

THE PREVALENCE, CONSUMPTION, AND CONSEQUENCES OF ALCOHOL, TOBACCO, MARIJUANA, OPIOIDS, STIMULANTS, AND MENTAL HEALTH IN INDIANA

A STATE EPIDEMIOLOGICAL PROFILE



Developed by Indiana State
Epidemiological Outcomes Workgroup



The Prevalence, Consumption, and Consequences of Alcohol, Tobacco, Marijuana, Opioids, Stimulants, and Mental Health in Indiana:

A State Epidemiological Profile

Developed by the Indiana State Epidemiological Outcomes Workgroup, 2021-2022

OUR VISION

Healthy, safe, and drug-free environments that nurture and assist all Indiana citizens to thrive.

OUR MISSION

To reduce substance use and abuse across the lifespan of Indiana citizens.

Published by Syra Health

The following document analyzes and presents data to support the development of a framework for advancing the mission of the Indiana Substance Abuse Prevention System. The intended audience of this document is for state policymakers and community leaders.

More information about SEOW, reports and dashboards can be viewed in the below website: <https://www.in.gov/fssa/dmha/substance-misuse-prevention-and-mental-health-promotion/prevention-partners/state-epidemiological-outcomes-workgroup/>

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About Syra Health

Syra Health is a healthcare professional services company that provides unique and innovative patient-centric solutions to a plethora of entities and organizations involved in improving patient care and health outcomes at a local, community, state, and national level.

At Syra Health, we strongly believe in behavioral health equity and strive to provide quality health care to all populations, regardless of race, ethnicity, gender, socioeconomic status, sexual orientation, or geographic location. Prevention, specialized clinical workforce, and recovery services for mental and substance use disorders are among our services to the Indiana population. At the core of our services is health education and outreach for healthcare personnel and patients, our team develops strategic and insightful content through medical storytelling to instill confidence in clinical decisions and provide knowledge to healthier living.

Since 2021, Syra Health has been supporting the ongoing efforts of State Epidemiological Outcomes Workgroup by monitoring substance use and mental health. We also provide data-driven evidence-based solutions to improve public health and evaluate/frame public policies. We are in the process of evaluating the Indiana's regional prevention system and providing recommendations for improvement.

Additionally, Syra Health has a broad team of data scientists, public health experts, health economists, and biostatisticians that provide advanced health analytics on retrospective to real-world data to provide meaningful insights to improve quality of clinical care, understand patterns and trends around diagnosis, treatment, and continued care.

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Executive Summary

The Indiana Statewide Epidemiological Outcomes Workgroup (SEOW) is comprised of committee members from over 16 state agencies/divisions from the state of Indiana who are knowledgeable about mental, emotional, and behavioral health disorders, as well as prevention, intervention, and treatment. The goal of the SEOW committee is to monitor the prevalence of substance misuse and mental illness in Indiana and implement state-based interventions to reduce the occurrence of related behavioral health issues. The SEOW is committed to using epidemiological data and evidence-based practices to assess the needs of all Indiana residents, and to promote physical and mental wellness to combat drug addiction, mental illness, and suicide.

The SEOW Annual Report provides a detailed description of the prevalence, consequences, and other behavioral health indicators of alcohol, tobacco, marijuana, opioid, and stimulant use, and the occurrence of mental illness and suicide. For this report, the SEOW workgroup identified several indicators from various national and state data sources that were relevant to monitor the substance use and mental health based on relevance, timeliness, validity, and representation. These measures help identify emerging trends related to state of behavioral and mental health in Indiana. This report also shows the changes in data relative to prior years for most measures.

ALCOHOL

Alcohol is the most widely consumed substance in the United States. Alcohol has become increasingly more accessible and appealing in the last couple of years, and consumption has trended upwards. Wide social acceptance, stress, environment, and other factors have led to harmful misuse of alcohol. Alcohol misuse is also related to numerous adverse health conditions and can also lead to death. Overconsumption and harmful drinking of alcohol have contributed to over 3 million deaths a year worldwide (World Health Organization, 2022).

During the COVID-19 pandemic in 2020, nearly half of Indiana residents over the age of 12 years old reported consuming alcohol, a 1.1 percentage point decline from previous year (NSDUH, 2020). Approximately 23.8% of residents who are 12 years or older have participated in binge drinking with the highest rate among young adults (ages 18 to 25) (NSDUH, 2020). Indiana has also seen an increase of 1.1 percentage point in alcohol use amongst adult population in 2020, with 51.1% of the population (age-adjusted) reporting alcohol use within the past month (CDC-BRFSS, 2020). There were higher increases in alcohol use among women with 44.2% consuming alcohol in 2020 (a 3.3 percentage point increase relative to 2019) with the increase in alcohol consumption, Indiana has also seen a 3.3 percentage points increase in alcohol-attributable mortality from 2019 to 2020. This is approximately 13.7 deaths per 100,000 population in 2020 (CDC, 2020).

TOBACCO

Tobacco is one of the most commonly used and easily accessible drugs. Approximately 34 million people in the United States smoke cigarettes (CDC, 2021). Tobacco use can lead to many health conditions such as cancer, heart disease, stroke, lung disease, type II diabetes, and other chronic health conditions. Tobacco use has increased due to the availability of new forms including hookah, e-cigarettes, and other nonconventional tobacco products, many of which are popular amongst the youth.

In 2020, about, 25.4% of Indiana residents aged 12 and over reported current tobacco use (still above the national rate of 19.9%), while 20.2% of Indiana residents reported using cigarettes (NSDUH, 2020). The highest rates of smoking occurred amongst groups of working age adults, people with a high school education or less, and lower income groups (CDC-BRFSS, 2020). In youth populations, it was reported that 18.5% of high school students smoked e-cigarettes in 2018, a 8 percentage point increase from 2016 data (Indiana Youth Tobacco

Survey, 2018). Of the college population, approximately 21.6% of college students used electronic vapor products (King & Jun, 2021).

MARIJUANA

Marijuana is a popular drug used often for recreational use. Marijuana can be used in several different ways, including smoking and eating. While marijuana is currently classified as an illegal substance, over 18 states, along with the U.S. capital Washington D.C., have legalized the recreational use of marijuana.

About 10.9% Hoosiers had used marijuana in 2020 and 26.7% young adults aged 18-25 used marijuana during the same period (NSDUH, 2020).

OPIOIDS

Opioids are a class of pain-reducing drugs that include both legal and illegal substances. Extended use of prescription drugs can lead to dependence. Patients who develop addiction and dependence on these drug products sometimes pursue them through licit and illicit means. The advent of COVID-19 has further increased the dangers of opioid abuse. The pandemic has also resulted in an increase in drug overdoses, possibly from a combination of social isolation, increased stress, and less access to treatment programs.

In 2020, there were over 2,316 deaths from drug poisoning, an increase of 621 deaths from 2019 (IDOH, 2021). The mortality rate for drug overdoses involving opioids was 27.8 per every 100,000 population in 2020, an increase of 9.3 points from 2019 (IDOH, 2021). There were over 1,875 overdose deaths in Indiana for the year 2020 which demonstrated an increase of 1,098 deaths from 2018 (IDOH, 2020). Emergency department visits increased by 2,127 visits in 2020, to a total of 7,191 visits (IDOH, 2021).

About 35.4% of Hoosiers who received substance use treatment in Indiana during SFY 2021 reported using opioid (including heroin, non-prescription methadone and other opiates/synthetics) as a primary, secondary or tertiary substance (IN-DMHA, 2021). Among them, methamphetamine use was highest (50.8%), followed by Marijuana use (33.8%) and alcohol use (18.3%).

STIMULANTS

Stimulants are similar to opioids in that they are a group of drug substances that can be used legally and illegally. Some of the most commonly abused stimulants include illicit drugs like cocaine/crack and methamphetamine,

along with legal drug products like prescription stimulants. Methamphetamine, also referred to as “meth”, is derived from the chemical substance amphetamine. Prescription stimulants are designed to increase alertness, attention, and energy; however, abuse of these drug products is not limited to desired intoxication. Some reports show that people inappropriately use prescription stimulants, like Adderall, to improve performance at school/work or enhance their memory (NIDA, 2021).

In the state of Indiana, approximately 1.8% of residents have reported using cocaine within the last year and about 4.2% young adults between the ages of 18 to 25 used cocaine (NSDUH, 2020). About 0.8% of Indiana residents and 1% of young adults ages 18 to 25 reported using meth. In SFY 2021, of those treated for substance use in Indiana, 10.3% of admissions reported cocaine use and 41.3% reported meth use either as a primary, secondary, or tertiary substance (IN-DMHA, 2021). Meth lab seizures decreased from 62 to 38 in 2021.

MENTAL HEALTH

Over half of the people living in the U.S. may be diagnosed with a mental illness or disorder at some point in their life. There are several different types of mental disorders, with no one specific cause for any mental illness. Some common mental illnesses are anxiety disorders and depression. The COVID-19 pandemic had a serious impact on the mental health of many Americans. Over 50% of the country reported COVID-19 having a negative impact on their mental health.

In Indiana, approximately 21.8% of Hoosiers ages 18 and older reported having a mental illness and 6.8% reported having a serious mental illness in 2020 (NSDUH, 2020). In 2020, 8.8% of Indiana residents ages 18 and over reported having at least one major depressive episode (NSDUH, 2020). When comparing gender and race, it is reported that 15.8% of men suffer from depression compared to 27.7% of women in 2020, an increase of 0.9 percentage points from 2019 for both groups (CDC-BRFSS, 2020). There was also a reported increase in depression across all race groups from 2019 to 2020, with 17.4% of the African American race, 17.8% of the Hispanic race, and 22.9% of the White race suffering from depression, with higher increases seen among Hispanic and African-American races. In the state of Indiana, there were 15 suicide deaths per 100,000 people in 2020 (CDC, 2020). The average age-adjusted mortality rate for suicide between 1999 and 2020 was higher amongst men at 22.2 per 100,000 relative to women at 5.1 per 100,000 (CDC, 1999-2020).

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Alcohol Use in Indiana: Prevalence And Consequences

INTRODUCTION

Alcohol is the most widely consumed substance in the United States and the world. The 2019 National Survey on Drug Use and Health (NSDUH) found that 85.6% of Americans over the age of 18 have consumed alcohol at some point in their life (Ahrnsbrak, 2016). Excessive drinking in a short period (binge drinking) occurred within 16.3-18.1% of the total population in Indiana (CDC, 2019). Excessive drinking and alcohol misuse have been associated with various adverse health conditions.

Alcohol has become increasingly more accessible and appealing in the last couple of years, and consumption has trended upwards. Wide social acceptance, stress, the environment, and other factors have led to the harmful misuse of alcohol. During the COVID-19 pandemic, many Americans faced an enormous amount of mental stress from quarantine. Anxiety or depressive disorders increased by 30% and alcohol or substance abuse increased by 12% (Panchal et al., 2021). In response to the economic impacts of the pandemic, many American environments saw a change in accessibility to alcohol. In Indiana, House Bill 1396 relaxed restrictions on the sale of alcohol and permitted restaurants to allow “to go” forms of alcohol to be delivered to patrons (Smaltz, Clere, Bartels, & May, 2021). Beer, wine, and liquor sales increased by 20% during the pandemic since many Americans were able to order alcohol online and have it delivered to their front door (Castaldelli-Maia et al., 2021).

Alcohol misuse is also related to numerous adverse health conditions that could lead to death. Overconsumption and harmful drinking of alcohol have contributed to over 3 million deaths a year worldwide (World Health Organization, 2022). In 2019, alcohol-related vehicle accidents contributed to over 10,000 deaths, 106 of which were in Indiana alone (Thelin, 2020). The economic impact of alcohol misuse in the U.S. reached over \$249 billion in 2010 through loss in work productivity, healthcare expenses, criminal justice expenses, and other expenses (Sacks et al., 2015).

As the prevalence of alcohol consumption for age groups under 25 increases, rates of alcohol misuse may also increase. Misuse can lead to unintended consequences such as alcohol overdoses, sexual assaults, injuries, and deaths. Long-term health consequences of alcohol abuse include chronic liver disease, low self-esteem, depression, and impeded brain development (NIH, 2004). Mortality is increased in people with liver disease due to heavy alcohol use; about 44% of deaths from liver disease are due to alcohol (Basra, 2011).

PREVALENCE OF ALCOHOL CONSUMPTION IN THE GENERAL POPULATION

National Survey on Drug Use and Health

The Substance Abuse and Mental Health Services Administration (SAMHSA)'s National Survey on Drug Use and Health (NSDUH) showed that an estimated 48.4% (95% Confidence Interval [CI]: 45.1–51.7) of Indiana residents ages 12 and up used alcohol in the past month. Indiana's prevalence rate for current alcohol use [in past 30 days or past month] is close to the national rate of 50.4% (95% CI: 49.8–51.0) (See Figure 2.1). The highest level of use is among adults ages 18-25 at 55.1% (95% CI: 49.9–60.2) (U.S.: 52.9%, 95% CI: 51.8–54.1). 55.1% (95% CI: 59.9–60.2) of Indiana adults ages 18-25 reported recent alcohol use (past 30 days), again, close to the national rate of 52.9% (95% CI: 51.8–54.1) (See Figure 2.2). In the age group 12-17, 8.4% (95% CI: 6.8–10.3) of young people reported alcohol consumption in the past 30 days, slightly below the nation's average of 8.8% (8.8%; 95% CI: 8.2–9.5) (Ahrnsbrak, 2016)

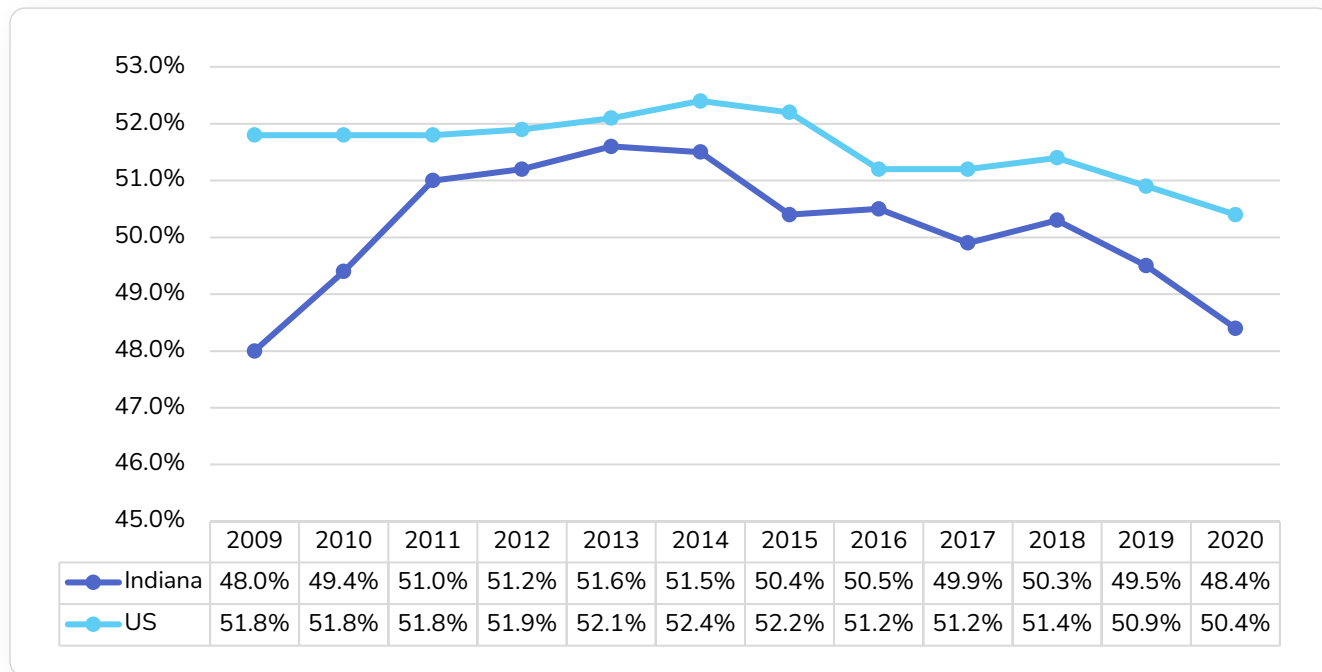
Under NSDUH, binge drinking is defined as “five or more drinks (for males) or four or more drinks (for females) on the same occasion (i.e., at the same time or within a couple of hours of each other)” on at least 1 day in the past 30 days (“Section 2 PE Tables,” 2021, Ahrnsbrak, 2016).

NSDUH estimated that in 2020, 23.8% of Indiana's population 12 years of age or older reported current binge

drinking (95% CI: 21.1–26.6); this represents a rate similar to the national average of 23.1% (95% CI: 22.6–23.6). Binge drinking was more prevalent among 18 to 25 year olds than among any other age group (IN: 35.7%; 95% CI: 31.0–40.6; U.S.: 32.8%; 95% CI: 31.8–33.9). 2020 binge

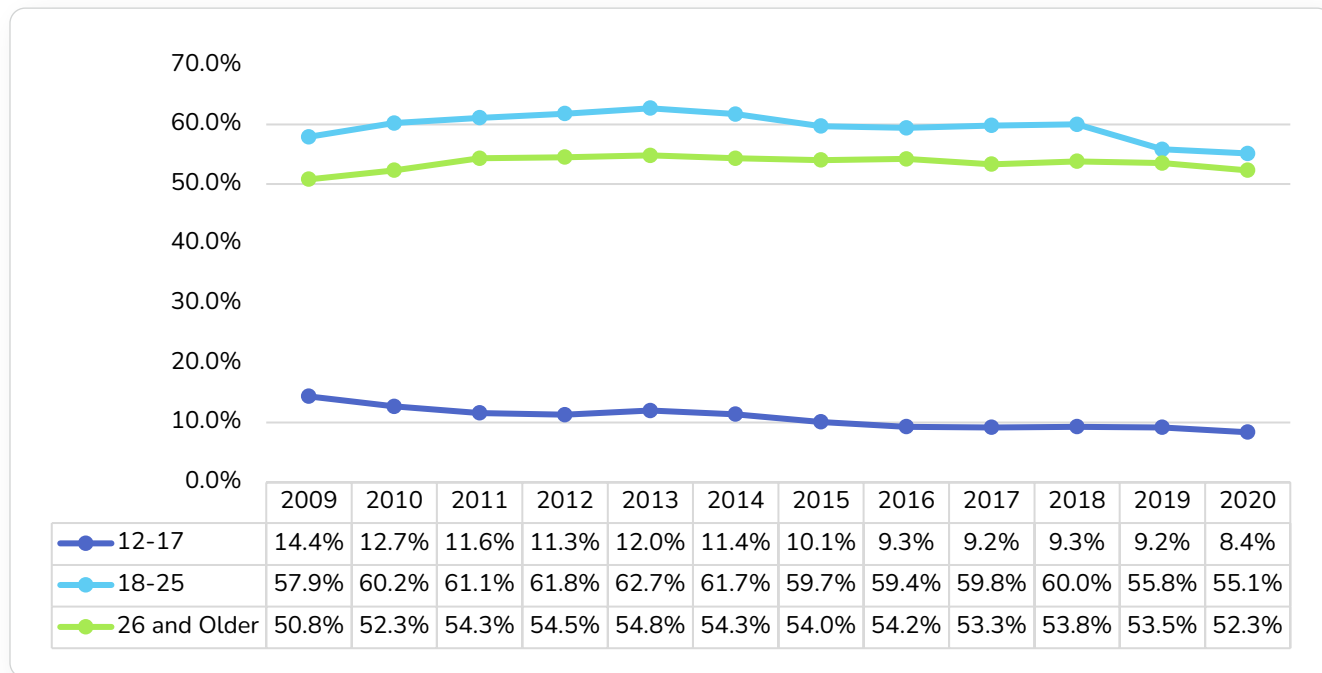
drinking rates in individuals ages 12 to 20 were similar in Indiana (9.6%; 95% CI: 7.5–12.3) and the U.S. (10.1%; 95% CI: 9.5–10.8) (“Section 2 PE Tables,” 2021; Ahrnsbrak, 2016) (See Figure 2.3).

Figure 2.1 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Current Alcohol Use (National Survey on Drug Use and Health, 2009–2020)



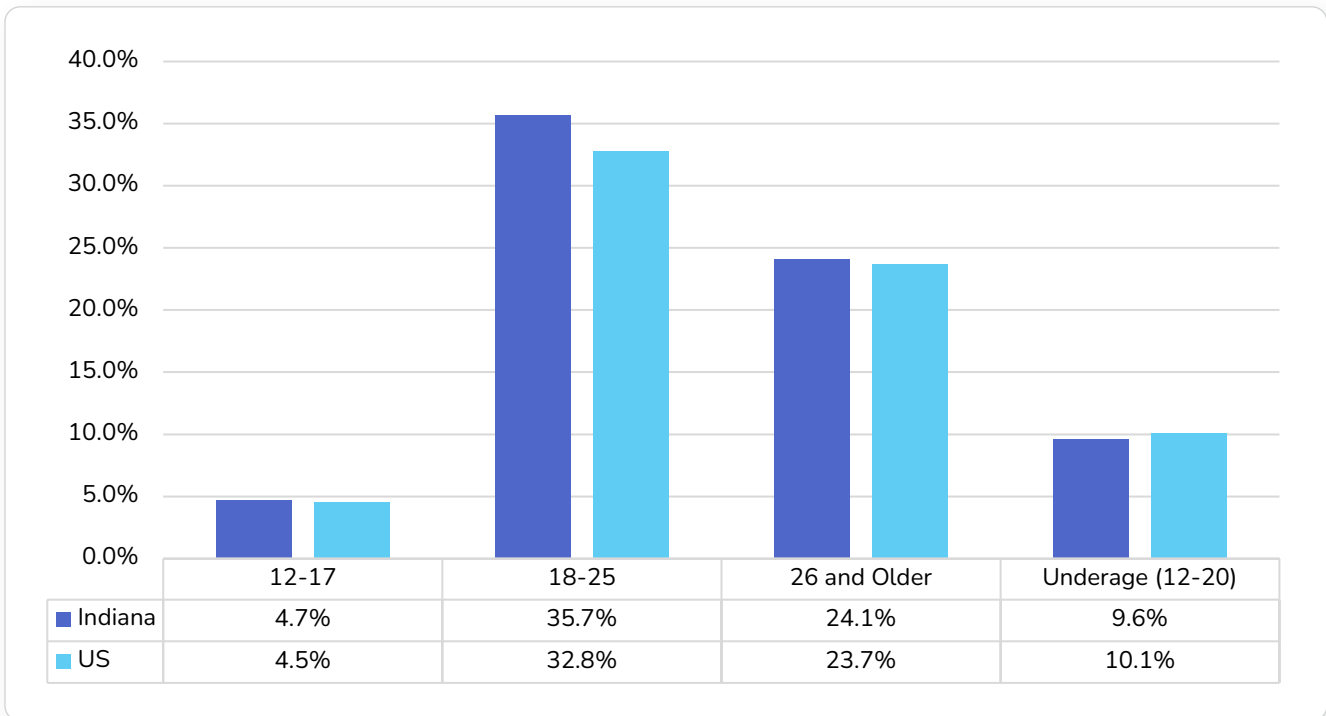
Source: “Section 2 PE Tables,” 2021

Figure 2.2 Percentage of Indiana Population Reporting Current Alcohol Use by Age Group (National Survey on Drug Use and Health, 2009–2020)



Source: “Section 2 PE Tables,” 2021

Figure 2.3 Current Binge Drinking in Indiana and the U.S. by Age Group (National Survey on Drug Use and Health, 2020)



