indicate the extent to which you believe each of the following is a barrier to receiving substance services at your agency.

The responses are:

“1=Strongly Disagree, 2=Disagree, 3=unknown/ undecided, 4= agree 5 =Strongly Agree

- Number of professionals qualified to assess substance use treatment needs
- Ability hiring qualified workplace personnel
- Care coordination across providers and organizations
- Availability of public funds
- Reimbursement procedures
- Provider follow up on referrals within the organization
- Provider follow up on referrals outside the organization
- Individual follow-up on upcoming appointments
- Family or guardian follow up on upcoming appointments
- Transportation
- Office hours of substance abuse service providers
- Available childcare
- Parent/family knowledge of substance abuse problems
- Parent/family information about substance abuse
- Stigma
- Turnover rate of personnel
- Other

Other barrier to receiving substance abuse services. (Please specify).

It would be helpful if you could provide examples of how these are barriers for your clients seeking substance abuse services.

## Access and Barriers to Substance Abuse Services in Cuyahoga County

Which age group do you perceive faces the greatest barriers to receiving substance use treatment and prevention services in Cuyahoga

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18-24)
- Adults (26-64)
- Seniors (65 and older)

How long do individuals usually wait? This would depend on the service see comment above

“1=Least Difficult, 2=Mild Difficulty 3=Unknown/ Uncertain, 4= Moderate Difficulty 5 =Greatest Difficulty

- Children (birth to age 5)
- Youth (6-17)
- Transitional Age Youth (18-24)
- Adults (26-64)
- Seniors (65 and older)

Which gender do you perceive faces the greatest barriers to receiving substance abuse services?

- Men
- Women
- Transgender
- No difference
- Not sure

What are the system-wide barriers to providing substance abuse services to these individuals (e.g. the gender identified as facing the greatest barriers)?

What are your agencies' barriers to providing substance abuse services to these individuals (e.g. the gender identified as facing the greatest barriers)?



## Access and Barriers to Substance Abuse Services in Cuyahoga County

To what extent do you perceive that the following populations of adults and youth have adequate access to substance abuse services?

1=Not well served, 2= mildly served 3= unknown /uncertain, 4= moderately served, 5=adequately served

- Hispanic/Latino
- White
- Black or African-American
- Asian
- American Indian
- Alaska Native
- Chinese
- Filipino
- Korean
- Japanese
- Other Asian
- Native Hawaiian
- Samoan
- Chamorro
- Other Pacific Islander
- Other race
- Immigrants
- Children (age 5 – 10)
- Youth/adolescent (age 11- 18)
- Young adults (age 19-30)
- Adults (31-60)
- Seniors (61 and Older)
- LGBTQ
- Women with children
- Pregnant women
- Parolees
- Persons with co-occurring conditions
- Persons with Severe and Persistent Mental Illness
- Persons at risk for suicide
- Persons who are homeless
- Persons with difficulty with English
- Persons who have been incarcerated
- Persona with co-occurring mental illness/ disorders

Please rank the extent that you think the following are barrier to access substance use treatment and prevention services at your agency.

(Number 1, Big barrier 2, Somewhat of a Barrier or 3 Not a barrier).

- \_\_\_ Number of qualified professionals
- \_\_\_ Ability hiring qualified personnel
- \_\_\_ Difficulty with care coordination
- \_\_\_ Availability of public funds
- \_\_\_ Reimbursement procedures
- \_\_\_ Referral follow-up within the agency
- \_\_\_ Referral follow-up outside agency
- \_\_\_ Individual follow-up on appointments
- \_\_\_ Family follow-up on appointments
- \_\_\_ Transportation
- \_\_\_ Office hours of providers
- \_\_\_ Childcare
- \_\_\_ Family knowledge of mental illness
- \_\_\_ Family information about services
- \_\_\_ Stigma
- \_\_\_ Turn-over rate of personnel
- \_\_\_ Other

Other (please specify)

It would be helpful if you could provide examples of how these are barriers for your clients seeking substance abuse services. \*

### **Waitlist for substance abuse services**

Do you maintain a waitlist at your agency for any substance abuse services?