Source: "Section 2 PE Tables," 2021

Behavioral Risk Factor Surveillance System

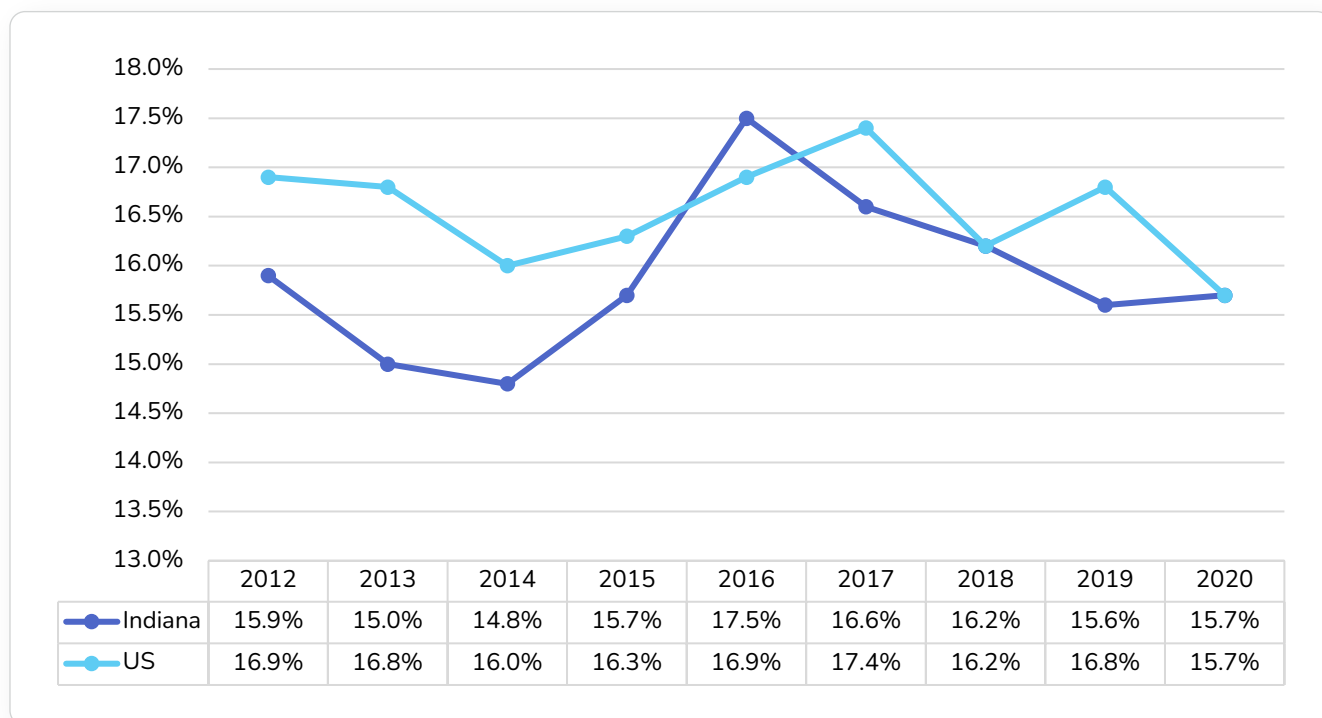
The Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS) is a telephone-based survey system that collects data on health-related topics. BRFSS collects data from all 50 states using prevalence and trend data tools. BRFSS findings on adult prevalence rates for current alcohol use in 2020 were 50.0% (95% CI: 48.7–51.4) for Indiana and 52.4% for the nation. The rates continue to be higher for males and the working-age population (See Table 2.1). The prevalence of adult binge drinking in Indiana (15.7%, 95% CI: 14.6–16.7) was similar to the U.S. median rate (15.7%) in 2020. Males in Indiana had significantly higher rates of reported binge drinking than females: 20.5% (95% CI 18.8–22.2) vs. 11.2% (95% CI 9.9–12.4) (See Table 2.2) ("BRFSS Prevalence & Trends," 2019). Trends in binge drinking are shown in Figure 2.4 (CDC, 2019). Men were more likely to participate in binge drinking, leading to higher rates of alcohol use disorder. Excessive alcohol use can affect reproductive health in men, as well as increase the chances of engaging in high-risk sexual behavior ("Excessive Alcohol Use," 2019). Alcohol is a risk factor associated with certain cancers, and in men, it can increase the chances of prostate cancer. Reducing alcohol consumption would be a preventable action against such cancers ("Excessive Alcohol Use," 2019).

Table 2.1 Percentage of Indiana Adults Having Used Alcohol in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2020)

| | | Indiana % (95% CI) |
|----------------|----------|--------------------|
| Gender | Male | 56.1% (54.2–58.1) |
| | Female | 44.2% (42.4–46.1) |
| Race/Ethnicity | White | 50.4% (49.0–51.9) |
| | Black | 53.2% (48.2–58.1) |
| | Asian | 36.6% (23.0–50.1) |
| | Hispanic | 44.5% (38.2–50.8) |
| Age Group | 18-24 | 44.3% (39.4–49.3) |
| | 25-34 | 61.6% (57.8–65.4) |
| | 35-44 | 58.7% (55.2–62.1) |
| | 45-54 | 53.7% (50.6–56.7) |
| | 55-64 | 49.1% (46.3–51.9) |
| | 65+ | 36.7% (34.6–38.8) |
| Total | | 50.0% (48.7–51.4) |

Source: CDC, 2021

Figure 2.4 Percentage of Indiana and U.S. Adults Reporting Binge Drinking in the Past 30 Days (Behavioral Risk Factor Surveillance System, 2012–2020)



Source: CDC, 2021

Table 2.2 Percentage of Indiana Residents Who Engaged in Binge Drinking in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2020)

| | | Indiana % (95% CI) |
|----------------|----------|--------------------|
| Gender | Male | 20.5% (18.8–22.2) |
| | Female | 11.2% (9.9–12.4) |
| Race/Ethnicity | White | 15.7% (14.6–16.9) |
| | Black | 15.2% (11.4–19.0) |
| | Hispanic | 17.8% (12.8–22.9) |
| Age Group | 18-24 | 20.3% (16.4–24.2) |
| | 25-34 | 25.7% (22.1–29.2) |
| | 35-44 | 20.2% (17.3–23.2) |
| | 45-54 | 16.4% (14.1–18.7) |
| | 55-64 | 12.0% (10.2–13.8) |
| | 65+ | 4.5% (3.6–5.4) |
| Total | | 15.7% (14.6–16.7) |

Source: CDC, 2021

Youth Risk Behavior Surveillance System

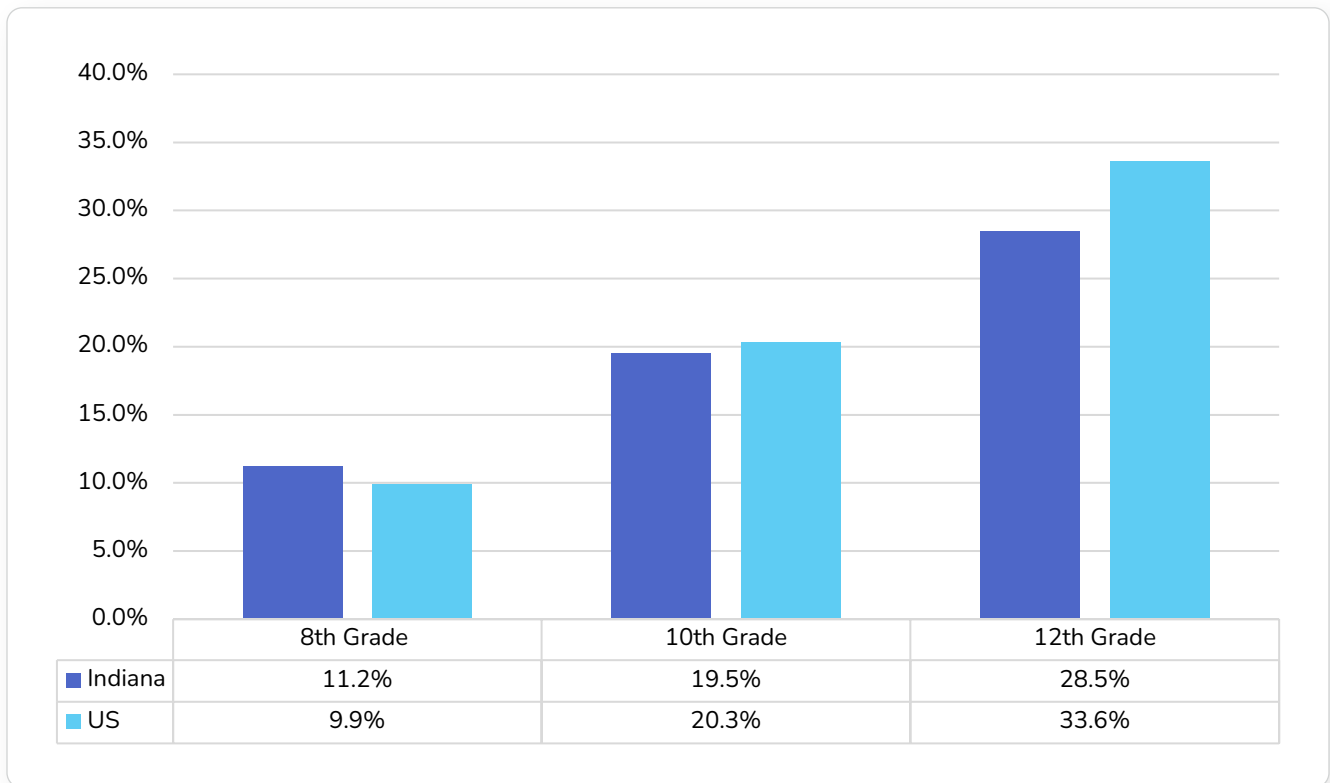
CDC's Youth Risk Behavior Surveillance System (YRBSS) is used to monitor and collect data on health behaviors among young adults through a survey system. The 2015 YRBSS survey on alcohol consumption shows that 30.5% (95% CI: 26.3–35.2) of Indiana high school students had consumed at least one alcoholic drink in the past 30 days (*Indiana Youth Survey Report*, 2020). Rates among grade levels varied, with 9th grade at the lowest rate of consumption. Indiana's past-month alcohol prevalence among high school students closely followed the U.S. prevalence (32.8%: 95% CI: 30.4–35.2). Binge drinking was reported by 17.4% (95% CI: 14.0–21.5) of Indiana high school students; the U.S. rate was similar at 17.7% (95% CI: 15.8–19.8). Indiana's binge alcohol consumption among high school students decreased significantly from 28.9% in 2003 to 17.4% in 2015 (Esser et al., 2017). Although rates of consumption appear to be declining in high school students, significant health conditions from alcohol use still exist within these groups. Alcohol use in groups under 17 years of age can affect normal adolescent brain development and can lead to other adverse health conditions early on. As rates of binge drinking are higher in males, a significant portion of young male alcohol users are still at risk for adverse health conditions (NIAAA, 2022).

Indiana Youth Survey

The Indiana Youth Survey (INYS) assesses students in grades 6-12 to collect data on substance use, mental health, gambling, and other areas of risk (*Indiana Youth Survey Report, 2020*). Among students in all grades, alcohol was found to be the most used substance in the past 30 days. Students in 12th grade reported the highest prevalence of recent alcohol use among all grades at 28.5% (*Indiana Youth Survey Report, 2020*). Overall prevalence rates increased as the grade level increased, and no significant differences

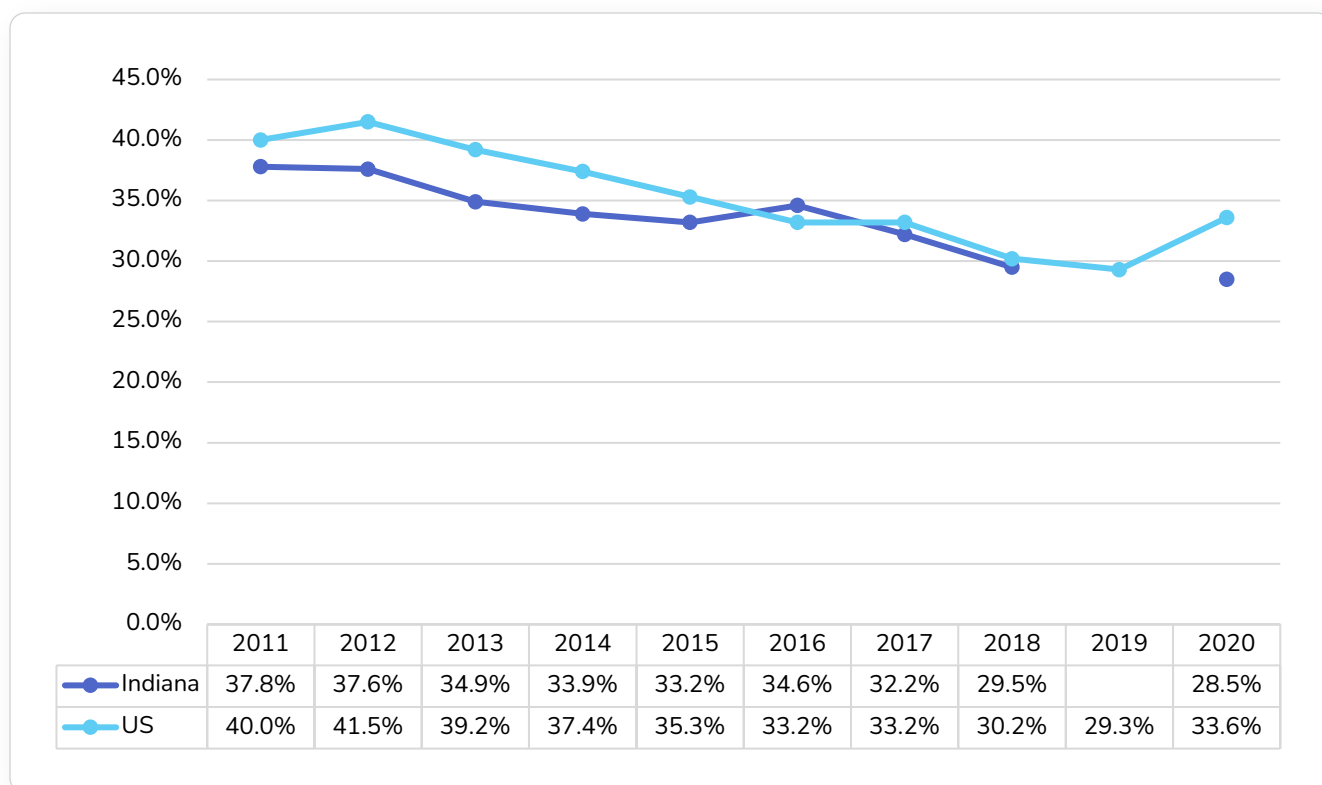
were found due to gender. Prevalence of past month's alcohol use decreased in 2020 compared to 2018 (*Indiana Youth Survey Report, 2020*). Consequences of alcohol use in youth include poor test performance and affected adolescent brain development (*Indiana Youth Survey Report, 2020*). Figure 2.5 shows the prevalence rate of monthly alcohol use among 8th, 10th and 12th grade students and Figure 2.6 shows the trends of monthly alcohol use among 12th grade students (high school seniors).

Figure 2.5 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2020)



Source: Jun et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020

Figure 2.6 Percentage of Indiana and U.S. High School Seniors (12th Grade) Reporting Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2011–2020)



Source: Jun et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020

Notes: The 2019 data for Indiana is missing because the Indiana Youth Survey (INYS) switched the data collection to biennial.

Indiana College Substance Use Survey

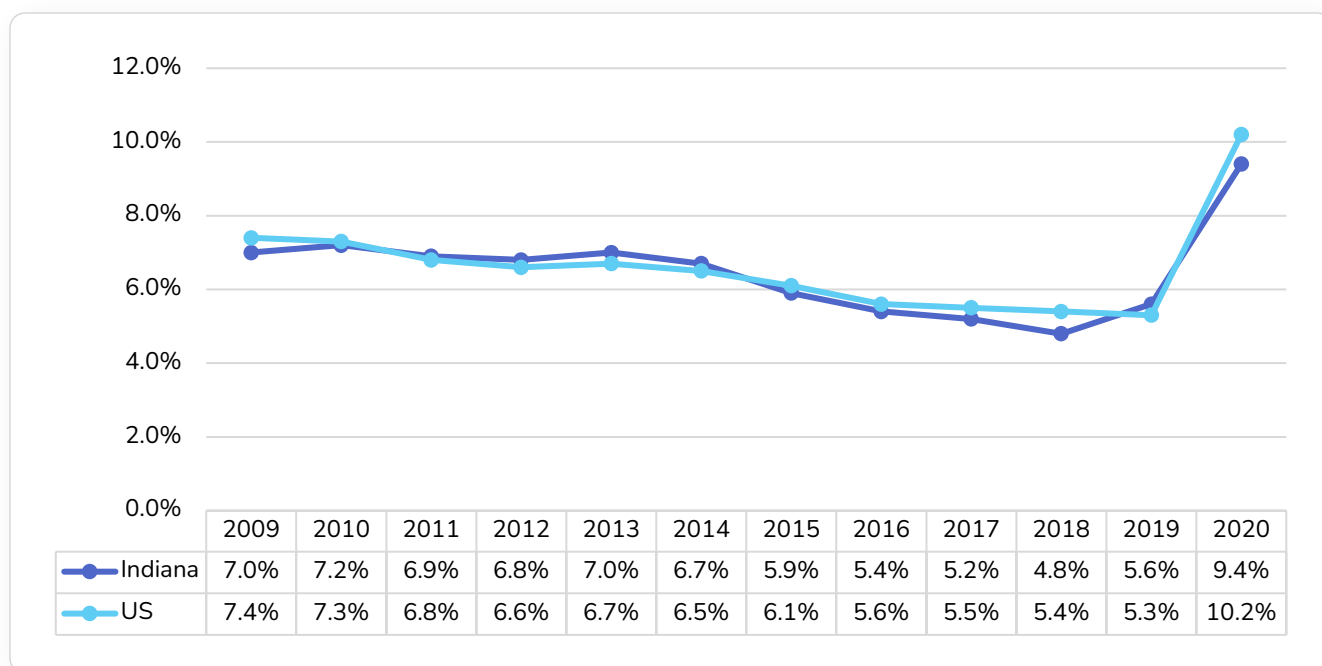
The 2021 Indiana College Substance Use Survey (ICSUS) collected data from 8,059 students who were 18-25 years of age from 23 colleges in Indiana. The survey may not be representative of all college students in Indiana due to convenience sampling, but provides valuable insights into behavioral health among young adults. About 55.6% of students reported consuming alcohol in the past 30 days. Among students who reported alcohol consumption, 40.4% were under the age of 21. Binge drinking in the last two weeks was reported by 27.2% of students, slightly lower than the national prevalence of 32.7% (King & Jun, 2021). A significantly higher prevalence of binge drinking in the past two weeks was found in students ages 21-25 (36.8%) compared to students under the age of 21 (19.7%). The negative consequences of drinking in college can range from poor performance in school to violence and injuries. Alcohol use is a major contributor to sexual assault on campus, with at least 50% of assaults involving alcohol or other substances (Krebs et al., 2007).

USE OF ALCOHOL IN THE TREATMENT POPULATION

National Survey on Drug Use and Health

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines alcohol use disorder (AUD) as a condition in which a user is unable to control alcohol use despite adverse consequences (NIH, 2021). Based on the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV) definitions, NSDUH classifies AUD as meeting the criteria for alcohol dependence and abuse. Indiana's prevalence of AUD in ages 12 and up were estimated to be 9.4% (95% CI: 7.4–11.8) in the 2020 NSDUH report (U.S estimate 10.2%; 95% CI: 9.7–10.8) (See Figure 2.7). Of that age group, an estimated 9.0% required treatment but did not receive it. The age group 18-25 has the highest level of AUD prevalence in both Indiana and the U.S. Excessive and uncontrollable alcohol use can lead to health complications within all age groups. A SAMHSA report on people ages 12-20, who visited the emergency department from 2010-2013, found that 18 to 20 year-olds had the highest percentage of alcohol-related visits (Naeger, 2017).

Figure 2.7 Percentage of Indiana and U.S. Population Ages 12 and Older with Alcohol Use Disorder (National Survey on Drug Use and Health, 2009–2020)



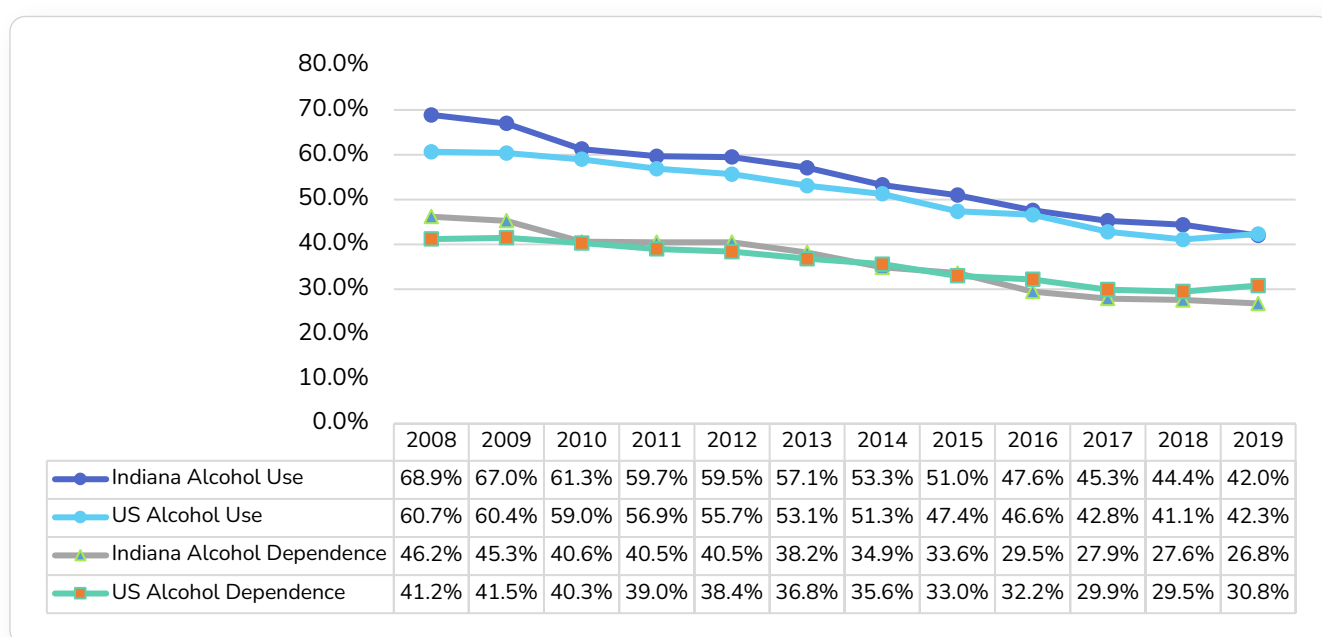
Source: "Section 2 PE Tables," 2021

Treatment Episode Data Set

Alcohol has been found to play a role in substance abuse treatment admissions both in Indiana and nationally ("Treatment Episode Data Set," 2021). Based on data from 2019, alcohol use was reported in 42.0% of Indiana treatment episodes, which closely followed U.S. rates of

42.3%. Alcohol dependence was reported at 26.8%, again closely following national rates of 30.8% (See Figure 2.8) ("Treatment Episode Data Set," 2021). Alcohol dependence was defined as individuals seeking substance abuse treatment listing alcohol as their primary substance at admission.

Figure 2.8 Percentage of Treatment Episodes in Indiana and the United States with Alcohol Use and Alcohol Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2008–2019)



Source: "Treatment Episode Data Set," 2021

In Indiana’s treatment population, gender, race/ethnicity, and age contributed to alcohol use:

Gender—Males reported significantly higher alcohol use in substance use treatment (47.5%) compared to females (34.4%). The percentage of dependence in gender followed similar patterns.

Race/ethnicity—Blacks (55.4%) and other races (44.1%) reported alcohol use, at the time of admission,

more than whites (40.0%). Hispanics reported alcohol use (52.7%) higher than non-Hispanics (41.7%). Overall, non-whites report higher alcohol use than whites at admission. Non-Hispanics reported higher alcohol dependence (26.6%) than Hispanics (34.9%), but overall non-white dependence was still significantly higher than compared to white dependence.

Age—Reported alcohol use at admission increased with age, with ages 55 and older holding the highest reported percentage (65.6%). Alcohol dependence followed the same pattern in which the percentage increased with age (See Table 2.3).

During the State Fiscal Year 2021, out of 23,573 treatment episodes, 43.4% of the patients consumed alcohol and 28.6% of them had alcohol dependence. Appendix 2B shows the treatment episodes in Indiana with alcohol use and dependence by county

Table 2.3 Percentage of Treatment Episodes in Indiana with Alcohol Use and Alcohol Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (“Treatment Episode Data Set,” 2021).

| | | Alcohol Use | Alcohol Dependence |
|-----------|--------------|-------------|--------------------|
| Gender | Male | 47.5% | 31.0% |
| | Female | 34.4% | 21.0% |
| Race | White | 40.0% | 25.3% |
| | Black | 55.4% | 36.1% |
| | Other | 44.1% | 29.0% |
| Ethnicity | Hispanic | 52.7% | 34.9% |
| | Non-Hispanic | 41.7% | 26.6% |
| Age Group | Under 18 | 39.2% | 13.9% |
| | 18-24 | 35.7% | 17.0% |
| | 25-34 | 33.6% | 19.3% |
| | 35-44 | 42.0% | 27.6% |
| | 45-54 | 57.3% | 41.4% |
| | 55+ | 65.6% | 53.1% |
| Total | | 42.0% | 26.8% |

Source: “Treatment Episode Data Set,” 2021

Impact of Alcohol During COVID-19 Pandemic

During the COVID-19 Pandemic, alcohol use increased in older persons, essential workers, and those dealing with mental health issues (Sallie et al., 2020). In a household with children ages 5-7 years, about 57% of adults reported consuming more alcohol at home. In a survey, about 60% of binge drinkers reported drinking more during the pandemic, while only 27% of non-binge drinkers reported an increase in alcohol consumption (Weerakoon et al., 2021). The same survey found that the prevalence of binge drinking increased as the number of weeks spent in quarantine increased. In a sample study, college students reported a decrease in the number of drinks per week but reported a slight increase in the frequency of days spent drinking (White et al., 2020). Alcohol-related diseases increased during the reopening phase; gastrointestinal and liver diseases attributable to alcohol rose by 78.7% (Rubin, 2021).

CONSEQUENCES OF ALCOHOL USE

Hospitalizations

In 2019, 10,575 patients were hospitalized with a prognosis related to alcohol (using the diagnosis that is 100% attributable to alcohol) these patients accounted for 1.4% of all discharges in the state. (IDOH, 2019). Appendix 2C shows the conditions that are directly attributable to alcohol in Indiana computed by CDC based on 2015 to 2019 averages. Healthcare treatment costs are very high; curbing alcohol-related hospitalization would free up high healthcare costs to be used for other conditions.

Fetal Alcohol Spectrum Disorders

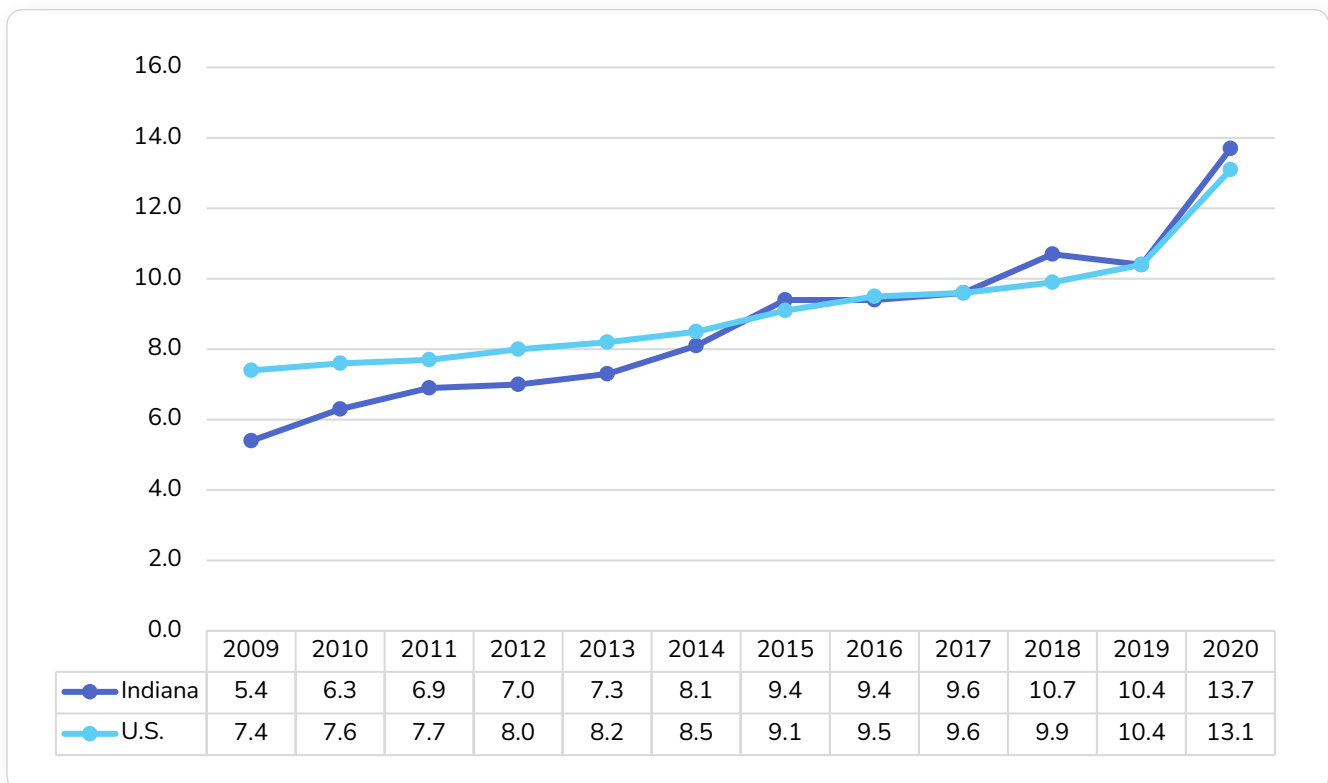
Fetal alcohol spectrum disorders (FASD) are the direct result of alcohol use during pregnancy. FASD is an umbrella term used to describe a range of disorders such as fetal alcohol syndrome, alcohol-related neurodevelopmental disorders, and alcohol-related birth defects. From 2015-2017, 61 children were born with fetal alcohol syndrome, the most severe form of FASD, in Indiana (IDOH, 2018).

State law requires doctors, hospitals, the Center for Health Policy, and other healthcare providers to submit a report to the registry at Indiana Department of Health (IDOH) when a child is born with a birth defect. The Indiana Birth Defects and Problems Registry collects information on birth defects and birth problems for all children in Indiana from birth to 3 years old (5 years old for autism and fetal alcohol syndrome). The prevalence of FASD has not been accurately calculated, but experts estimate that the full range of FASD in the United States might be as high as 1 to 5 per 100 school children (CDC, 2022).

Alcohol-Related Mortality

Alcohol-related causes contributed to 10,645 deaths in Indiana from 2000-2020 (CDC, 1999-2020). The alcohol-induced causes of death include ICD-10 codes such as E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15. In 2020, there were 1,027 deaths among Hoosiers and 49,061 deaths overall in the nation. Mortality rates related to alcohol increased in both

Figure 2.9 Age-Adjusted Alcohol-attributable Mortality Rates per 100,000 Population in Indiana and the United States (CDC WONDER, 2009–2020)



Source: CDC, 1999-2020

the nation and Indiana (CDC, 1999–2020). In 2020, Indiana’s age-adjusted alcohol-attributable death rate was 13.7 per 100,000 (95% CI: 12.8–14.6); similar to the U.S. rate (13.1; 95% CI: 13.0–13.3) (See Figure 2.9) (CDC, 1999–2020).

Alcohol-Related Motor Vehicle Accidents

Alcohol-related collisions in Indiana decreased from 7,025 in 2019 to 4,038 in 2020 based on data from the Automated Reporting Information Exchange System (*Rapid Review*, 2020). There were 134 fatal crashes with alcohol involvement, but they decreased by 12.4% from 2019 to 2020. (For a detailed listing of alcohol-related collisions and fatalities in Indiana by county for 2019, see Appendix 2D). The overall rate for alcohol-related collisions in Indiana in 2020 was 0.61 per 1,000 population (“Dataset - the Indiana Data Hub,” 2020).

Child Removals due to Parental Substance Abuse

Alcohol use is a commonly used reason to remove children from unfit homes. There were a total of 7,041 children removed from their homes in the State Fiscal Year 2021. In 11.3% of those cases, parental alcohol use was indicated as a reason for the removal (Indiana Department of Child Services, 2022). Some of the removals could be the result of multiple episodes from the same children. See Appendix 2E for county-level distribution of child removals in the State Fiscal Year 2021. Child abuse leads to long-term

consequences such as poor mental and emotional health, post-traumatic stress, and alcohol and drug use (Children’s Bureau, 2019). People with childhood trauma are about 7 times more likely to abuse alcohol or drugs in adulthood (Children’s Bureau, 2019).

Alcohol, Tobacco, and/or Drug-Related School Suspensions or Expulsions

Since alcohol use is illegal for anyone under the age of 21, students can face severe penalties if caught with alcohol. In Indiana, students can be suspended or expelled from school for using alcohol, tobacco, and/or drugs on school property. Data from the Indiana Department of Education (IDOE) indicate that during the academic year 2020, a total of 574 suspensions/expulsions were recorded in Indiana schools related to alcohol (See Appendix 2F) (IDOE, 2021).

COVID-19 and Adolescent Alcohol Use

Safety measures during the pandemic included school closures and a transition to online classes. As adolescents were under more parental supervision, access to alcohol became limited. Despite a lack of access, levels of binge drinking among adolescents did not drastically change. Of people under the age of 18, about 17% reported binge drinking in the past two weeks prior to the pandemic; that number dipped to only 13% during the pandemic (Miech, 2021).

APPENDIX 2A

Percentage of Indiana Students Reporting Monthly and Binge Alcohol Use, by Region and Grade (Indiana Youth Survey, 2020)

| | | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
|------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 6th Grade | Monthly | 4.5% | 4.2% | 4.6% | 6.0% | 4.4% | 4.1% | 2.2% | 4.5% | 3.3% | 3.9% | 7.5% |
| | Binge | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7th Grade | Monthly | 7.8% | 9.7%* | 7.7% | 9.9%* | 7.8% | 7.8% | 3.7%* | 6.5% | 6.2%* | 8.0% | 11.1%* |
| | Binge | 2.3% | 2.5% | 1.9% | 3.1% | 2.4% | 2.9% | 0.9%* | 2.4% | 1.4%* | 2.8% | 3.3% |
| 8th Grade | Monthly | 11.2% | 15.3%* | 9.9%* | 15.5%* | 9.1%* | 9.9% | 7.9% | 7.8%* | 10.0% | 12.0% | 17.4%* |
| | Binge | 3.5% | 4.6%* | 3.1% | 5.5%* | 2.2%* | 3.0% | 2.3%* | 1.9%* | 3.2% | 3.6% | 7.0%* |
| 9th Grade | Monthly | 14.4% | 14.2% | 10.0%* | 16.3% | 11.9% | 14.1%* | 13.8% | 11.4%* | 18.6%* | 15.0% | 19.0%* |
| | Binge | 5.2% | 4.2% | 2.7%* | 7.2%* | 4.0% | 5.4% | 5.2% | 3.8% | 7.9%* | 5.4% | 6.4% |
| 10th Grade | Monthly | 19.5% | 23.5%* | 15.9%* | 19.3% | 16.9%* | 16.6% | 20.7% | 18.0% | 20.8% | 19.9% | 25.8%* |
| | Binge | 7.5% | 7.5% | 6.5% | 7.3% | 5.4%* | 5.9% | 7.8% | 6.6% | 9.3%* | 8.1% | 10.6%* |
| 11th Grade | Monthly | 20.8% | 19.1% | 15.5%* | 19.8% | 23.5% | 15.7%* | 23.9% | 25.5%* | 26.7%* | 19.4% | 23.6% |
| | Binge | 8.8% | 7.8% | 5.6%* | 9.2% | 7.5% | 6.4% | 8.5% | 11.4% | 14.2%* | 7.6% | 10.7% |
| 12th Grade | Monthly | 28.5% | 29.9% | 18.5%* | 28.7% | 24.9% | 18.7% | 30.7% | 35.9%* | 36.0%* | 28.1% | 29.8% |
| | Binge | 12.7% | 10.9% | 8.8%* | 11.6% | 9.2%* | 7.1%* | 13.2% | 17.8%* | 19.2%* | 12.5% | 11.8% |

Source: Gassman et al., 2020

* signifies that the local rate and the state rate are statistically different (P < .05)

Data from INYS at the state and regional levels is provided. Until 2018, there were 8 regions. DMHA changed the number of regions to 10 in 2020. The counties in each region include:

Region 1: Lake, LaPorte, Porter

Region 2: Cass, Elkhart, Fulton, Howard, Kosciusko, Marshall, Miami, Pulaski, St. Joseph, Starke, Wabash
Region 3: Adams, Allen, DeKalb, Huntington, Lagrange, Noble, Steuben, Wells, Whitley

Region 4: Benton, Boone, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, White

Region 5: Blackford, Delaware, Grant, Hamilton, Hancock, Henry, Jay, Madison, Randolph, Tipton, Wayne

Region 6: Clay, Hendricks, Monroe, Morgan, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo

Region 7: Marion

Region 8: Daviess, Dubois, Gibson, Greene, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, Warrick

Region 9: Bartholomew, Brown, Clark, Crawford, Floyd, Harrison, Jackson, Johnson, Lawrence, Orange, Scott, Washington

Region 10: Dearborn, Decatur, Fayette, Franklin, Jefferson, Jennings, Ohio, Ripley, Rush, Shelby, Switzerland, Union

APPENDIX 2B

Number of Treatment Episodes with Alcohol Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2021)

| County | Treatment Episodes | Alcohol Use | | Alcohol Dependence | |
|-------------|--------------------|-------------|-------|--------------------|-------|
| | Total | Number | % | Number | % |
| Adams | 34 | 7 | 20.6% | <5 | N/A |
| Allen | 805 | 441 | 54.8% | 314 | 39.0% |
| Bartholomew | 317 | 131 | 41.3% | 75 | 23.7% |
| Benton | 43 | 21 | 48.8% | 17 | 39.5% |
| Blackford | 89 | 25 | 28.1% | 13 | 14.6% |
| Boone | 333 | 176 | 52.9% | 120 | 36.0% |
| Brown | 45 | 18 | 40.0% | 15 | 33.3% |
| Carroll | 49 | 24 | 49.0% | 12 | 24.5% |
| Cass | 89 | 39 | 43.8% | 24 | 27.0% |
| Clark | 337 | 127 | 37.7% | 81 | 24.0% |
| Clay | 51 | 17 | 33.3% | 11 | 21.6% |
| Clinton | 111 | 40 | 36.0% | 27 | 24.3% |
| Crawford | 47 | 14 | 29.8% | 10 | 21.3% |
| Daviess | 113 | 50 | 44.2% | 23 | 20.4% |
| Dearborn | 314 | 128 | 40.8% | 77 | 24.5% |
| Decatur | 119 | 45 | 37.8% | 31 | 26.1% |
| DeKalb | 165 | 89 | 53.9% | 58 | 35.2% |
| Delaware | 611 | 243 | 39.8% | 164 | 26.8% |
| Dubois | 124 | 72 | 58.1% | 60 | 48.4% |
| Elkhart | 365 | 188 | 51.5% | 120 | 32.9% |
| Fayette | 237 | 64 | 27.0% | 39 | 16.5% |
| Floyd | 276 | 90 | 32.6% | 53 | 19.2% |
| Fountain | 57 | 25 | 43.9% | 18 | 31.6% |
| Franklin | 74 | 24 | 32.4% | 17 | 23.0% |
| Fulton | 47 | 9 | 19.1% | 7 | 14.9% |
| Gibson | 174 | 89 | 51.1% | 52 | 29.9% |
| Grant | 338 | 124 | 36.7% | 65 | 19.2% |
| Greene | 66 | 27 | 40.9% | 12 | 18.2% |
| Hamilton | 640 | 331 | 51.7% | 246 | 38.4% |
| Hancock | 213 | 113 | 53.1% | 79 | 37.1% |
| Harrison | 52 | 17 | 32.7% | 13 | 25.0% |
| Hendricks | 508 | 206 | 40.6% | 131 | 25.8% |
| Henry | 326 | 94 | 28.8% | 56 | 17.2% |
| Howard | 526 | 226 | 43.0% | 157 | 29.8% |
| Huntington | 113 | 41 | 36.3% | 32 | 28.3% |
| Jackson | 223 | 68 | 30.5% | 41 | 18.4% |

| | Treatment Episodes | Alcohol Use | | Alcohol Dependence | |
|--------------|--------------------|-------------|-------|--------------------|-------|
| County | Total | Number | % | Number | % |
| Jasper | 90 | 41 | 45.6% | 27 | 30.0% |
| Jay | 143 | 33 | 23.1% | 25 | 17.5% |
| Jefferson | 232 | 81 | 34.9% | 59 | 25.4% |
| Jennings | 138 | 51 | 37.0% | 34 | 24.6% |
| Johnson | 195 | 85 | 43.6% | 58 | 29.7% |
| Knox | 166 | 79 | 47.6% | 43 | 25.9% |
| Kosciusko | 146 | 71 | 48.6% | 45 | 30.8% |
| LaGrange | 76 | 40 | 52.6% | 26 | 34.2% |
| Lake | 1,033 | 614 | 59.4% | 480 | 46.5% |
| LaPorte | 433 | 200 | 46.2% | 165 | 38.1% |
| Lawrence | 190 | 73 | 38.4% | 46 | 24.2% |
| Madison | 1,108 | 409 | 36.9% | 253 | 22.8% |
| Marion | 3,521 | 1,652 | 46.9% | 1,077 | 30.6% |
| Marshall | 69 | 31 | 44.9% | 19 | 27.5% |
| Martin | 17 | <5 | N/A | <5 | N/A |
| Miami | 72 | 20 | 27.8% | 11 | 15.3% |
| Monroe | 689 | 299 | 43.4% | 182 | 26.4% |
| Montgomery | 456 | 149 | 32.7% | 92 | 20.2% |
| Morgan | 345 | 120 | 34.8% | 76 | 22.0% |
| Newton | 18 | 16 | 88.9% | 7 | N/A |
| Noble | 159 | 76 | 47.8% | 53 | 33.3% |
| Ohio | 26 | 10 | 38.5% | 6 | N/A |
| Orange | 61 | 22 | 36.1% | 22 | 36.1% |
| Owen | 76 | 31 | 40.8% | 18 | 23.7% |
| Parke | 24 | 15 | 62.5% | 7 | 29.2% |
| Perry | 60 | 20 | 33.3% | 19 | 31.7% |
| Pike | 40 | 26 | 65.0% | 22 | 55.0% |
| Porter | 329 | 138 | 41.9% | 109 | 33.1% |
| Posey | 102 | 47 | 46.1% | 26 | 25.5% |
| Pulaski | 39 | 10 | 25.6% | 6 | 15.4% |
| Putnam | 229 | 92 | 40.2% | 51 | 22.3% |
| Randolph | 156 | 38 | 24.4% | 30 | 19.2% |
| Ripley | 127 | 62 | 48.8% | 36 | 28.3% |
| Rush | 131 | 42 | 32.1% | 27 | 20.6% |
| Saint Joseph | 761 | 361 | 47.4% | 239 | 31.4% |
| Scott | 251 | 58 | 23.1% | 41 | 16.3% |
| Shelby | 147 | 45 | 30.6% | 26 | 17.7% |
| Spencer | 47 | 24 | 51.1% | 20 | 42.6% |
| Starke | 159 | 36 | 22.6% | 19 | 11.9% |

| County | Treatment Episodes | Alcohol Use | | Alcohol Dependence | |
|-------------|--------------------|-------------|-------|--------------------|-------|
| | Total | Number | % | Number | % |
| Steuben | 114 | 69 | 60.5% | 52 | 45.6% |
| Sullivan | 30 | 14 | 46.7% | 12 | 40.0% |
| Switzerland | 66 | 13 | 19.7% | 9 | 13.6% |
| Tippecanoe | 574 | 235 | 40.9% | 162 | 28.2% |
| Tipton | 56 | 21 | 37.5% | 14 | 25.0% |
| Union | 25 | 8 | 32.0% | <5 | N/A |
| Vanderburgh | 1142 | 603 | 52.8% | 304 | 26.6% |
| Vermillion | 19 | 6 | 31.6% | <5 | N/A |
| Vigo | 233 | 94 | 40.3% | 57 | 24.5% |
| Wabash | 83 | 18 | 21.7% | 10 | 12.0% |
| Warren | 17 | 8 | 47.1% | 5 | N/A |
| Warrick | 211 | 109 | 51.7% | 68 | 32.2% |
| Washington | 65 | 28 | 43.1% | 21 | 32.3% |
| Wayne | 529 | 185 | 35.0% | 131 | 24.8% |
| Wells | 92 | 50 | 54.3% | 25 | 27.2% |
| White | 131 | 63 | 48.1% | 43 | 32.8% |
| Whitley | 77 | 35 | 45.5% | 25 | 32.5% |
| Indiana | 23,573 | 10228 | 43.4% | 6731 | 28.6% |

Source: Indiana Family and Social Services Administration, 2022

Notes: Alcohol dependence is defined as those receiving substance abuse treatment who at admission listed alcohol as their primary substance.

The percentages are calculated by taking the count of reported alcohol use and dependence and dividing by the count of treatment episodes. As a result of confidentiality concerns, data was suppressed if the count of treatment episodes was less than 5.