Yes

No

Not sure/NA

## Professional groups for Substance Abuse Services

Which professional groups are responsible for NON- MEDICATION related substance abuse services in your agency? (Select all that apply).

- Certified Peer Support Specialists
  - Certified Prevention Professionals
  - Chemical Dependency Counselors
  - Clinical Psychologists
  - Licensed Counselors
  - Marriage and Family Therapists
  - Pastoral/Faith-Based Counselors
  - Psychiatric Nurses
  - Social Workers
  - Not Sure
  - Other
- Other Professional groups (please specify)

Which professional group is there a shortage of in rendering substance abuse services?

- Certified Peer Support Specialists
- Certified Prevention Professionals
- Chemical Dependency Counselors
- Clinical Psychologists
- Licensed Counselors
- Marriage and Family Therapists
- Pastoral/Faith-Based Counselors
- Psychiatric Nurses
- Other
- Not Sure

Other professional groups (please specify)

When considering medication-assisted treatment, which professional groups are responsible for prescribing and/or monitoring medications assisted treatment? (Select all that apply).

- Psychiatrists
- Primary care physicians

- Pediatricians (for children and youth)
- Nurse practitioners
- Neurologists
- Psychiatric Pharmacist
- Not Sure
- Other

Other professional group for medication- assisted treatment (Please specify)

When considering medication-assisted treatment, which of these groups is there a shortage of?

- Psychiatrists
- Primary care physicians
- Pediatricians (for children and youth)
- Nurse practitioners
- Neurologists
- Psychiatric Pharmacist
- Not Sure
- All of Above
- None of the above- no shortage
- Other

### **Population Trends within your agency**

### **MEDICAID REDESIGN/ROLE OF ADAMHS BOARD**

Are there any trends or changes in the individuals who are currently receiving substance use treatment as compared to individuals who were receiving substance use treatment services over the past 10 years?

- Yes
- No
- Unknown/Uncertain
- Not applicable to the organization

If so what sort of trends or changes have you witnessed?

## Substance Abuse Funding and Improving Services

Please indicate the funding streams your agency receives for substance abuse services. (Select all that apply.)

- Cuyahoga County ADAMHS Board
- Other ADAMHS Board
- Medicaid
- Medicare
- CHIP
- Private Insurance
- Contributions
- Foundations/Grants
- Charity Care (services you provide but are not reimbursed)
- Other County Funding
- None; our agency does not provide substance abuse services
- Don't know; not sure
- Other

Other funding (please specify)

What are your recommendations for improving the substance abuse system of care in Cuyahoga County?

Is there anything you'd like to add regarding the need for substance abuse services in Cuyahoga County?

## Plans for Future Services

Please indicate the services your agency is planning to start or enhance now or in the near future. Check all that apply.

- Online Chat
- Tele-health
- Video Conferencing
- Webinars
- Online app
- Other

Other services (Please describe)

## COVID-19

The next questions relate to how COVID-19 is affecting service delivery in your agency.

Our agency will be seeking to purchase additional personal protective equipment such as masks and disposable gloves in response to COVID-19.

- Strongly Disagree
- Disagree
- Neither Disagree or Agree
- Agree
- Strongly agree

### Medicaid Redesign and Role of ADAMHS Board

These next few questions will ask you about Medicaid redesign and the role of the ADAMHS Board in general. They apply to both mental health and substance abuse.

To what extent has Medicaid redesign impacted the delivery of mental health and substance abuse services in Cuyahoga County?

- Not at all
- A little
- Unknown/ Uncertain
- Somewhat
- Quite a lot

Please describe how you perceive the Medicaid Redesign impacted the delivery of mental health and substance abuse services.

### Role of the ADAMHS Board

What do you think is the role of the ADAMHS Board?

## TELEPHONE FOLLOW-UP

We would like to follow-up with some respondents with a telephone interview to further explore responses to this survey. Please indicate whether you would be willing to be contacted by the research team for a follow-up interview.

I would be willing to be contacted by the research team for a follow-up telephone interview.