APPENDIX 2C

Conditions that are Directly Attributable to Alcohol in Indiana (Alcohol-Related Disease Impact, Based on Averages from 2015-2019)

| Condition | Percentage Directly Attributable to Alcohol |
|---|---|
| Alcohol abuse/dependence | 100% |
| Alcohol cardiomyopathy | 100% |
| Alcohol polyneuropathy | 100% |
| Alcohol-induced chronic pancreatitis | 100% |
| Alcoholic gastritis | 100% |
| Alcoholic liver disease | 100% |
| Alcoholic myopathy | 100% |
| Alcoholic psychosis | 100% |
| Degeneration of nervous system due to alcohol | 100% |
| Fetal alcohol syndrome/Fetus and newborn affected by maternal alcohol use | 100% |
| Alcohol poisoning | 100% |
| Suicide by and exposure to alcohol | 100% |
| Esophageal varices | 68% |
| Portal hypertension | 68% |
| Gastroesophageal hemorrhage | 47% |
| Homicide | 47% |
| Fire Injuries | 42% |
| Hypothermia | 41% |
| Liver cirrhosis, unspecified | 40% |
| Drowning | 34% |
| Fall injuries | 32% |
| Poisoning (not alcohol) | 29% |
| Suicide | 24% |

Source: Centers for Disease Control and Prevention, 2015-2019

APPENDIX 2D

Number and Rate (per 1,000) of All and Fatal Alcohol-Related Collisions in Indiana, by County (Automated Reporting Information Exchange System, 2020)

| County | Total Collisions | Alcohol related Collisions | Alcohol related Collision Rate | Total Fatal Collision | Alcohol related Fatal Collisions | Alcohol related Fatal Collision Rate |
|-------------|------------------|----------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------------|
| Adams | 604 | 21 | 0.59 | 5 | 1 | 0.03 |
| Allen | 11,156 | 401 | 1.08 | 33 | 9 | 0.02 |
| Bartholomew | 1,631 | 49 | 0.59 | 11 | 3 | 0.04 |
| Benton | 113 | 2 | 0.23 | 2 | 0 | 0 |
| Blackford | 227 | 11 | 0.92 | 3 | 1 | 0.08 |
| Boone | 1,889 | 39 | 0.6 | 6 | 0 | 0 |
| Brown | 438 | 11 | 0.73 | 2 | 1 | 0.07 |
| Carroll | 496 | 10 | 0.5 | 3 | 1 | 0.05 |
| Cass | 1,109 | 37 | 0.98 | 6 | 1 | 0.03 |
| Clark | 3,617 | 63 | 0.54 | 13 | 1 | 0.01 |
| Clay | 563 | 11 | 0.42 | 3 | 0 | 0 |
| Clinton | 932 | 26 | 0.81 | 4 | 1 | 0.03 |
| Crawford | 315 | 9 | 0.85 | 1 | 0 | 0 |
| Daviess | 248 | 25 | 0.75 | 2 | 0 | 0 |
| Dearborn | 1,461 | 32 | 0.65 | 9 | 0 | 0 |
| Decatur | 674 | 15 | 0.56 | 3 | 0 | 0 |
| DeKalb | 1,112 | 34 | 0.79 | 10 | 3 | 0.07 |
| Delaware | 3,279 | 64 | 0.56 | 16 | 3 | 0.03 |
| Dubois | 1,211 | 34 | 0.8 | 4 | 0 | 0 |
| Elkhart | 6,027 | 119 | 0.58 | 32 | 3 | 0.01 |
| Fayette | 512 | 17 | 0.73 | 1 | 0 | 0 |
| Floyd | 2,231 | 67 | 0.87 | 5 | 2 | 0.03 |
| Fountain | 375 | 11 | 0.67 | 5 | 1 | 0.06 |
| Franklin | 614 | 16 | 0.7 | 4 | 1 | 0.04 |
| Fulton | 539 | 7 | 0.35 | 6 | 0 | 0 |
| Gibson | 893 | 25 | 0.74 | 4 | 0 | 0 |
| Grant | 1,937 | 32 | 0.48 | 7 | 1 | 0.02 |
| Greene | 766 | 13 | 0.4 | 2 | 1 | 0.03 |
| Hamilton | 6,198 | 146 | 0.45 | 23 | 5 | 0.02 |
| Hancock | 1,610 | 27 | 0.36 | 9 | 1 | 0.01 |
| Harrison | 1,069 | 19 | 0.48 | 7 | 0 | 0 |
| Hendricks | 4,182 | 75 | 0.46 | 11 | 3 | 0.02 |
| Henry | 956 | 23 | 0.48 | 9 | 0 | 0 |
| Howard | 1,986 | 53 | 0.64 | 9 | 1 | 0.01 |
| Huntington | 996 | 30 | 0.83 | 4 | 2 | 0.06 |
| Jackson | 1,709 | 47 | 1.07 | 8 | 0 | 0 |

| County | Total Collisions | Alcohol related Collisions | Alcohol related Collision Rate | Total Fatal Collision | Alcohol related Fatal Collisions | Alcohol related Fatal Collision Rate |
|------------|------------------|----------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------------|
| Jasper | 1,073 | 36 | 1.08 | 7 | 0 | 0 |
| Jay | 538 | 8 | 0.38 | 5 | 0 | 0 |
| Jefferson | 810 | 21 | 0.65 | 12 | 0 | 0 |
| Jennings | 549 | 9 | 0.32 | 3 | 1 | 0.04 |
| Johnson | 3,250 | 75 | 0.49 | 6 | 1 | 0.01 |
| Knox | 1,081 | 26 | 0.7 | 8 | 2 | 0.05 |
| Kosciusko | 2,242 | 56 | 0.71 | 10 | 1 | 0.01 |
| LaGrange | 810 | 26 | 0.66 | 4 | 0 | 0 |
| Lake | 15,196 | 335 | 0.69 | 53 | 10 | 0.02 |
| LaPorte | 3,184 | 144 | 1.31 | 16 | 4 | 0.04 |
| Lawrence | 1,177 | 21 | 0.46 | 3 | 0 | 0 |
| Madison | 3,401 | 72 | 0.56 | 15 | 2 | 0.02 |
| Marion | 28,712 | 371 | 0.39 | 135 | 26 | 0.03 |
| Marshall | 1,368 | 38 | 0.82 | 8 | 1 | 0.02 |
| Martin | 144 | 4 | 0.39 | 0 | 0 | 0 |
| Miami | 948 | 29 | 0.81 | 5 | 2 | 0.06 |
| Monroe | 2,749 | 49 | 0.33 | 8 | 2 | 0.01 |
| Montgomery | 837 | 16 | 0.42 | 8 | 0 | 0 |
| Morgan | 1,491 | 28 | 0.4 | 10 | 1 | 0.01 |
| Newton | 357 | 18 | 1.29 | 5 | 2 | 0.14 |
| Noble | 1,103 | 25 | 0.53 | 5 | 0 | 0 |
| Ohio | 158 | 2 | 0.34 | 1 | 0 | 0 |
| Orange | 419 | 9 | 0.46 | 1 | 1 | 0.05 |
| Owen | 438 | 9 | 0.43 | 2 | 1 | 0.05 |
| Parke | 389 | 22 | 1.3 | 1 | 0 | 0 |
| Perry | 353 | 13 | 0.68 | 2 | 0 | 0 |
| Pike | 127 | 7 | 0.57 | 2 | 0 | 0 |
| Porter | 4,163 | 136 | 0.81 | 19 | 4 | 0.02 |
| Posey | 556 | 18 | 0.7 | 3 | 0 | 0 |
| Pulaski | 346 | 11 | 0.88 | 6 | 0 | 0 |
| Putnam | 826 | 19 | 0.51 | 9 | 1 | 0.03 |
| Randolph | 480 | 8 | 0.32 | 4 | 0 | 0 |
| Ripley | 650 | 10 | 0.35 | 3 | 1 | 0.04 |
| Rush | 312 | 10 | 0.6 | 1 | 0 | 0 |
| St Joseph | 7,143 | 98 | 0.36 | 30 | 6 | 0.02 |
| Scott | 599 | 14 | 0.59 | 8 | 3 | 0.13 |
| Shelby | 1,110 | 31 | 0.7 | 7 | 1 | 0.02 |
| Spencer | 618 | 16 | 0.78 | 1 | 0 | 0 |

| County | Total Collisions | Alcohol related Collisions | Alcohol related Collision Rate | Total Fatal Collision | Alcohol related Fatal Collisions | Alcohol related Fatal Collision Rate |
|-------------|------------------|----------------------------|--------------------------------|-----------------------|----------------------------------|--------------------------------------|
| Starke | 523 | 15 | 0.65 | 9 | 1 | 0.04 |
| Steuben | 1,384 | 45 | 1.31 | 6 | 1 | 0.03 |
| Sullivan | 412 | 19 | 0.92 | 1 | 0 | 0 |
| Switzerland | 150 | 4 | 0.37 | 3 | 1 | 0.09 |
| Tippecanoe | 5,356 | 122 | 0.64 | 8 | 1 | 0.01 |
| Tipton | 299 | 14 | 0.92 | 6 | 1 | 0.07 |
| Union | 82 | 3 | 0.42 | 1 | 0 | 0 |
| Vanderburgh | 4,067 | 85 | 0.47 | 12 | 0 | 0 |
| Vermillion | 329 | 11 | 0.71 | 3 | 0 | 0 |
| Vigo | 2,820 | 68 | 0.63 | 14 | 5 | 0.05 |
| Wabash | 747 | 19 | 0.61 | 3 | 1 | 0.03 |
| Warren | 224 | 5 | 0.61 | 4 | 0 | 0 |
| Warrick | 1,297 | 33 | 0.53 | 4 | 0 | 0 |
| Washington | 569 | 16 | 0.57 | 6 | 1 | 0.04 |
| Wayne | 2,056 | 59 | 0.89 | 9 | 1 | 0.02 |
| Wells | 701 | 14 | 0.5 | 4 | 2 | 0.07 |
| White | 751 | 32 | 1.33 | 5 | 0 | 0 |
| Whitley | 773 | 13 | 0.39 | 6 | 0 | 0 |
| Indiana | 175,922 | 4,038 | 0.61 | 812 | 134 | 0.02 |

Source: Indiana State Police, 2022

Notes: Rates calculated from numbers less than 20 are considered unreliable. Vehicle collisions are considered to be alcohol-related if at least one driver had 0.08g/dL or higher BAC.

APPENDIX 2E

Child Removals, Total and Due Parental Alcohol Abuse, SFY 2021

| County | Total | Count | Percentage |
|-------------|-------|-------|------------|
| Adams | 65 | 11 | 16.9% |
| Allen | 347 | 44 | 12.7% |
| Bartholomew | 103 | 7 | 6.8% |
| Benton | 5 | 1 | 20.0% |
| Blackford | 37 | 3 | 8.1% |
| Boone | 32 | 9 | 28.1% |
| Brown | 11 | 2 | 18.2% |
| Carroll | 7 | 1 | 14.3% |
| Cass | 11 | 2 | 18.2% |
| Clark | 76 | 2 | 2.6% |
| Clay | 52 | 4 | 7.7% |
| Clinton | 17 | 1 | 5.9% |
| Crawford | 31 | 4 | 12.9% |
| Daviess | 33 | 4 | 12.1% |
| Dearborn | 33 | 0 | 0.0% |
| Decatur | 36 | 3 | 8.3% |
| Dekalb | 18 | 3 | 16.7% |
| Delaware | 127 | 24 | 18.9% |
| Dubois | 64 | 2 | 3.1% |
| Elkhart | 77 | 2 | 2.6% |
| Fayette | 28 | 0 | 0.0% |
| Floyd | 183 | 23 | 12.6% |
| Fountain | 14 | 2 | 14.3% |
| Franklin | 5 | 0 | 0.0% |
| Fulton | 32 | 1 | 3.1% |
| Gibson | 26 | 10 | 38.5% |
| Grant | 120 | 19 | 15.8% |
| Greene | 61 | 5 | 8.2% |
| Hamilton | 60 | 6 | 10.0% |
| Hancock | 75 | 19 | 25.3% |
| Harrison | 31 | 3 | 9.7% |
| Hendricks | 41 | 6 | 14.6% |
| Henry | 44 | 4 | 9.1% |
| Howard | 126 | 10 | 7.9% |

| County | Total | Count | Percentage |
|------------|-------|-------|------------|
| Huntington | 25 | 5 | 20.0% |
| Jackson | 43 | 8 | 18.6% |
| Jasper | 9 | 0 | 0.0% |
| Jay | 39 | 2 | 5.1% |
| Jefferson | 39 | 2 | 5.1% |
| Jennings | 41 | 5 | 12.2% |
| Johnson | 76 | 7 | 9.2% |
| Knox | 44 | 8 | 18.2% |
| Kosciusko | 59 | 6 | 10.2% |
| Whitley | 28 | 0 | 0.0% |
| Lagrange | 20 | 2 | 10.0% |
| Lake | 385 | 64 | 16.6% |
| LaPorte | 122 | 6 | 4.9% |
| Lawrence | 66 | 3 | 4.5% |
| Madison | 243 | 30 | 12.3% |
| Marion | 1184 | 125 | 10.6% |
| Marshall | 34 | 1 | 2.9% |
| Martin | 12 | 0 | 0.0% |
| Miami | 29 | 1 | 3.4% |
| Monroe | 139 | 15 | 10.8% |
| Montgomery | 51 | 6 | 11.8% |
| Morgan | 100 | 12 | 12.0% |
| Newton | 4 | 2 | 50.0% |
| Noble | 52 | 2 | 3.8% |
| Ohio | 8 | 4 | 50.0% |
| Orange | 36 | 6 | 16.7% |
| Owen | 33 | 7 | 21.2% |
| Parke | 11 | 0 | 0.0% |
| Perry | 80 | 5 | 6.3% |
| Pike | 39 | 0 | 0.0% |
| Porter | 83 | 25 | 30.1% |
| Posey | 37 | 4 | 10.8% |
| Pulaski | 22 | 0 | 0.0% |
| Putnam | 45 | 2 | 4.4% |

| County | Total | Count | Percentage |
|-------------|-------|-------|------------|
| Randolph | 23 | 0 | 0.0% |
| Ripley | 70 | 15 | 21.4% |
| Rush | 12 | 5 | 41.7% |
| St Joseph | 285 | 22 | 7.7% |
| Scott | 79 | 5 | 6.3% |
| Shelby | 48 | 2 | 4.2% |
| Spencer | 43 | 8 | 18.6% |
| Starke | 44 | 3 | 6.8% |
| Steuben | 18 | 0 | 0.0% |
| Sullivan | 24 | 2 | 8.3% |
| Switzerland | 23 | 1 | 4.3% |
| Tippecanoe | 132 | 13 | 9.8% |
| Tipton | 15 | 0 | 0.0% |
| Union | 4 | 0 | 0.0% |
| Vanderburgh | 410 | 49 | 12.0% |
| Vermillion | 28 | 3 | 10.7% |
| Vigo | 263 | 31 | 11.8% |
| Wabash | 39 | 7 | 17.9% |
| Warren | 9 | 0 | 0.0% |
| Warrick | 52 | 7 | 13.5% |
| Washington | 18 | 1 | 5.6% |
| Wayne | 80 | 11 | 13.8% |
| Wells | 23 | 0 | 0.0% |
| White | 33 | 6 | 18.2% |
| INDIANA | 7,041 | 793 | 11.3% |

Source: Indiana Department of Child Services, 2022

Notes: The counts are of number of removals, as opposed to number of unique children removed. One child could potentially account for multiple episodes of removal in the same year or underrepresented based on removal reason.

APPENDIX 2F

School Suspensions or Expulsions Related to Alcohol, Tobacco, and/or Drug Use (2020)

| County | Number of Incidents | Number of Unique Students Involved |
|-------------|---------------------|------------------------------------|
| Adams | 28 | 27 |
| Allen | 560 | 535 |
| Bartholomew | 272 | 239 |
| Benton | 33 | 29 |
| Blackford | 30 | 28 |
| Boone | 110 | 107 |
| Brown | 33 | 29 |
| Carroll | 32 | 32 |
| Cass | 94 | 90 |
| Clark | 179 | 172 |
| Clay | 23 | 23 |
| Clinton | 82 | 78 |
| Crawford | 27 | 25 |
| Daviess | 19 | 19 |
| Dearborn | 138 | 125 |
| Decatur | 26 | 26 |
| Dekalb | 71 | 68 |
| Delaware | 146 | 140 |
| Dubois | 66 | 66 |
| Elkhart | 260 | 249 |
| Fayette | 40 | 36 |
| Floyd | 198 | 192 |
| Fountain | 37 | 32 |
| Franklin | 74 | 64 |
| Fulton | 43 | 41 |
| Gibson | 52 | 50 |
| Grant | 87 | 86 |
| Greene | 46 | 41 |
| Hamilton | 336 | 320 |
| Hancock | 122 | 114 |
| Harrison | 60 | 57 |
| Hendricks | 214 | 205 |
| Henry | 78 | 71 |
| Howard | 108 | 105 |
| Huntington | 74 | 66 |
| Jackson | 144 | 130 |

| County | Number of Incidents | Number of Unique Students Involved |
|------------|---------------------|------------------------------------|
| Jasper | 48 | 47 |
| Jay | 85 | 76 |
| Jefferson | 63 | 58 |
| Jennings | 23 | 23 |
| Johnson | 283 | 273 |
| Knox | 156 | 142 |
| Kosciusko | 189 | 182 |
| Lagrange | 71 | 67 |
| Lake | 549 | 523 |
| LaPorte | 245 | 226 |
| Lawrence | 139 | 121 |
| Madison | 173 | 167 |
| Marion | 1,155 | 1,111 |
| Marshall | 91 | 86 |
| Martin | 7 | 7 |
| Miami | 147 | 137 |
| Monroe | 208 | 196 |
| Montgomery | 66 | 62 |
| Morgan | 139 | 126 |
| Newton | 61 | 56 |
| Noble | 131 | 119 |
| Ohio | 3 | 3 |
| Orange | 51 | 50 |
| Owen | 47 | 44 |
| Parke | 40 | 39 |
| Perry | 35 | 34 |
| Pike | 71 | 65 |
| Porter | 267 | 255 |
| Posey | 56 | 54 |
| Pulaski | 41 | 37 |
| Putnam | 47 | 43 |
| Randolph | 65 | 60 |
| Ripley | 87 | 67 |
| Rush | 16 | 15 |
| St Joseph | 326 | 306 |
| Scott | 67 | 66 |
| Shelby | 87 | 80 |
| Spencer | 9 | 8 |
| Starke | 56 | 53 |

| County | Number of Incidents | Number of Unique Students Involved |
|-------------|---------------------|------------------------------------|
| Steuben | 28 | 27 |
| Sullivan | 43 | 41 |
| Switzerland | | |
| Tippecanoe | 175 | 164 |
| Tipton | 44 | 41 |
| Union | 23 | 20 |
| Vanderburgh | 207 | 195 |
| Vermillion | 26 | 25 |
| Vigo | 105 | 96 |
| Wabash | 41 | 38 |
| Warren | 5 | 5 |
| Warrick | 117 | 107 |
| Washington | 83 | 78 |
| Wayne | 92 | 85 |
| Wells | 49 | 46 |
| White | 60 | 57 |
| Whitley | 74 | 69 |
| INDIANA | 10,514 | 9,895 |

Source: Indiana Department of Education, 2021

Note: Counts of incidents observe each time a student, due to alcohol use, was either suspended or expelled. The unique count is the number of unique students involved.

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Tobacco Use in Indiana: Prevalence And Consequences

INTRODUCTION

Approximately 34 million people in the United States smoke cigarettes (CDC, 2021b). Using tobacco is the leading cause of preventable disease in the United States (Cornelius et al., 2020). Tobacco use can lead to many health conditions such as cancer, heart disease, stroke, lung disease, type 2 diabetes, and other chronic health conditions. Tobacco use during pregnancy increases the risk of complications and can lead to premature birth, low birth weight, birth defects, and sudden infant death syndrome (SIDS).

The landscape of tobacco products is changing drastically, and nonconventional tobacco products are hitting the market such as e-cigarettes, hookahs, synthetic nicotine, and heat-not-burn products. The use of these products is on the rise among the U.S. youth. Use of e-cigarettes and vaping products have been linked to lung injuries known as e-cigarette or vaping, product use - associated lung injury (EVALI). Patients with EVALI were first being identified in 2019. From 2019 to March 2020, there were 60 confirmed cases of vaping-related lung injuries and six deaths (IDOH, 2021). Health officials are still learning about the disease, and as of right now vitamin E acetate - an additive used in e-cigarettes - has been the primary suspect (American Lung Association, n.d.).

PREVALENCE OF TOBACCO CONSUMPTION IN THE GENERAL POPULATION

National Survey on Drug Use and Health

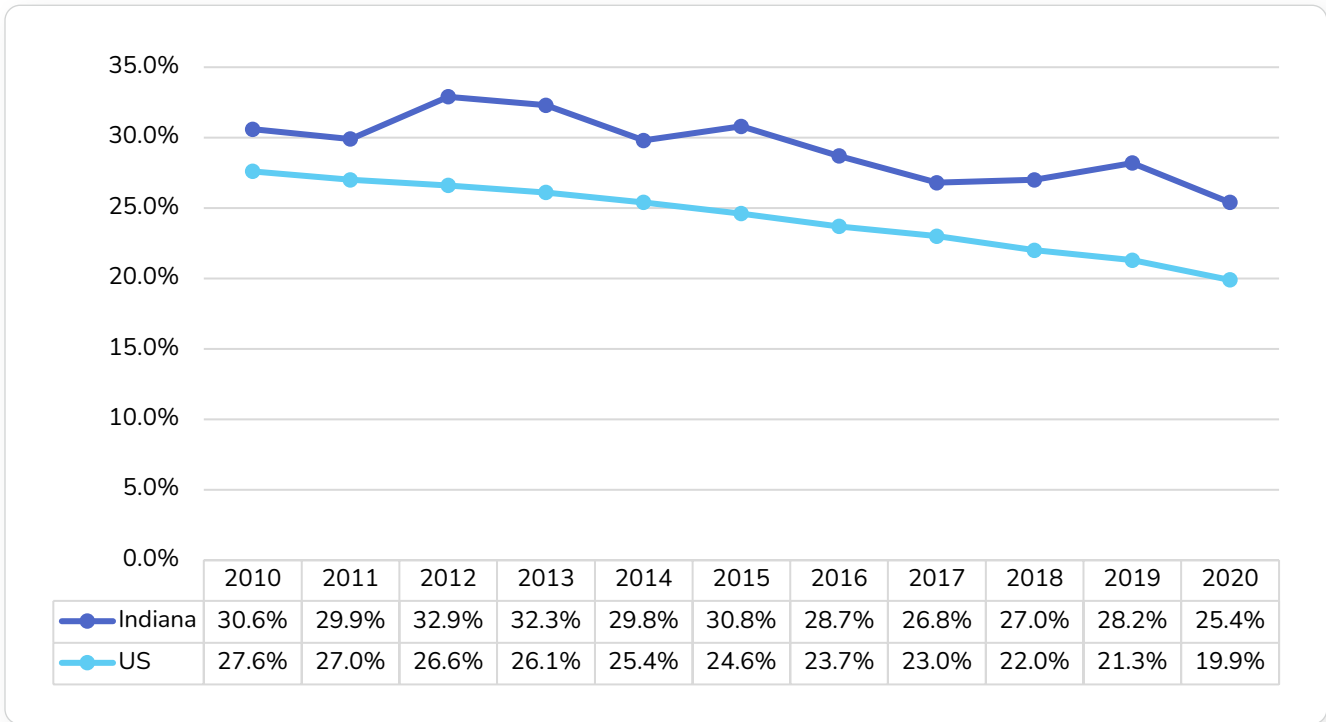
Survey results from the 2020 National Survey on Drug Use and Health shows 25.4% (95% CI: 22.8-28.2) of the Indiana population 12 years and older used a tobacco product in the past month, which is higher than the United States rate of 19.9% (95% CI: 19.4-20.4). Tobacco products in this survey included cigarettes, smokeless tobacco, cigars, and pipe tobacco. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), the rate

of tobacco users in Indiana has significantly decreased over the past decade (See Figure 3.1).

Cigarettes were the most common tobacco product used. 20.2% (95% CI: 17.7-22.9) of 12 years and older Indiana residents reported using cigarettes in the past month: a rate significantly higher than the United States rate of 15.8%; (95% CI: 15.4-16.3). In the past decade, Indiana's smoking prevalence has significantly declined from 25.9% in 2009 (95% CI: 24.5-39.3) to 20.2% in 2020 (95% CI: 17.7-22.9) (See Figure 3.2). There were variations in smoking use across different age groups. Figure 3.3 compares the prevalence of cigarette use in Indiana and the nation by age groups. Reported cigarette use among 12-17 year old Hoosiers was by far the lowest of all age groups (2.8%).