Yes/No

If yes, please provide your contact information.

Name

Agency

Position

Telephone

Email

## Appendix D. 3 Focus group questions

### Focus group interview questions

1. What do you think is the biggest challenge in seeking out services for substance abuse/mental health treatment? (Facilitator)
2. What do you think is the biggest challenge in getting substance abuse/mental health treatment? (Co-Facilitator)
3. Do you know of anyone who has encountered difficulty finding mental health and/or substance abuse services? (Ask about outpatient, residential, and inpatient/hospitalization). What was it like for them? (Facilitator)
4. Comment on the availability of support services for family members of individuals seeking treatment for substance abuse and/or mental health concerns. (Co-Facilitator)
5. Which group do you believe faces the greatest challenges in accessing services (e.g., children and youth)? (Facilitator)
6. What do you find are the areas of greatest need for substance use treatment/mental health services? (Co-Facilitator)
7. What do you think people need to get better? (Facilitator)
8. What else do you think we should know about the need for services? (Co-Facilitator)
9. Anything else you'd like to add? (Facilitator)

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#### <sup>i</sup> List of questions asked about each substance on NSDUH to measure dependence and abuse:

- During the past 12 months, was there a month or more when you spent a lot of your time getting or using heroin?
- During the past 12 months, was there a month or more when you spent a lot of your time getting over the effects of the heroin you used?
- During the past 12 months, did you try to set limits on how often or how much heroin you would use?
- Were you able to keep to the limits you set, or did you often use heroin more than you intended to?
- During the past 12 months, did you need to use more heroin than you used to in order to get the effect you wanted?
- During the past 12 months, did you notice that using the same amount of heroin had less effect on you than it used to?
- During the past 12 months, did you want to or try to cut down or stop using heroin?
- During the past 12 months, were you able to cut down or stop using heroin every time you wanted to or tried to?
- During the past 12 months, did you cut down or stop using heroin at least one time?



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- Please look at the symptoms listed below. During the past 12 months, did you have 3 or more of these symptoms after using heroin?
    - Feeling kind of blue or down
    - Vomiting or feeling nauseous
    - Having cramps or muscle aches
    - Having teary eyes or a runny nose
    - Feeling sweaty, having enlarged eye pupils, or having body hair standing up on your skin
      - Having diarrhea
    - Yawning
    - Having a fever
    - Having trouble sleeping
  - Please look at the symptoms listed below. During the past 12 months, did you have 3 or more of these symptoms at the same time that lasted for longer than a day after you cut back or stopped using heroin?
    - Feeling kind of blue or down
    - Vomiting or feeling nauseous
    - Having cramps or muscle aches
    - Having teary eyes or a runny nose
    - Feeling sweaty, having enlarged eye pupils, or having body hair standing up on your skin
      - Having diarrhea
    - Yawning
    - Having a fever
    - Having trouble sleeping
  - During the past 12 months, did you have any problems with your emotions, nerves, or mental health that were probably caused or made worse by your use of heroin?
  - Did you continue to use heroin even though you thought it was causing you to have problems with your emotions, nerves, or mental health?
  - During the past 12 months, did you have any physical health problems that were probably caused or made worse by your use of heroin?
  - Did you continue to use heroin even though you thought it was causing you to have physical problems?
  - This question is about important activities such as working, going to school, taking care of children, doing fun things such as and spending time with friends and family. During the past 12 months, did using heroin cause you to give up or spend less time doing these types of important activities?
  - Sometimes people who use heroin have serious problems at home, work or school - such as:
    - neglecting their children
    - missing work or school
    - doing a poor job at work or school
    - losing a job or dropping out of school
  - During the past 12 months, did using heroin cause you to have serious problems like this either at home, work, or school?
  - During the past 12 months, did you regularly use heroin and then do something where using heroin might have put you in physical danger?
  - During the past 12 months, did using heroin cause you to do things that repeatedly got you in trouble with the law?
  - During the past 12 months, did you have any problems with family or friends that were probably caused by your use of heroin?
  - Did you continue to use heroin even though you thought it caused problems with family or friends?