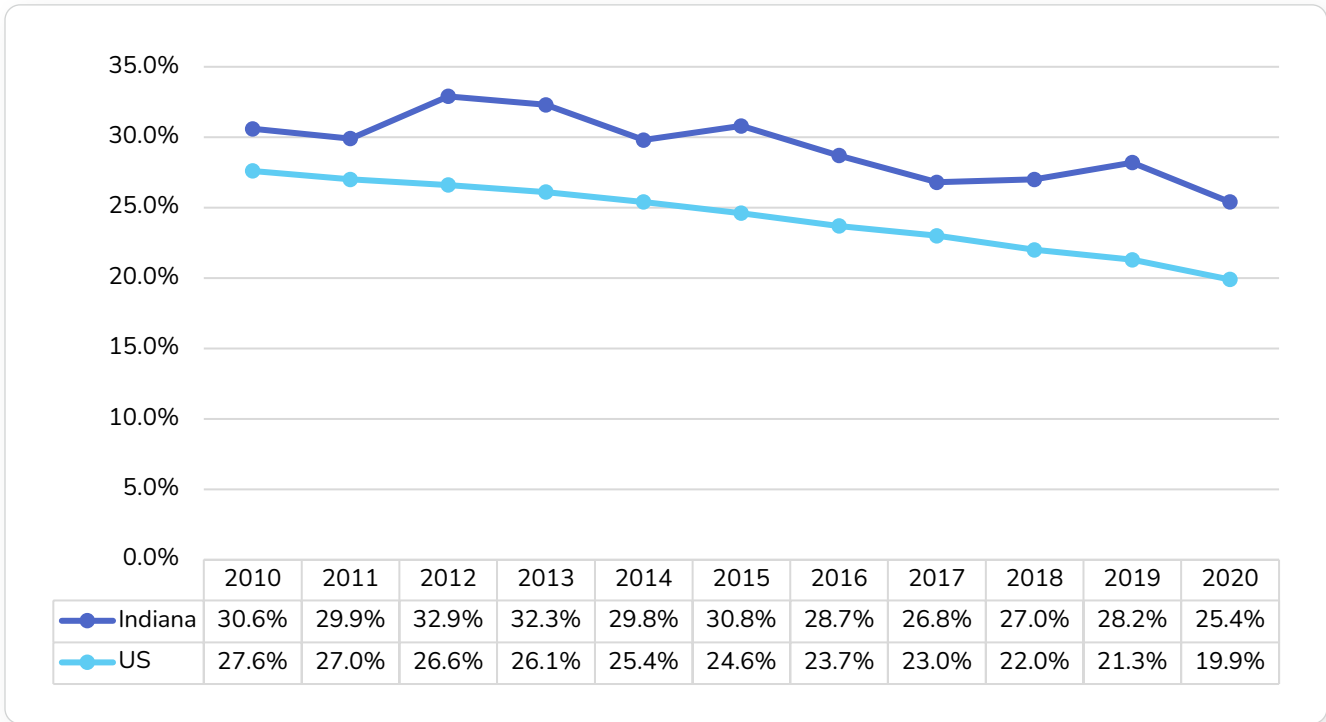


Figure 3.1 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Any Tobacco Use in the Past Month (National Survey on Drug Use and Health, 2010–2020)



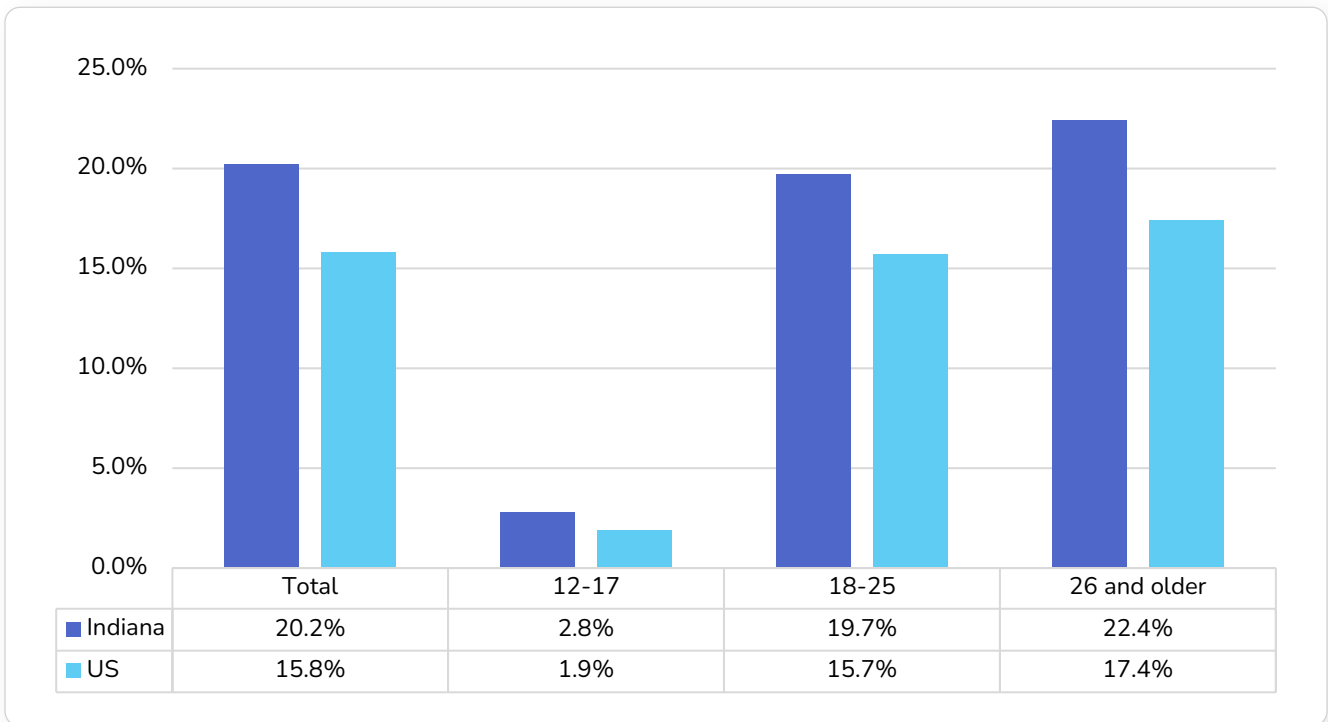
Source: SAMHSA, 2021

Figure 3.2 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cigarette Use in the Past Month (National Survey on Drug Use and Health, 2010–2020)



Source: SAMHSA, 2021

Figure 3.3 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cigarette Use in the Past Month (National Survey on Drug Use and Health, 2020)



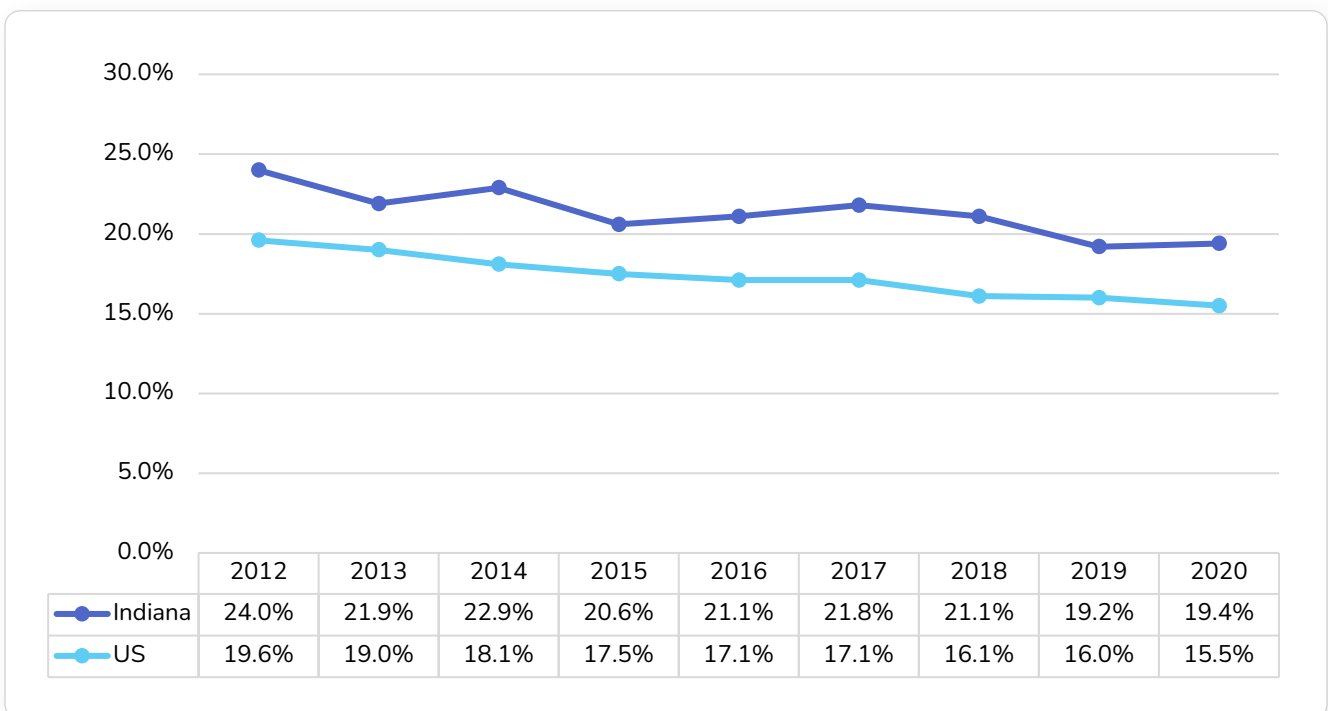
Source: SAMHSA, 2021

Behavior Risk Factor Surveillance System

Smoking prevalence in Indiana adults continues to be higher than the United States levels (See Figure 3.4). About

15.5% of United States adults reported smoking in the past month in comparison to 19.4% (CI: 18.3-20.5) of Indiana adults (CDC, 2021b).

Figure 3.4 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Current Cigarette Use (Behavioral Risk Factor Surveillance System, 2012–2020)



Source: CDC, 2021

The following groups in Indiana have shown significant differences in smoking prevalence:

- Men have shown a higher smoking rate compared to women.
- Lowest smoking prevalence rate in adults ages 65 and older.
- Individuals with higher education showed the lowest smoking rates.
- Individuals with higher income showed the lowest smoking rates (See Table 3.1).

Table 3.1 Adult Smoking Prevalence in Indiana, by Gender, Race/Ethnicity, Age Group, Educational Attainment, and Income Level (Behavioral Risk Factor Surveillance System, 2020)

| | | Indiana (95% CI) |
|------------------|-----------------------|--------------------------|
| Gender | Male | 20.8% (19.1-22.4) |
| | Female | 18.1% (16.6-19.6) |
| Race / Ethnicity | White | 19.9% (18.7-21.1) |
| | Black | 20.3% (16.4-24.3) |
| | Hispanic | 11.1% (7.2-15.0) |
| Age Group | 18-24 | 11.4% (8.2-14.7) |
| | 25-34 | 23.6% (20.2-27.0) |
| | 35-44 | 25.2% (22.0-28.3) |
| | 45-54 | 21.1% (18.6-23.6) |
| | 55-64 | 25.3% (22.8-27.8) |
| | 65+ | 11.2% (9.8-12.6) |
| Education | Less than High School | 40.8% (36.0-45.6) |
| | High School or GED | 22.1% (20.2-24.0) |
| | Some post-High School | 18.4% (16.5-20.4) |
| | College Graduate | 6.8% (5.8-7.9) |
| Income | Less than \$15,000 | 34.3% (29.3-39.4) |
| | \$15,000–\$24,999 | 29.8% (26.3-33.3) |
| | \$25,000–\$34,999 | 26.6% (22.5-30.8) |
| | \$35,000–\$49,999 | 22.2% (18.9-25.5) |
| | \$50,000 and above | 13.3% (11.8-14.8) |
| Total | | 19.4% (18.3-20.5) |

Source: CDC, 2021

Indiana Adult Tobacco Survey

According to the 2019 Indiana Adults Tobacco Survey, overall smoking prevalence among Indiana’s adults was at 19.9% (95% CI: 17.3-22.7). Smoking was prevalent among certain groups:

- Individuals without a high school degree (30.4%; 95% CI: 20.7–42.2)
- Individuals with an annual household income of less than \$20,000 (34.4%; 95% CI: 22.5-48.6)
- Ages 25 to 39 years (30.7%; 95% CI: 24.4–37.7)
- Individuals who classified themselves as “others” under ethnicity (28.3%; 95% CI: 19.3–39.4)

About 25.9% (95% CI: 23.1-28.7) of the adults in Indiana reported trying an e-cigarette. The share of current e-cigarette use was highest among youth and young adults compared to older adults. Further, 18.7% (95% CI: 13.5-25.3) of the individuals had the intention to quit within the next 30 days among the current smokers (IDOH, TPC, 2020). (See Table 3.2)

Table 3.2 Intentions to Quit Smoking among Current Smokers (Indiana Adult Tobacco Survey, 2019)

| | Within next 30 days | Within 30 days to 6 months | Sometime after 6 months | No intention to quit |
|-----------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| Gender | | | | |
| Male | 13.1% (7.9-21.1) | 17.0% (10.4-26.4) | 26.5% (17.3-38.2) | 43.4% (32.4-55.1) |
| Female | 27.2% (17.9-39.0) | 20.8% (13.4-30.8) | 20.5% (12.5-31.9) | 31.4% (21.4-43.6) |
| Race/Ethnicity | | | | |
| White | 18.1% (12.3-25.8) | 20.6% (14.4-28.5) | 22.1% (14.9-31.4) | 39.2% (30.3-48.9) |
| Black | 21.4% (8.0-46.3) | 5.5% (1.5-17.9) | 34.9% (16.1-60.1) | 38.1% (16.6-65.6) |
| Hispanic | 23.6% (4.6-66.4) | -- | 60.5% (20.6-90.1) | 15.9% (3.1-53.3) |
| Other | 19.6% (8.3-39.4) | 19.4% (8.4-38.6) | 23.7% (9.6-47.7) | 37.3% (18.5-60.9) |
| Age Group | | | | |
| 18-24 | 15.9% (3.8-47.4) | 22.6% (8.1-49.1) | 18.5% (5.5-46.6) | 43.0% (20.1-69.4) |
| 25-39 | 18.7% (10.5-31.0) | 13.6% (6.7-25.7) | 28.8% (17.8-43.0) | 38.9% (25.6-54.1) |
| 40-64 | 19.0% (12.0-28.7) | 20.7% (13.5-30.5) | 25.1% (15.7-37.7) | 35.2% (24.8-47.1) |
| 65+ | 19.2% (6.9-43.2) | 27.6% (10.9-54.1) | 2.5% (0.6-10.2) | 50.7% (28.7-72.4) |
| Education | | | | |
| Less than High School | 15.5% (5.9-35.0) | 6.9% (1.9-21.9) | 19.8% (7.4-43.3) | 57.9% (34.7-78.0) |
| High School Grad | 17.3% (9.8-28.8) | 23.0% (14.5-34.4) | 27.0% (17.1-39.9) | 32.7% (22.9-44.3) |
| Some College | 20.9% (12.6-32.7) | 18.3% (10.1-30.8) | 27.0% (15.9-41.9) | 33.8% (22.6-47.2) |
| College | 22.5% (8.6-47.0) | 22.2% (9.3-44.3) | 13.5% (3.9-37.9) | 41.8% (21.7-65.1) |
| Post-Graduate | 37.6% (8.7-79.1) | 22.8% (4.5-64.7) | -- | 39.6% (11.5-76.8) |
| Income | | | | |
| Less than \$20,000 | 17.4% (5.9-41.5) | 24.9% (10.7-47.9) | 15.9% (5.7-37.3) | 41.8% (22.4-64.1) |
| \$20,000 – \$39,999 | 24.5% (13.3-40.6) | 15.5% (8.0-27.7) | 20.3% (9.9-37.1) | 39.8% (23.3-59.0) |
| \$40,000 – \$69,999 | 19.1% (11.0-31.1) | 19.5% (10.6-33.1) | 23.3% (13.0-38.1) | 38.2% (26.3-51.6) |
| \$70,000 or more | 9.7% (1.7-39.6) | 10.6% (2.6-34.5) | 45.8% (16.7-78.0) | 33.9% (12.0-65.9) |
| Total | 18.7% (13.5-25.3) | 18.5% (13.3-25.1) | 24.4% (17.8-32.6) | 38.4% (30.5-46.9) |

Source: IDOH/TPC, 2020

Indiana Youth Tobacco Survey (IYTS)

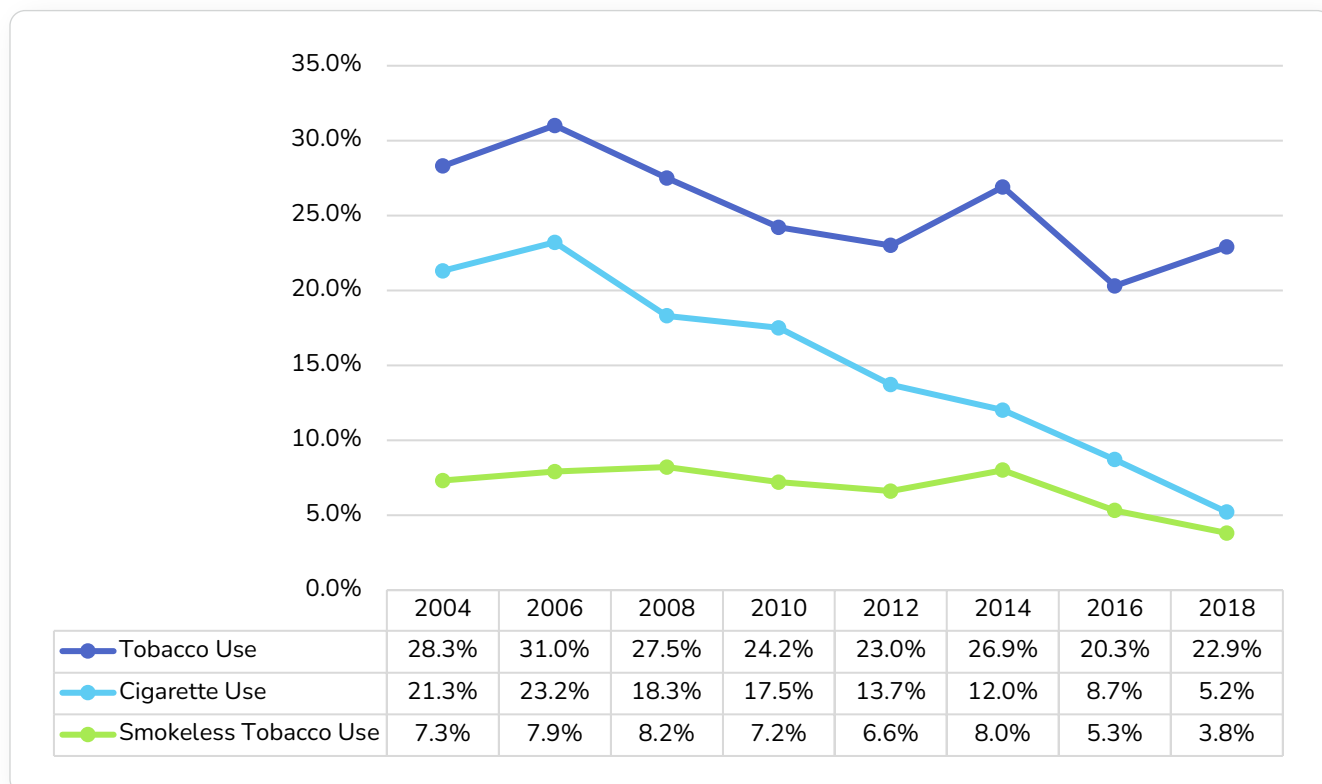
According to the Indiana Youth Tobacco Survey, overall tobacco use has significantly reduced in Indiana from 2004 to 2016 with a slight increase between 2016 to 2018 (IYTS, 2019). The survey captures information on tobacco use, smoking cessation, tobacco related attitudes and beliefs, social media influence on tobacco use, secondhand tobacco exposure, and various tobacco related issues in middle schoolers and high schoolers in Indiana. (Figure 3.5 and Figure 3.6).

The 2018 results from the Indiana Youth Tobacco Survey showed a total of 8.1% (95% CI: 6.3-10) of middle schoolers and 22.8% (95% CI: 19.8-26.1) of high schoolers used any tobacco product within the past month. 1.9% (95% CI: 1.3 – 2.5) of middle schoolers and 5.2% (95% CI: 3.9-6.5) of high schoolers reported smoking cigarettes

in the past month. Use of e-cigarettes in 2018 was at 5.5% and 18.5% within Indiana’s middle schoolers and high schoolers respectively. Among Indiana youth that smoke cigarettes, 33.6% of middle school students and 45.8% of high school students reported using e-cigarettes. Appendix 3A shows the prevalence rate of smoking among youth and their demographic characteristics based on data from 2018 IYTS. E-cigarettes have been popular among middle schoolers and high schoolers. Many e-cigarettes are laced with substances other than nicotine, such as marijuana, THC, hash oil, or THC wax.

Appendix 3A shows the distribution of cigarette use, e-cigarette use, and smokeless tobacco by various demographic characteristics of middle and high school students.

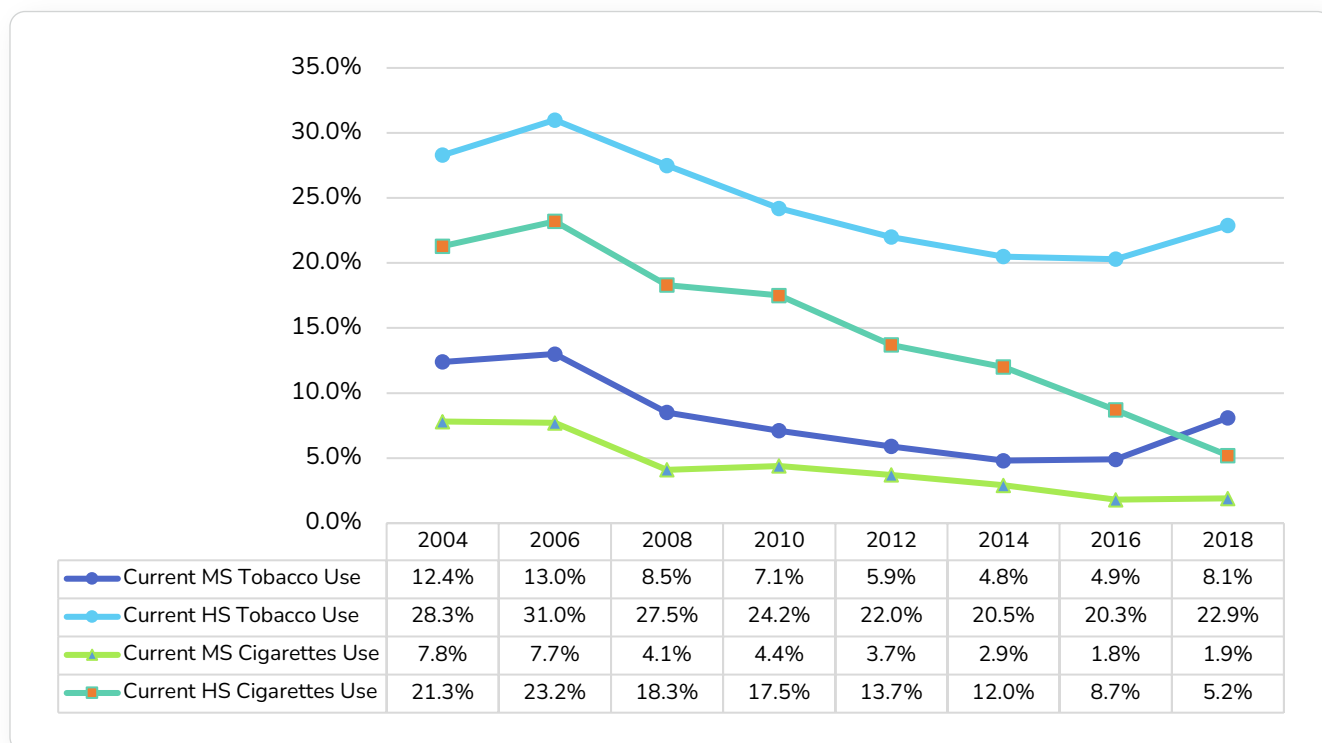
Figure 3.5 Tobacco Use among Indiana High School Students (9th–12th Grade) (Indiana Youth Tobacco Survey, 2004–2018)



Source: IDOH/TPC, 2020

Note: Based on variability in prevalence rates of different type of tobacco products over time, the use of bidi’s were included in the “Tobacco use” until 2016 and the e-cigarette use were included since 2012 by IYTS.

Figure 3.6 Percentage of Indiana Middle School and High School Students Reporting Current Tobacco and Cigarette Use (Indiana Youth Tobacco Survey, 2004–2018)



Source: IDOH/TPC, 2020

Youth Risk Behavior Surveillance System

Youth Risk Behavior Surveillance System (YRBSS) monitors health related behaviors (such as alcohol, tobacco, and other drugs) that lead to death and disability among young and adults. One of the six health related behaviors includes tobacco use. Based on 2015 YRBSS data, 32.4% of high school students in Indiana used tobacco products (See Table 3.3). The rate of cigarette use has decreased in Indiana from 25.6% (95% CI: 23.2-28.2) in 2003 to 11.2%

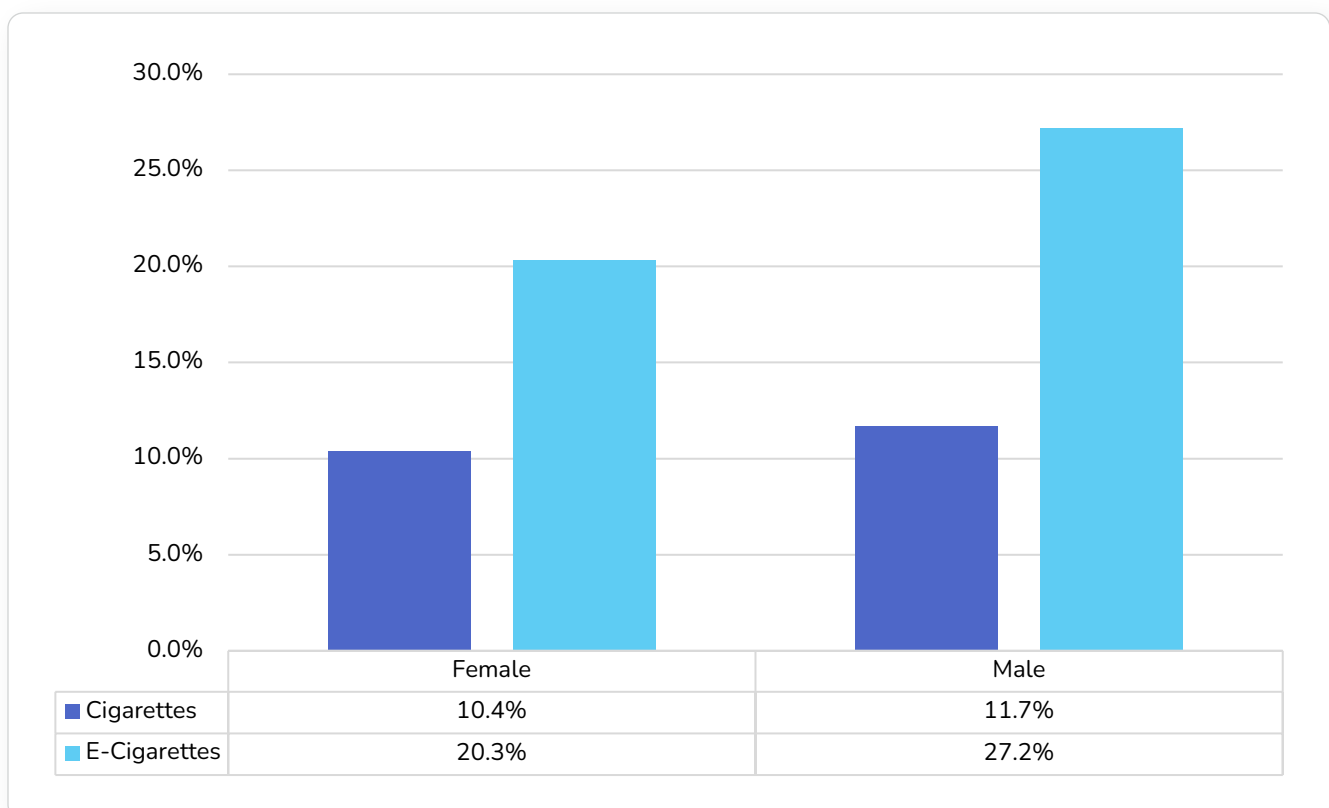
(96% CI: 8.3-14.8) in 2015. The use of e-cigarettes has increased among high school students, with 23.9% (95% CI: 20.6-27.7) reporting current use in Indiana (CDC, 1991-2019). Use of cigarettes and e-cigarettes is higher among high school males than females. Additionally, use among white high school students is higher than that of black high school students in Indiana. E-cigarette use increases with grade level in Indiana high schoolers (See Fig 3.7 through 3.9).

Table 3.3 Current Use of Tobacco Products in Indiana and U.S. High School Students (Youth Risk Behavior Surveillance System, 2015)

| | Indiana (95% CI) | U.S.(95% CI) |
|---------------------------|-------------------|-------------------|
| Any Tobacco Use | 32.4% (27.3–38.0) | 31.4% (29.1–33.8) |
| Electronic Vapor Products | 23.9% (20.6–27.7) | 24.1% (22.1–26.2) |
| Cigarettes | 11.2% (8.3–14.8) | 10.8% (9.4–12.4) |
| Cigars | 11.4% (9.1–14.3) | 10.3% (9.0–11.8) |
| Smokeless Tobacco | 9.4% (5.9–14.7) | 7.3% (6.1–8.6) |

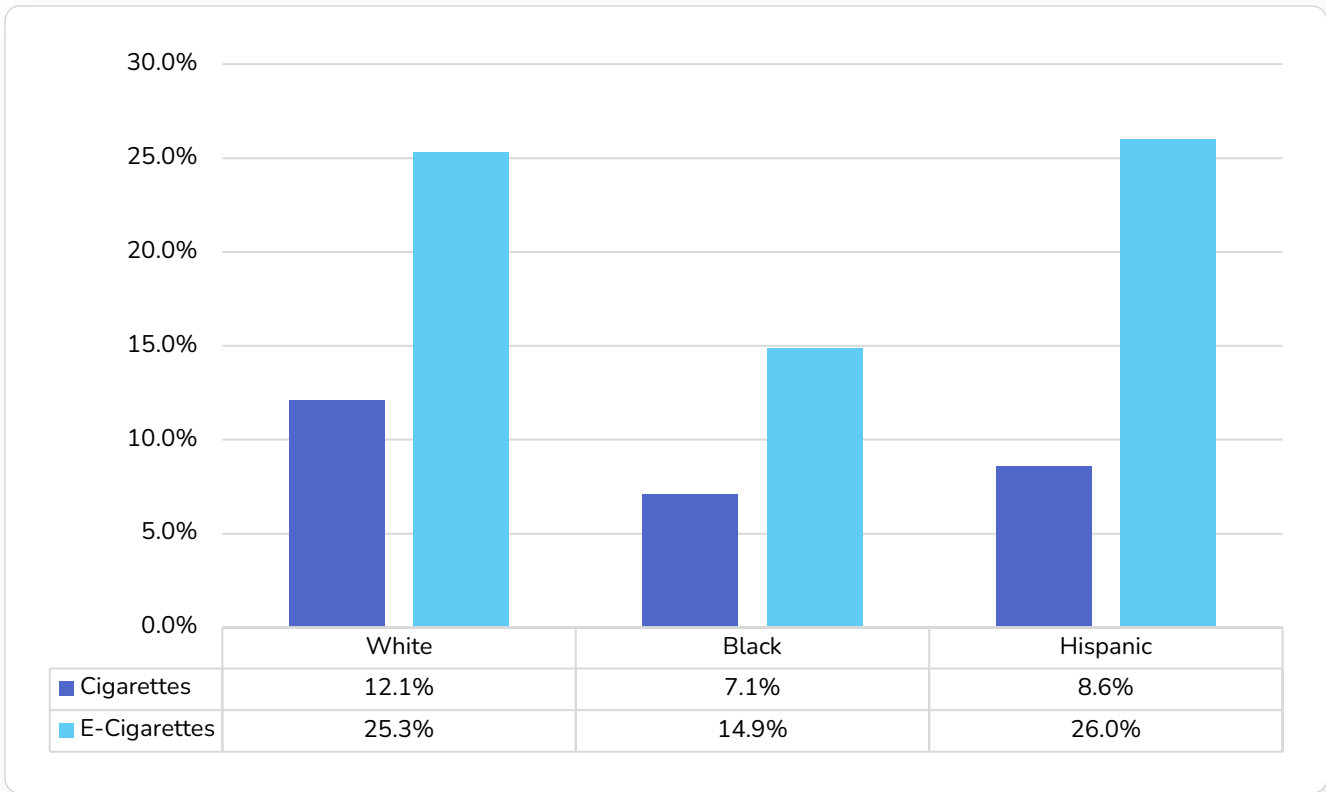
Source: CDC, 1991-2019

Figure 3.7 Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th–12th Grade), by Gender (Youth Risk Behavior Surveillance System, 2015)



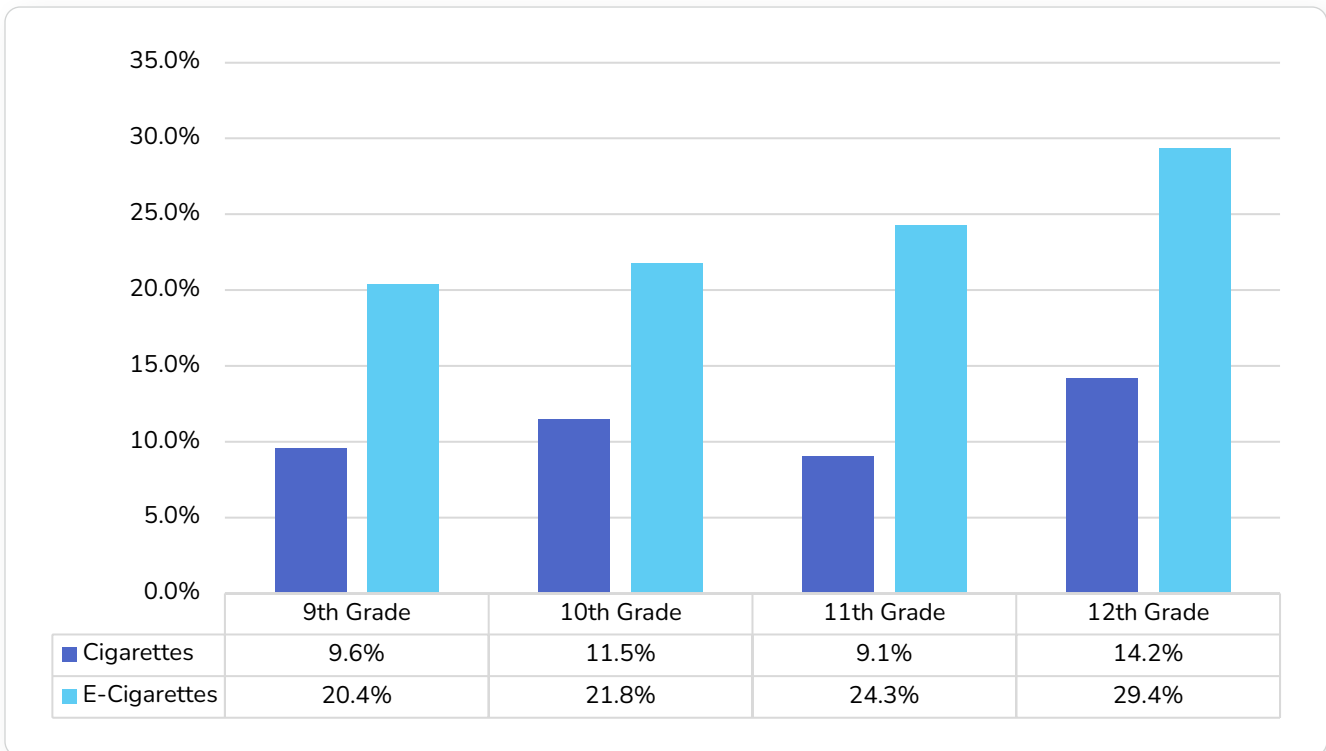
Source: CDC, 1991-2019

Figure 3.8 Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th–12th Grade), by Race/Ethnicity (Youth Risk Behavior Surveillance System, 2015)



Source: CDC, 1991-2019

Figure 3.9 Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th–12th Grade), by Grade (Youth Risk Behavior Surveillance System, 2015)



Source: CDC, 1991-2019

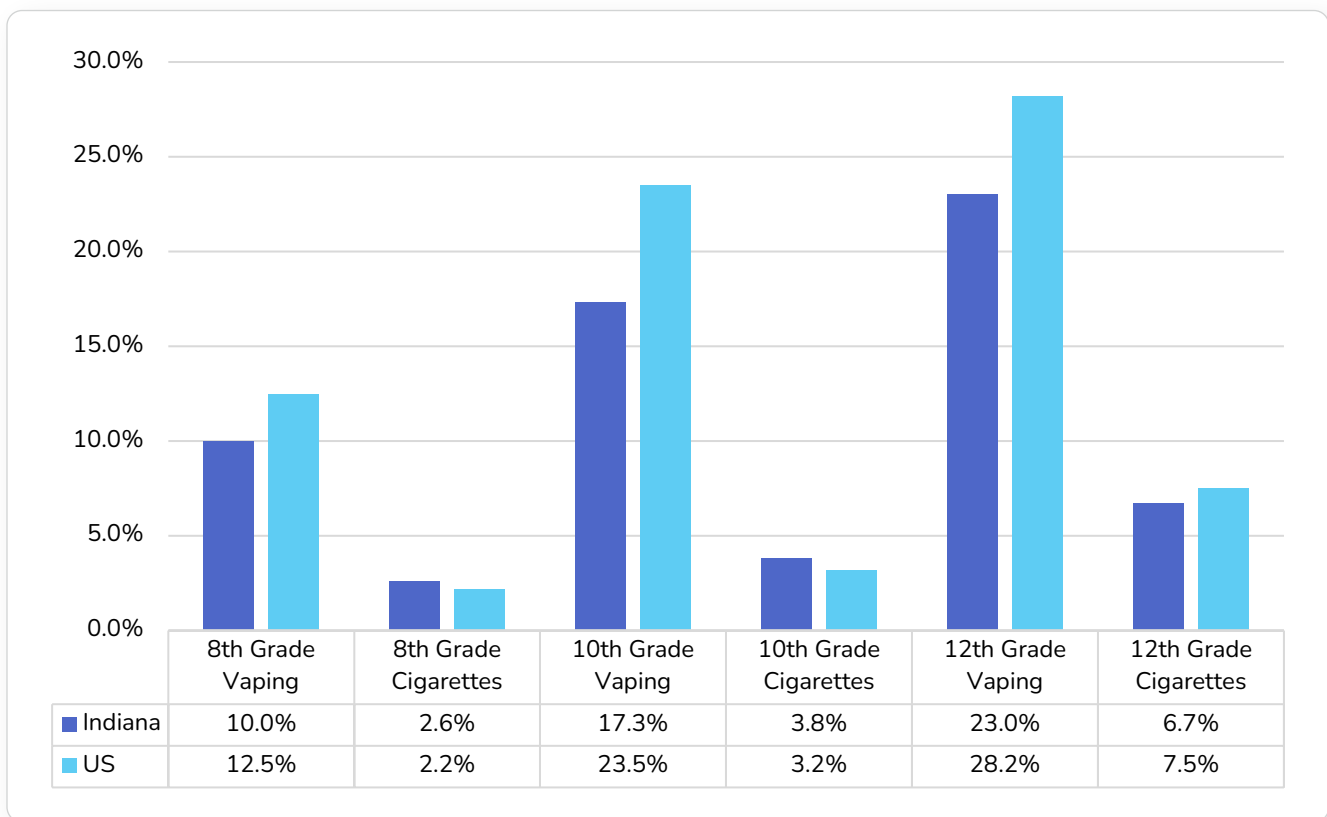
Indiana Youth Survey

The Indiana Youth Survey is conducted biennially for students in grades 6 to 12. The survey assesses the students use of substances, mental health, gambling, and risk and protective factors that can affect students' academic success. The 2020 results of the survey showed that cigarette and e-cigarette use increased as students progressed through the academic years. (See Figure 3.10) Appendix 3B shows the monthly cigarette and e-cigarette use by grade by region.

When comparing 12th grade students in Indiana to

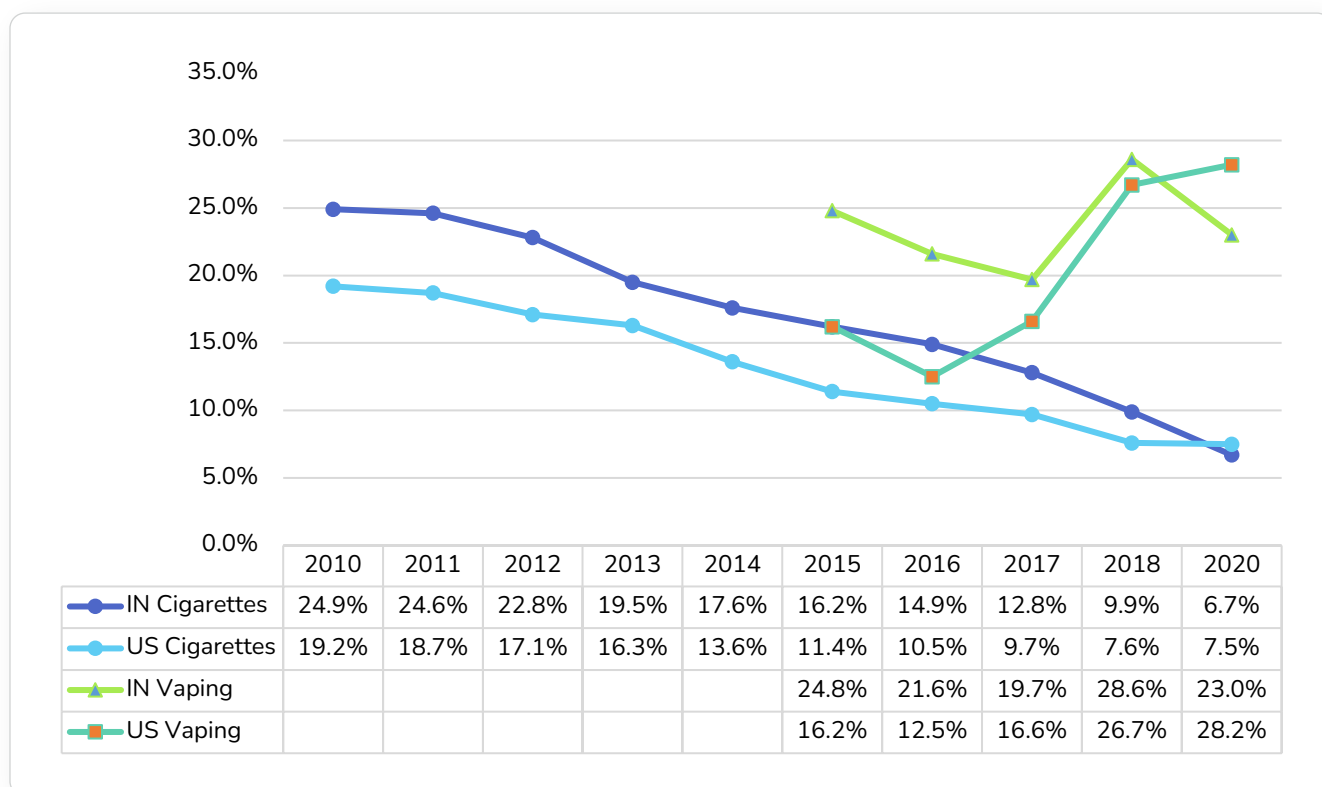
those in the United States, Indiana students have had higher rates of cigarettes use and vaping throughout the years. In addition, it was also noted that vaping had reached an all-time high and cigarette use had declined in 2018. 2020 data suggest that although vaping rates have increased among high school students, rates have declined among Indiana high school students in comparison to the United States (See Figure 3.11). Of note, statistical significance could not be calculated due to a lack of details provided in the data. Therefore, it is recommended to interpret these results with caution.

Figure 3.10 Monthly Cigarette Use and Vaping among 8th, 10th, and 12th Grade Students, Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2020)



Source: Gassman et al., 2020; Inter-university Consortium for Political and Social Research, 2020

Figure 3.11 Monthly Cigarette Use and Vaping among 12th Grade Students in Indiana and the United States (Indiana Youth Survey: 2010–2020; and Monitoring the Future Survey, 2010–2020)



Source: Gassman et al., 2020; Inter-university Consortium for Political and Social Research, 2020

Note: Data on vaping is only available from 2015.

Indiana College Substance Use Survey

About 21.6% of the Indiana college students reported the use of current (past month) electronic vapors vs 23.9% in the U.S. according to the Indiana College Substance Use Survey (Kim and Jun, 2021). Cigarette use was the second most common form of tobacco used (Indiana: 7.5% and US: 4.1%). The survey was based on 23 colleges

and universities in Indiana and included questions on the use of various tobacco products. The survey may not be representative of all college students in Indiana due to convenience sampling, but provides valuable insights on behavioral health among young adults. Table 3.4 shows consumption rates for the different types of tobacco/nicotine products by demographic characteristic.

Table 3.4 Rates of Past-Month Use of Nicotine Products among Indiana College Students (Indiana College Substance Use Survey, 2021)

| | Indiana (Total) | Male | Female | Under 21 | 21 or Over |
|--|-----------------|-------|--------|----------|------------|
| Cigarettes | 7.5% | 10.0% | 5.7%* | 5.5% | 9.9%* |
| Cigars | 3.8% | 6.9% | 1.9%* | 2.9% | 4.9%* |
| Chewing/smokeless tobacco | 2.5% | 5.6% | 0.7%* | 1.9% | 3.2%* |
| Smoking tobacco with hookah/ water pipe | 2.4% | 2.9% | 1.9%* | 1.6% | 3.4%* |
| Electronic vapor products | 21.6% | 22.9% | 20.6% | 20.4% | 23.1%* |

Source: King & Jun, 2021

Note: *Statistical significance of P<0.05

CONSEQUENCES OF TOBACCO USE

Tobacco use has unintended consequences, especially in terms of addiction, health issues, and productivity loss at work. Tobacco use among youth also has a discernable impact, and its use among K-12 students on school property may lead to in-school suspensions or expulsions. There were 6,279 incidents of suspensions/expulsions at schools in academic year 2019-20 related to tobacco in Indiana (Indiana Department of Education, 2021). Appendix 3C shows the distribution of tobacco related school suspensions/expulsions by county.

Tobacco Related Morbidity and Mortality

About 480,000 people die yearly in the United States due to smoking, and it is the leading cause of preventable cancer. The most common cancer caused by tobacco use is lung cancer. Lung cancer is the leading cause of cancer death in the United States for both men and women. Smoking increases the risk of lung cancer by five to tenfold. In addition to lung cancer, smoking can also cause cancer of the mouth, pharynx, larynx, esophagus, stomach, pancreas, cervix, kidney, and bladder (NIH, 2020). The average life expectancy of a smoker is at least 10 years shorter than nonsmokers (CDC, 2020). Among women, risk of death is increased by almost 5 times among smokers.

Long term smoking can also cause lung disease, such as chronic bronchitis, emphysema, exacerbate existing asthma, and chronic obstructive pulmonary disease (COPD). Quitting smoking can repair much of the smoking induced lung damage. However, damage caused by COPD is irreversible (NIH, 2020). The risk of dying from bronchitis and emphysema is increased in male smokers by 17 times, and the chances of dying from coronary heart disease is increased by 4 times (CDC, 2020).

Appendix 3D shows the county-level data on several smoking-related outcomes provided by Indiana Tobacco Prevention and Cessation.

Secondhand Smoking

About 41,000 deaths occur each year due to secondhand smoke exposure in the United States. Secondhand smoke exposure can lead to stroke, lung cancer, and coronary heart disease. Secondhand smoke exposure in children can lead to exacerbation of existing asthma, acute respiratory infections, middle ear infections, slowed lung growth, and sudden infant death syndrome (SIDS) (CDC, 2020). In 2018, about 1,770 Hoosiers (adults/children/infants) died

from diseases tied to secondhand smoke exposure and cost the state of Indiana \$2.1 billion in health care and loss of life costs (Lewis and Zollinger, 2018).

Continuous Use

Continued use of tobacco and nicotine can lead to nicotine dependence, which endorses a cycle of nicotine and abuse that leads to further health complications. The use of e-cigarettes has increased in popularity tenfold, especially among U.S youth. The use of e-cigarettes became a popular trend due to its easy accessibility and variety of flavors that made it more appealing to younger consumers. Additives and use of other substances in e-cigarette formulas were linked to numerous respiratory failures and lung injury in U.S teens.

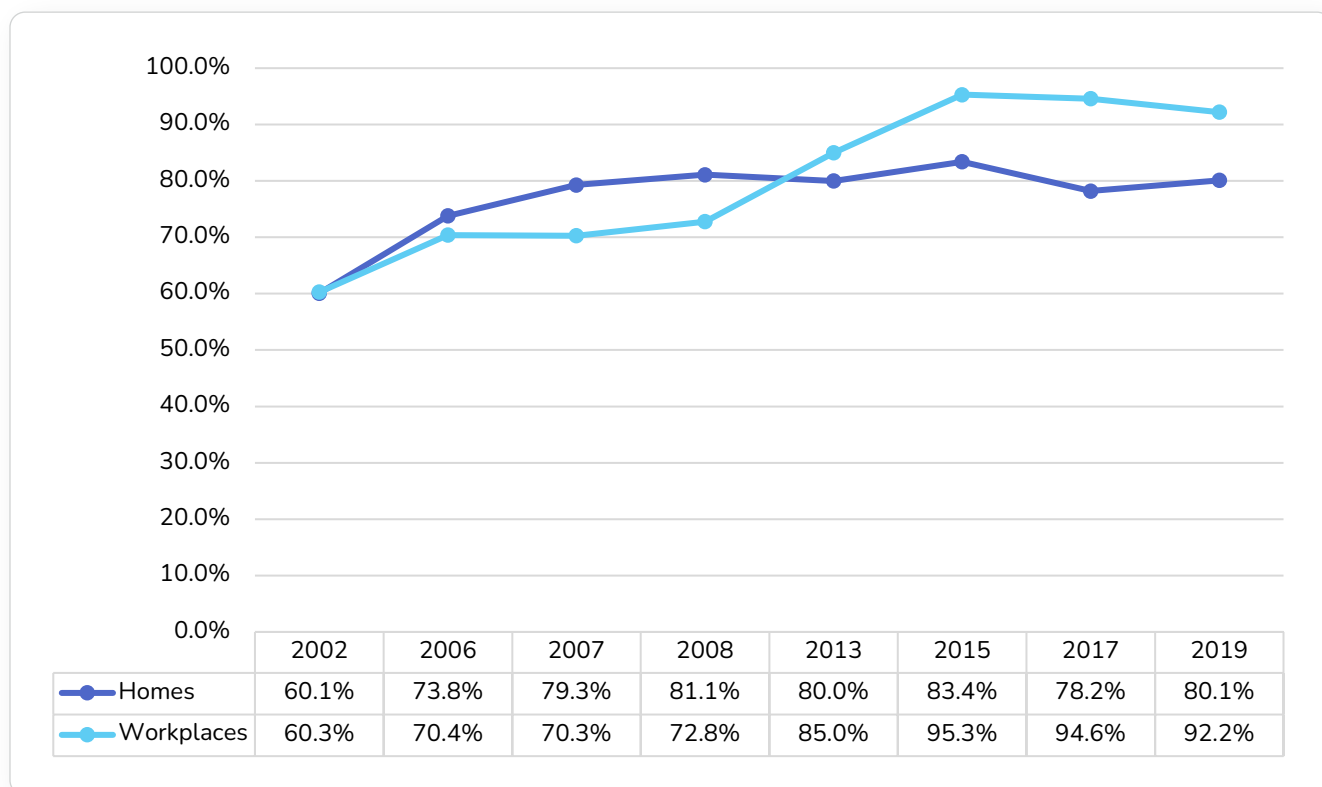
Continued nicotine use also leads to a decrease in immune response, resulting in increased infections. Nicotine and tobacco use affects the reproductive health of both males and females. In males, continuous use leads to decreased sperm count, sperm motility, and results in more mutations in sperm DNA. In females, the continuous use of tobacco and nicotine products can lead to loss in egg viability and cause early menopause (Szumilas et al., 2020). Use of tobacco in pregnancy is extensively documented, with well-known effects to embryos such as spontaneous abortions and fetal abnormalities. Smoking during pregnancy is associated with reduced lung function in newborns.

Economic Impact

Smoking related illnesses cost the United States \$300 billion each year, with \$156 billion lost in productivity and \$5.6 billion lost in productivity due to secondhand smoking (CDC, 2021a). Creative ways have been used to reduce tobacco consumption, such as increasing the price of tobacco products. An increase of 10% in price estimates an overall reduction of 3-5% of tobacco consumption (CDC, 2021a). In Indiana, the annual healthcare costs associated with smoking were \$2.93 billion, medical costs were \$589.8 million, tax burden from government expenditures was \$931 per household, and productivity losses due to smoking were \$3.17 billion (Campaign for Tobacco-Free Kids, 2022).

Figure 3.12 shows percentage of smoke-free Indiana homes and workplaces from 2002 to 2019. The percentage of workplaces in Indiana that are smoke-free has increased significantly from 60.3% in 2002 to 92.2% in 2019.

Figure 3.12 Percentage of Smoke-free Homes and Workplaces in Indiana (Adult Tobacco Survey, 2002–2019)



Source: ISDH/TPC, 2020

COVID-19 and Tobacco Use

Evidence has linked the use of nicotine and tobacco use to increased vulnerability to the COVID-19 infection. Tobacco use can be a risk factor for COVID-19 infection, as well as a risk factor for severe disease from COVID-19 (Gupta et al., 2021). This is possibly due to the decrease in immune function and the specificity of the COVID-19 virus in the

respiratory system. Smoking also affects and damages cells in the airway lining, which are essential to defending against pathogens in the respiratory system. (American Lung Association, 2021). During the pandemic, frequent smokers reported an increase in tobacco use. The increase in use was reported as driven by pandemic related anxiety, boredom, and irregular routines (Giovenco et al., 2021).

APPENDIX 3A

Percentage of Indiana Middle School and High School Students Who Currently Use Cigarettes, E-Cigarettes, or Smokeless Tobacco by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2018)

| | Current Use of Cigarettes | | Current Use of E-Cigarettes | | Current Use of Smokeless Tobacco | |
|----------------------|---------------------------|-------------|-----------------------------|-------------|----------------------------------|------------|
| | % | (95% CI) | % | (95% CI) | % | (95% CI) |
| MIDDLE SCHOOL | | | | | | |
| Gender | | | | | | |
| Male | 1.6 | (1.0-2.3) | 5.4 | (3.9-6.9) | 1.8 | (1.0-2.6) |
| Female | 2.1 | (1.2-3.0) | 5.4 | (3.5-6.9) | 1.1 | (0.6-1.7) |
| Race/Ethnicity | | | | | | |
| White | 5.6 | (4.2-7.0) | 5.6 | (4.1-7.0) | 1.5 | (0.9-2.1) |
| Black | 12.5* | (7.4-17.7) | 3.4* | (1.1-5.8) | 1.5* | (-0.4-3.5) |
| Hispanic | 7.3 | (3.5-11.0) | 6.7 | (4.1-9.3) | 1.4* | (0.5-2.2) |
| Other | 7.3* | (4.0-10.7) | 5.9* | (1.9-9.9) | 1.0* | (-0.5-2.6) |
| Grade | | | | | | |
| 6 | 0.8* | (-0.2-1.9) | 5.8 | (3.6-8.0) | 0.7* | (-0.2-1.5) |
| 7 | 2.1 | (0.8-3.4) | 7.7 | (5.4-10.1) | 1.8 | (0.8-2.9) |
| 8 | 2.9 | (1.8-3.9) | 12 | (9.0-15.0) | 2 | (1.1-2.9) |
| Total | 1.9 | (1.3-6.5) | 5.5 | (4.2-6.7) | 1.5 | (0.9-2.0) |
| HIGH SCHOOL | | | | | | |
| Gender | | | | | | |
| Male | 5.6 | (3.8-7.5) | 20 | (16.1-23.9) | 5.7 | (3.9-7.5) |
| Female | 4.7 | (3.4-6.0) | 17 | (13.8-20.2) | 1.7 | (1.1-2.4) |
| Race/Ethnicity | | | | | | |
| White | 17.5 | (13.8-21.2) | 20.9 | (18.0-23.9) | 4.1 | (3.0-5.1) |
| Black | 24.5* | (18.9-30.2) | 9.4 | (5.5-13.4) | 2.0* | (0.3-3.6) |
| Hispanic | 16.1 | (11.4-20.8) | 16.7 | (11.5-21.9) | 2.8* | (0.6-5.0) |
| Other | 21.9* | (14.9-28.9) | 12.2* | (4.3-20.0) | 5.9* | (1.2-10.3) |
| Grade | | | | | | |
| 9 | 3 | (2.0-4.0) | 12 | (9.0-15.0) | 1.8 | (1.2-2.4) |
| 10 | 3.4 | (2.0-4.9) | 17.8 | (13.4-22.3) | 4 | (2.3-5.8) |
| 11 | 5.8 | (3.7-8.0) | 20.4 | (15.9-24.9) | 4.2 | (1.7-6.7) |
| 12 | 8.8 | (5.5-12.1) | 24.1 | (17.0-31.2) | 5.2 | (3.1-7.2) |
| Total | 5.2 | (3.9-6.5) | 18.5 | (15.3-21.7) | 3.8 | (2.8-4.8) |

Source: IDOH/TPC, 2019

Notes: * is used to indicate statistically unstable values (relative standard error >30%) and caution should be used in interpretation.

APPENDIX 3B - PART 1

Percentage of Indiana Students Reporting Monthly Cigarette Use, by Region and Grade (Indiana Youth Survey, 2020)

| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 6th Grade | 1.20% | 0.6%* | 1.50% | 2.1%* | 1.20% | 0.60% | 0.00% | 1.10% | 1.10% | 1.20% | 2.3%* |
| 7th Grade | 2.10% | 1.90% | 2.30% | 2.80% | 2.20% | 1.60% | 1.0%* | 1.20% | 1.3%* | 2.80% | 4.3%* |
| 8th Grade | 2.60% | 1.90% | 2.80% | 2.80% | 2.10% | 2.50% | 2.20% | 1.1%* | 2.60% | 3.10% | 5.3%* |
| 9th Grade | 3.40% | 2.1%* | 1.9%* | 3.50% | 5.4%* | 3.30% | 3.20% | 1.8%* | 4.10% | 4.9%* | 4.10% |
| 10th Grade | 3.80% | 2.3%* | 3.10% | 3.80% | 5.2%* | 3.50% | 4.50% | 2.3%* | 3.20% | 4.60% | 6.80% |
| 11th Grade | 4.70% | 2.7%* | 4.40% | 6.7%* | 6.10% | 3.40% | 4.00% | 4.00% | 5.80% | 4.30% | 6.10% |
| 12th Grade | 6.70% | 4.6%* | 5.60% | 7.00% | 7.60% | 5.10% | 7.40% | 3.5%* | 9.7%* | 5.50% | 10.8%* |

Source: Gassman et al., 2020

Notes: * is used to indicate local rate that varies significantly from the state rate (P<.05).

APPENDIX 3B - PART 2

Percentage of Indiana Students Reporting Monthly E-Cigarette Use, by Region and Grade (Indiana Youth Survey, 2020)

| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 6th Grade | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 7th Grade | 6.5% | 5.1%* | 6.8% | 7.3% | 5.7% | 5.1% | 3.6%* | 6.2% | 5.8% | 8.9%* | 8.8%* |
| 8th Grade | 10.0% | 11.7%* | 9.5% | 12.1%* | 7.5%* | 8.3% | 8.5% | 7.6%* | 9.9% | 11.3%* | 14.6%* |
| 9th Grade | 13.0% | 12.0% | 10.3%* | 11.3% | 12.4% | 12.6% | 13.7% | 12.3% | 16.9%* | 14.0% | 14.1% |
| 10th Grade | 17.3% | 20.2%* | 15.6% | 15.4% | 14.7%* | 13.5%* | 18.6% | 17.4% | 18.5% | 18.1% | 20.2% |
| 11th Grade | 18.2% | 15.0%* | 14.6%* | 18.4% | 21.3% | 15.6% | 17.6% | 18.1% | 24.9%* | 17.3% | 18.3% |
| 12th Grade | 23.0% | 22.5% | 17.5%* | 23.1% | 20.4% | 15.8%* | 19.8% | 25.1% | 29.5%* | 23.9% | 21.7% |

Source: Gassman et al., 2020

Notes: * used to indicate local rate that varies significantly from the state rate (P<.05)

Data from INYS at the state and regional levels is provided. Until 2018, there were 8 regions. DMHA changed the number of regions to 10 in 2020. The counties in each region include:

Region 1: Lake, LaPorte, Porter

Region 2: Cass, Elkhart, Fulton, Howard, Kosciusko, Marshall, Miami, Pulaski, St. Joseph, Starke, Wabash

Region 3: Adams, Allen, DeKalb, Huntington, Lagrange, Noble, Steuben, Wells, Whitley

Region 4: Benton, Boone, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, White

Region 5: Blackford, Delaware, Grant, Hamilton, Hancock, Henry, Jay, Madison, Randolph, Tipton, Wayne

Region 6: Clay, Hendricks, Monroe, Morgan, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo

Region 7: Marion

Region 8: Daviess, Dubois, Gibson, Greene, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, Warrick

Region 9: Bartholomew, Brown, Clark, Crawford, Floyd, Harrison, Jackson, Johnson, Lawrence, Orange, Scott, Washington

Region 10: Dearborn, Decatur, Fayette, Franklin, Jefferson, Jennings, Ohio, Ripley, Rush, Shelby, Switzerland, Union

APPENDIX 3C

Number of Incidents and Unique Students Involved in Suspensions/Expulsions due to Tobacco Use in Indiana, Academic Year 2019-20

| County | Students Enrolled | Number of Incidents | Number of Unique Students Involved |
|-------------|-------------------|---------------------|------------------------------------|
| Adams | 4804 | 19 | 18 |
| Allen | 69012 | 265 | 256 |
| Bartholomew | 14668 | 199 | 166 |
| Benton | 2118 | 31 | 27 |
| Blackford | 2330 | 18 | 16 |
| Boone | 14520 | 70 | 67 |
| Brown | 2386 | 19 | 16 |
| Carroll | 3488 | 22 | 22 |
| Cass | 7990 | 61 | 57 |
| Clark | 18780 | 141 | 134 |
| Clay | 5324 | <5 | <5 |
| Clinton | 8432 | 61 | 57 |
| Crawford | 1730 | 16 | 14 |
| Daviess | 3512 | 11 | 11 |
| Dearborn | 10592 | 119 | 106 |
| Decatur | 7346 | 20 | 20 |
| DeKalb | 8396 | 50 | 48 |
| Delaware | 16800 | 65 | 61 |
| DuBois | 8810 | 49 | 49 |
| Elkhart | 45836 | 98 | 94 |
| Fayette | 3216 | 29 | 25 |
| Floyd | 16530 | 102 | 98 |
| Fountain | 2636 | 27 | 22 |
| Franklin | 2512 | 66 | 56 |
| Fulton | 3384 | 31 | 29 |
| Gibson | 6904 | 35 | 34 |
| Grant | 12054 | 65 | 64 |
| Greene | 2578 | 33 | 28 |
| Hamilton | 65258 | 174 | 162 |
| Hancock | 16208 | 87 | 81 |
| Harrison | 3880 | 40 | 37 |
| Hendricks | 35274 | 144 | 136 |
| Henry | 8978 | 65 | 58 |

| County | Students Enrolled | Number of Incidents | Number of Unique Students Involved |
|------------|-------------------|---------------------|------------------------------------|
| Howard | 12920 | 77 | 74 |
| Huntington | 6394 | 53 | 45 |
| Jackson | 9670 | 112 | 98 |
| Jasper | 5716 | 22 | 21 |
| Jay | 3460 | 68 | 59 |
| Jefferson | 6634 | 50 | 45 |
| Jennings | 4968 | <5 | <5 |
| Johnson | 32626 | 152 | 146 |
| Knox | 6222 | 138 | 124 |
| Kosciusko | 16734 | 127 | 120 |
| LaGrange | 6046 | 56 | 52 |
| Lake | 94994 | 201 | 190 |
| LaPorte | 18954 | 133 | 119 |
| Lawrence | 7712 | 114 | 96 |
| Madison | 24336 | 120 | 114 |
| Marion | 199708 | 440 | 422 |
| Marshall | 10966 | 62 | 57 |
| Martin | 722 | 5 | 5 |
| Miami | 5368 | 121 | 112 |
| Monroe | 16194 | 141 | 129 |
| Montgomery | 6426 | 56 | 52 |
| Morgan | 12328 | 67 | 60 |
| Newton | 2050 | 37 | 32 |
| Noble | 9204 | 89 | 78 |
| Ohio | 522 | <5 | <5 |
| Orange | 3140 | 46 | 45 |
| Owen | 3048 | 33 | 30 |
| Parke | 3334 | 33 | 32 |
| Perry | 4744 | 30 | 29 |
| Pike | 2068 | 47 | 41 |
| Porter | 34220 | 148 | 137 |
| Posey | 4370 | 43 | 41 |
| Pulaski | 2260 | 37 | 33 |

| County | Students Enrolled | Number of Incidents | Number of Unique Students Involved |
|--------------|-------------------|---------------------|------------------------------------|
| Putnam | 5808 | 28 | 25 |
| Randolph | 6458 | 46 | 45 |
| Ripley | 6848 | 71 | 51 |
| Rush | 3160 | 13 | 12 |
| Saint Joseph | 45274 | 127 | 117 |
| Scott | 3822 | 60 | 59 |
| Shelby | 9480 | 62 | 55 |
| Spencer | 2020 | 7 | 6 |
| Starke | 3906 | 43 | 40 |
| Steuben | 4562 | 22 | 21 |
| Sullivan | 3676 | 31 | 29 |
| Switzerland | | <5 | <5 |
| Tippecanoe | 27792 | 125 | 116 |
| Tipton | 2690 | 30 | 27 |
| Union | 1482 | 18 | 15 |
| Vanderburgh | 27632 | 81 | 72 |
| Vermillion | 3220 | 11 | 10 |
| Vigo | 16566 | 52 | 47 |
| Wabash | 5266 | 33 | 30 |
| Warren | 1184 | <5 | <5 |
| Warrick | 11054 | 86 | 76 |
| Washington | 4742 | 74 | 69 |
| Wayne | 10496 | 31 | 30 |
| Wells | 4712 | 34 | 31 |
| White | 5086 | 42 | 39 |
| Whitley | 6680 | 62 | 57 |
| Indiana | 1237960 | 6279 | 5786 |

Source: Indiana Department of Education, 2021

Counts of incidents observe each time a student, due to tobacco use, was either suspended or expelled. The unique count is the number of unique students who involved.

APPENDIX 3D - PART 1

Adult Smoking Prevalence and Chronic Disease Outcomes, by County

| County | County | Estimated adult smoking rate (Statewide: 2019 BRFSS; County- level: 2015-2019 BRFSS) | Age-adjusted rate of lung cancer deaths per 100,000 population (2013-2017) | Age-adjusted rate of major cardiovascular diseases deaths per 100,000 population (2015-2019) | Asthma ER Visits Age Adjusted Rate per 10,000 population, 2015 | Percentage of live births to mothers who smoked during pregnancy, 2020 | Estimated cost of smoking-related births, 2020 |
|-------------|-------------|--|--|--|--|--|--|
| Adams | Adams | 21.3 | 44.8 | 205.2 | 21.9 | 5.7 | \$48,888 |
| Allen | Allen | 20.1 | 42.1 | 235.1 | 45 | 8.5 | \$597,520 |
| Bartholomew | Bartholomew | 21.5 | 46.4 | 221.1 | 40.5 | 14.8 | \$209,132 |
| Benton | Benton | 30.4 | 55.6 | 251.8 | 26.8 | 13.4 | \$20,370 |
| Blackford | Blackford | 28.5 | 72 | 233.7 | 43.3 | 26.4 | \$44,814 |
| Boone | Boone | 12.1 | 44.9 | 251.2 | 24.4 | 6.2 | \$62,468 |
| Brown | Brown | 22.6 | 46.9 | 188 | Unstable Rate | 10.3 | \$16,296 |
| Carroll | Carroll | 15.6 | 49.6 | 196.2 | 24.2 | 11.9 | \$39,382 |
| Cass | Cass | 24.8 | 57.4 | 214.9 | 43.6 | 15.2 | \$96,418 |
| Clark | Clark | 23.6 | 61.2 | 270.6 | 25.6 | 9 | \$165,676 |
| Clay | Clay | 22.0 | 59.2 | 295 | 35.9 | 20.6 | \$80,122.00 |
| Clinton | Clinton | 15.6 | 52.2 | 245.3 | 40.8 | 17.5 | \$100,492 |
| Crawford | Crawford | 22.3 | 69.2 | 272.4 | 24.6 | 32.3 | \$40,740 |
| Daviess | Daviess | 19.8 | 44.5 | 254.7 | 47.2 | 9.4 | \$67,900 |
| Dearborn | Dearborn | 22.3 | 56 | 234.4 | 25.5 | 14.1 | \$100,492 |
| Decatur | Decatur | 17.6 | 48.9 | 258.7 | 49.2 | 17 | \$70,616 |
| DeKalb | DeKalb | 25.9 | 48 | 244.2 | 26 | 15.5 | \$112,714 |
| Delaware | Delaware | 20.3 | 52.5 | 260.6 | 45 | 18.1 | \$262,094 |
| Dubois | Dubois | 15.3 | 33.4 | 236.2 | 5.6 | 9.2 | \$65,184 |
| Elkhart | Elkhart | 20.2 | 42.7 | 232 | 44.5 | 8.9 | \$351,722 |
| Fayette | Fayette | 29.0 | 51.7 | 299 | 27.5 | 20.9 | \$67,900 |
| Floyd | Floyd | 20.2 | 47.7 | 242.9 | 27.1 | 9.8 | \$107,282 |
| Fountain | Fountain | 30.4 | 49 | 247.7 | 60.9 | 19.4 | \$44,814 |
| Franklin | Franklin | 17.6 | 42.2 | 206.5 | 12.4 | 13.9 | \$44,814 |
| Fulton | Fulton | 22.5 | 61 | 273.7 | 35 | 24.3 | \$71,974 |
| Gibson | Gibson | 20.0 | 48.2 | 241 | 47.4 | 11.5 | \$57,036 |
| Grant | Grant | 24.8 | 63.4 | 262.4 | 59.1 | 28.2 | \$278,390 |
| Greene | Greene | 24.0 | 60.3 | 256.2 | 24.8 | 12.1 | \$50,246 |
| Hamilton | Hamilton | 10.5 | 29.3 | 173.6 | 19.5 | 1.2 | \$59,752 |
| Hancock | Hancock | 11.6 | 50.1 | 201.7 | 29 | 7.1 | \$70,616 |
| Harrison | Harrison | 23.4 | 59.2 | 221.4 | 23 | 12.5 | \$69,258 |
| Hendricks | Hendricks | 14.5 | 44.2 | 209.4 | 15.3 | 4.4 | \$108,640 |
| Henry | Henry | 25.0 | 54.3 | 250 | 46.1 | 23.3 | \$152,096 |

| County | County | Estimated adult smoking rate (Statewide: 2019 BRFSS; County- level: 2015-2019 BRFSS) | Age-adjusted rate of lung cancer deaths per 100,000 population (2013-2017) | Age-adjusted rate of major cardiovascular diseases deaths per 100,000 population (2015-2019) | Asthma ER Visits Age Adjusted Rate per 10,000 population, 2015 | Percentage of live births to mothers who smoked during pregnancy, 2020 | Estimated cost of smoking-related births, 2020 |
|------------|------------|--|--|--|--|--|--|
| Howard | Howard | 26.1 | 51 | 270.8 | 57.3 | 16.2 | \$202,342 |
| Huntington | Huntington | 24.4 | 44.4 | 255.8 | 40 | 17.3 | \$93,702 |
| Jackson | Jackson | 22.6 | 65.2 | 237.9 | 67.9 | 17.5 | \$150,738 |
| Jasper | Jasper | 25.6 | 50.2 | 268.2 | 34.1 | 16.9 | \$84,196 |
| Jay | Jay | 28.5 | 62.6 | 220.5 | 54.2 | 16.4 | \$66,542 |
| Jefferson | Jefferson | 30.9 | 67.7 | 284.1 | 31 | 26.1 | \$124,936 |
| Jennings | Jennings | 29.1 | 70.6 | 284.1 | 55.6 | 28.9 | \$138,516 |
| Johnson | Johnson | 20.0 | 46.3 | 229.5 | 39 | 10.1 | \$247,156 |
| Knox | Knox | 19.8 | 55.6 | 247.8 | 43.6 | 18.7 | \$100,492 |
| Kosciusko | Kosciusko | 20.1 | 45.8 | 231.1 | 28.7 | 12.9 | \$161,602 |
| LaGrange | LaGrange | 21.6 | 33.4 | 250.5 | 27.4 | 5.4 | \$52,962 |
| Lake | Lake | 18.6 | 46.5 | 255.4 | 69.9 | 5.9 | \$431,844 |
| LaPorte | LaPorte | 29.1 | 51.3 | 275.7 | 52.5 | 16.3 | \$251,230 |
| Lawrence | Lawrence | 21.3 | 58.8 | 245.6 | 50.5 | 22.7 | \$130,368 |
| Madison | Madison | 27.9 | 60 | 239.2 | 87 | 19.3 | \$370,734 |
| Marion | Marion | 20.0 | 54.5 | 241 | 83.4 | 7.8 | \$1,428,616 |
| Marshall | Marshall | 23.0 | 49.5 | 232.5 | 25.9 | 11.3 | \$84,196 |
| Martin | Martin | 19.8 | 48.3 | 250 | Unstable Rate | 11.7 | \$16,296 |
| Miami | Miami | 30.1 | 49.5 | 288.9 | 45 | 19.6 | \$96,418 |
| Monroe | Monroe | 15.8 | 40.7 | 193.8 | 22.9 | 12.2 | \$184,688 |
| Montgomery | Montgomery | 20.3 | 48.9 | 270.1 | 51.3 | 21.9 | \$118,146 |
| Morgan | Morgan | 23.0 | 55 | 252 | 41.6 | 16.6 | \$150,738 |
| Newton | Newton | 25.6 | 67.5 | 239.3 | 31.1 | 17 | \$31,234 |
| Noble | Noble | 20.5 | 47 | 230.2 | 32.8 | 12.5 | \$111,356 |
| Ohio | Ohio | 30.9 | 56.8 | 172.7 | Unstable Rate | 15.1 | \$10,864 |
| Orange | Orange | 29.8 | 54.1 | 259.1 | 52.8 | 23.3 | \$69,258 |
| Owen | Owen | 22.0 | 62.1 | 258.8 | 32.8 | 18.6 | \$50,246 |
| Parke | Parke | 22.9 | 46.2 | 233.6 | 32.3 | 11.7 | \$31,234 |
| Perry | Perry | 22.3 | 49.4 | 272.5 | 73.8 | 23.4 | \$52,962 |
| Pike | Pike | 19.8 | 54.6 | 246.2 | Unstable Rate | 12.2 | \$23,086 |
| Porter | Porter | 20.5 | 45.2 | 213.5 | 44 | 7.3 | \$161,602 |
| Posey | Posey | 20.0 | 53.9 | 205.1 | 20.7 | 10.4 | \$33,950 |
| Pulaski | Pulaski | 22.5 | 55.4 | 288.2 | 29.4 | 21.7 | \$35,308 |
| Putnam | Putnam | 22.9 | 66.5 | 231.8 | 25.1 | 17.3 | \$81,480 |

| County | County | Estimated adult smoking rate (Statewide: 2019 BRFSS; County- level: 2015-2019 BRFSS) | Age-adjusted rate of lung cancer deaths per 100,000 population (2013-2017) | Age-adjusted rate of major cardiovascular diseases deaths per 100,000 population (2015-2019) | Asthma ER Visits Age Adjusted Rate per 10,000 population, 2015 | Percentage of live births to mothers who smoked during pregnancy, 2020 | Estimated cost of smoking-related births, 2020 |
|-------------|-------------|--|--|--|--|--|--|
| Randolph | Randolph | 28.5 | 50.6 | 251.7 | 47.7 | 18.1 | \$69,258 |
| Ripley | Ripley | 18.2 | 53.7 | 241.4 | 39 | 14.5 | \$71,974 |
| Rush | Rush | 29.0 | 59.5 | 254.7 | 83.1 | 22.1 | \$57,036 |
| Scott | Scott | 29.1 | 69.6 | 281.1 | 51.9 | 18.7 | \$77,406 |
| Shelby | Shelby | 22.7 | 60.8 | 217 | 51.6 | 15.2 | \$93,702 |
| Spencer | Spencer | 22.3 | 48 | 232.5 | 22.5 | 9.3 | \$28,518 |
| St. Joseph | St. Joseph | 18.9 | 46.2 | 242.2 | 50.6 | 7.7 | \$336,784 |
| Starke | Starke | 22.5 | 79.2 | 306.7 | 51.8 | 21.5 | \$71,974 |
| Steuben | Steuben | 21.6 | 47.1 | 207 | 40.7 | 16.8 | \$73,332 |
| Sullivan | Sullivan | 24.0 | 62.3 | 279.4 | 46.8 | 17.8 | \$48,888 |
| Switzerland | Switzerland | 30.9 | 45.7 | 220.2 | Unstable Rate | 25.4 | \$42,098 |
| Tippecanoe | Tippecanoe | 14.9 | 41.5 | 214 | 38 | 8.5 | \$243,082 |
| Tipton | Tipton | 26.1 | 52.4 | 216.2 | 40.4 | 10.1 | \$23,086 |
| Union | Union | 29.0 | Suppressed | 217.9 | Suppressed | 14.9 | \$14,938 |
| Vanderburgh | Vanderburgh | 21.8 | 51.4 | 228.6 | 54.9 | 10.4 | \$298,760 |
| Vermillion | Vermillion | 22.9 | 52.1 | 344.8 | 48.7 | 24.4 | \$52,962 |
| Vigo | Vigo | 20.7 | 56.9 | 291.3 | 44.9 | 21.8 | \$332,710 |
| Wabash | Wabash | 30.1 | 43 | 247.5 | 27.4 | 22.5 | \$88,270 |
| Warren | Warren | 30.4 | 43.5 | 240.3 | 47.3 | 12.8 | \$13,580 |
| Warrick | Warrick | 14.8 | 41.3 | 218.3 | 30.1 | 5.8 | \$51,604 |
| Washington | Washington | 29.8 | 62.2 | 286.4 | 44.3 | 12.1 | \$52,962 |
| Wayne | Wayne | 23.0 | 55.9 | 299.8 | 41.9 | 17.6 | \$191,478 |
| Wells | Wells | 21.3 | 42.4 | 221.2 | 28 | 15.4 | \$71,974 |
| White | White | 15.6 | 49.7 | 249.7 | 53.8 | 13.7 | \$51,604 |
| Whitley | Whitley | 20.5 | 47.6 | 231.8 | 35.1 | 12.8 | \$65,184 |
| Indiana | Indiana | 19.4 | 49.4 | 239.3 | 47.4 | 10.9 | \$12,959,394 |

Source: IDOH/TPC, 2021

APPENDIX 3D - PART 2

Adult Smoking Prevalence and Chronic Disease Outcomes, by County

| County | Estimated number of people living with a tobacco-related illness | Estimated number of deaths due to tobacco | Estimated number of deaths due to secondhand smoke (SHS) | Estimated cost of SHS due to medical costs and premature death |
|-------------|--|---|--|--|
| Adams | 1,757 | 59 | 9 | \$11.6 Million |
| Allen | 18,914 | 630 | 101 | \$124.7 Million |
| Bartholomew | 4,034 | 134 | 21 | \$26.6 Million |
| Benton | 428 | 14 | 2 | \$2.8 Million |
| Blackford | 594 | 20 | 3 | \$3.9 Million |
| Boone | 3,475 | 116 | 18 | \$22.9 Million |
| Brown | 759 | 25 | 4 | \$5 Million |
| Carroll | 997 | 33 | 5 | \$6.6 Million |
| Cass | 1,858 | 62 | 10 | \$12.2 Million |
| Clark | 5,943 | 198 | 32 | \$39.2 Million |
| Clay | 1,299 | 43 | 7 | \$8.6 Million |
| Clinton | 1,629 | 54 | 9 | \$10.7 Million |
| Crawford | 517 | 17 | 3 | \$3.4 Million |
| Daviess | 1,638 | 55 | 9 | \$10.8 Million |
| Dearborn | 2,487 | 83 | 13 | \$16.4 Million |
| Decatur | 1,299 | 43 | 7 | \$8.6 Million |
| DeKalb | 2,123 | 71 | 11 | \$14 Million |
| Delaware | 5,492 | 183 | 29 | \$36.2 Million |
| Dubois | 2,141 | 71 | 11 | \$14.1 Million |
| Elkhart | 10,161 | 339 | 54 | \$67 Million |
| Fayette | 1,148 | 38 | 6 | \$7.6 Million |
| Floyd | 3,950 | 132 | 21 | \$26 Million |
| Fountain | 809 | 27 | 4 | \$5.3 Million |
| Franklin | 1,118 | 37 | 6 | \$7.4 Million |
| Fulton | 1,005 | 34 | 5 | \$6.6 Million |
| Gibson | 1,620 | 54 | 9 | \$10.7 Million |
| Grant | 3,272 | 109 | 17 | \$21.6 Million |
| Greene | 1,512 | 50 | 8 | \$10 Million |
| Hamilton | 17,052 | 568 | 91 | \$112.4 Million |
| Hancock | 3,918 | 131 | 21 | \$25.8 Million |
| Harrison | 1,946 | 65 | 10 | \$12.8 Million |
| Hendricks | 8,578 | 286 | 46 | \$56.5 Million |
| Henry | 2,400 | 80 | 13 | \$15.8 Million |

| County | Estimated number of people living with a tobacco-related illness | Estimated number of deaths due to tobacco | Estimated number of deaths due to secondhand smoke (SHS) | Estimated cost of SHS due to medical costs and premature death |
|------------|--|---|--|--|
| Howard | 4,106 | 137 | 22 | \$27.1 Million |
| Huntington | 1,799 | 60 | 10 | \$11.9 Million |
| Jackson | 2,278 | 76 | 12 | \$15 Million |
| Jasper | 1,615 | 54 | 9 | \$10.6 Million |
| Jay | 1,005 | 33 | 5 | \$6.6 Million |
| Jefferson | 1,627 | 54 | 9 | \$10.7 Million |
| Jennings | 1,355 | 45 | 7 | \$8.9 Million |
| Johnson | 7,939 | 265 | 42 | \$52.3 Million |
| Knox | 1,781 | 59 | 9 | \$11.7 Million |
| Kosciusko | 3,938 | 131 | 21 | \$26 Million |
| LaGrange | 1,985 | 66 | 11 | \$13.1 Million |
| Lake | 24,474 | 816 | 130 | \$161.3 Million |
| LaPorte | 5,517 | 184 | 29 | \$36.4 Million |
| Lawrence | 2,209 | 74 | 12 | \$14.6 Million |
| Madison | 6,386 | 213 | 34 | \$42.1 Million |
| Marion | 47,956 | 1,599 | 255 | \$316.1 Million |
| Marshall | 2,262 | 75 | 12 | \$14.9 Million |
| Martin | 482 | 16 | 3 | \$3.2 Million |
| Miami | 1,765 | 59 | 9 | \$11.6 Million |
| Monroe | 6,857 | 229 | 36 | \$45.2 Million |
| Montgomery | 1,862 | 62 | 10 | \$12.3 Million |
| Morgan | 3,523 | 117 | 19 | \$23.2 Million |
| Newton | 679 | 23 | 4 | \$4.5 Million |
| Noble | 2,329 | 78 | 12 | \$15.3 Million |
| Ohio | 292 | 10 | 2 | \$1.9 Million |
| Orange | 975 | 32 | 5 | \$6.4 Million |
| Owen | 1,046 | 35 | 6 | \$6.9 Million |
| Parke | 793 | 26 | 4 | \$5.2 Million |
| Perry | 941 | 31 | 5 | \$6.2 Million |
| Pike | 601 | 20 | 3 | \$4 Million |
| Porter | 8,501 | 283 | 45 | \$56 Million |
| Posey | 1,238 | 41 | 7 | \$8.2 Million |
| Pulaski | 614 | 20 | 3 | \$4 Million |
| Putnam | 1,802 | 60 | 10 | \$11.9 Million |
| Randolph | 1,202 | 40 | 6 | \$7.9 Million |

| County | Estimated number of people living with a tobacco-related illness | Estimated number of deaths due to tobacco | Estimated number of deaths due to secondhand smoke (SHS) | Estimated cost of SHS due to medical costs and premature death |
|-------------|--|---|--|--|
| Ripley | 1,423 | 47 | 8 | \$9.4 Million |
| Rush | 822 | 27 | 4 | \$5.4 Million |
| Scott | 1,197 | 40 | 6 | \$7.9 Million |
| Shelby | 2,211 | 74 | 12 | \$14.6 Million |
| Spencer | 972 | 32 | 5 | \$6.4 Million |
| St. Joseph | 13,393 | 446 | 71 | \$88.3 Million |
| Starke | 1,147 | 38 | 6 | \$7.6 Million |
| Steuben | 1,690 | 56 | 9 | \$11.1 Million |
| Sullivan | 1,022 | 34 | 5 | \$6.7 Million |
| Switzerland | 478 | 16 | 3 | \$3.1 Million |
| Tippecanoe | 9,140 | 305 | 49 | \$60.2 Million |
| Tipton | 754 | 25 | 4 | \$5 Million |
| Union | 348 | 12 | 2 | \$2.3 Million |
| Vanderburgh | 8,840 | 295 | 47 | \$58.3 Million |
| Vermillion | 758 | 25 | 4 | \$5 Million |
| Vigo | 5,209 | 174 | 28 | \$34.3 Million |
| Wabash | 1,520 | 51 | 8 | \$10 Million |
| Warren | 414 | 14 | 2 | \$2.7 Million |
| Warrick | 3,136 | 105 | 17 | \$20.7 Million |
| Washington | 1,383 | 46 | 7 | \$9.1 Million |
| Wayne | 3,266 | 109 | 17 | \$21.5 Million |
| Wells | 1,383 | 46 | 7 | \$9.1 Million |
| White | 1,212 | 40 | 6 | \$8 Million |
| Whitley | 1,678 | 56 | 9 | \$11.1 Million |
| Indiana | 333,000 | 11,100 | 1,770 | \$2.1 Billion |

Source: IDOH/TPC, 2021

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Marijuana Use in Indiana: Prevalence and Consequences

INTRODUCTION

Marijuana, commonly known as weed, pot, or cannabis is a mixture of dried flowers of the plant *Cannabis sativa* (CDC, 2021d). Two main chemical components of marijuana are extracted for medical and recreation purposes. Both delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) have entirely different effects when consumed (CDC, 2021d). THC is the chemical component of the plant responsible for the psychotropic effects caused by smoking or ingesting marijuana. Whereas CBD may help with anxiety, pain, or insomnia, little evidence exists on the benefits of CBD. Ingesting or smoking marijuana can cause a wide array of experiences among individuals ranging from euphoria or relaxation to anxiety or panic attacks. Ingested marijuana has a delayed onset of action in comparison to when smoked, which can lead to increased THC consumption. As of July 2021, eighteen U.S. states, two territories and the District of Columbia have legalized adult recreational marijuana use (Hartman, 2021). Under the federal law of Controlled Substance Act (CSA) marijuana is still considered an illegal substance and a schedule 1 controlled drug substance (DEA, 2021). Possession and distribution of marijuana under federal law is subject to severe criminal penalties.

Over the years, several dosage forms of THC have developed and became popular such as: resin, hash oil, wax, and many others. These dosage forms have a variety of delivery routes, ranging from vaporized inhalant to edible snacks and consumables. Potency among THC products has increased significantly over the years, with some products claiming THC levels exceeding 80%. Increase in potency and availability can lead to risk of physical dependence and exacerbation of side effects associated with marijuana use. Side effects that can be exacerbated with increased concentration include: anxiety, agitation, paranoia, and psychosis (Abuse, 2020). Increase in edible consumption of marijuana is found most prevalent in states that have allowed medical use of marijuana (Abuse, 2019).

Marijuana use disorder is a form of dependence where an individual feels withdrawal symptoms when not taking the drug (NIH, 2021c). The percent of developing marijuana use disorder increases when use begins before 18 years of age (National Institute on Drug Abuse, 2020). Marijuana use prior to the age of 18 has also shown to be a risk factor for use of other drugs and development of drug and/or alcohol dependence (Lynskey et al., 2012).

According to the annual Monitoring the Future Survey (MTF) marijuana use among young adults in the U.S. aged 19 to 30 showed an all-time high increase from 28% to 42% in 2006 (Schulenberg et al., 2021). In recent years, Marijuana use among college students in the United States has increased from 38% in 2015 to 44% in 2020 (NIH, 2021d). Inversely, the rate of cigarette smoking in the United States has dramatically decreased from 30.6% in 1999 to 4.1% in 2020 (King and Jun, 2021). The 2021 Indiana College Substance Use Survey reported 21.3% of the students used marijuana vs 24.5% of the students nationwide. 35.2% of Indiana students reported marijuana initiation after starting college.

PREVALENCE OF MARIJUANA CONSUMPTION IN THE GENERAL POPULATION

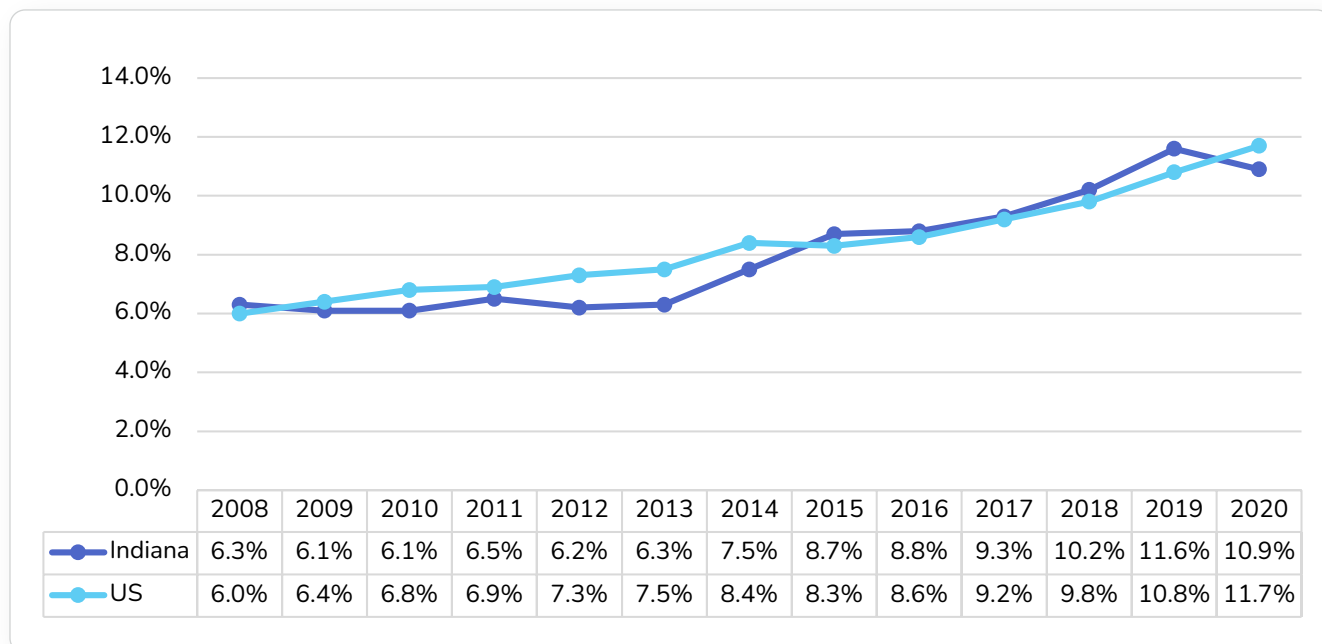
National Survey on Drug Use and Health

In 2020, National Survey on Drug Health Use (NSDUH) reported 10.9% (95% Confidence Interval [CI]: 9.2–13.0) of Indiana residents ages 12 and older use marijuana (U.S.: 11.7%; 95% CI: 11.3–12.0). Marijuana use in the last year among Indiana Hoosiers was estimated at 15.5% (95% CI: 13.4–18.0), versus the national rate at 17.7% (95% CI: 17.3–18.2) See Figure 4.1 for trend on past months marijuana use. Individuals ages 18 to 25 showed the highest prevalence of marijuana use, with 26.7% (95% CI: 22.0–31.9) of Hoosiers in this age group reporting current marijuana use (U.S.: 23.0%; 95% CI: 22.1–24.0) and 34.1% (95% CI: 29.2–39.3) reporting past-year use (U.S.: 35.0%;

95% CI:33.9–36.1) in 2020 (Figure 4.2). Prevalence rates were lower among adults aged 26 and older. In 2020, about 10.1% (95% CI: 7.7–13.1) of 12- to 17-year-olds reported using marijuana in the past year in Indiana (U.S.:

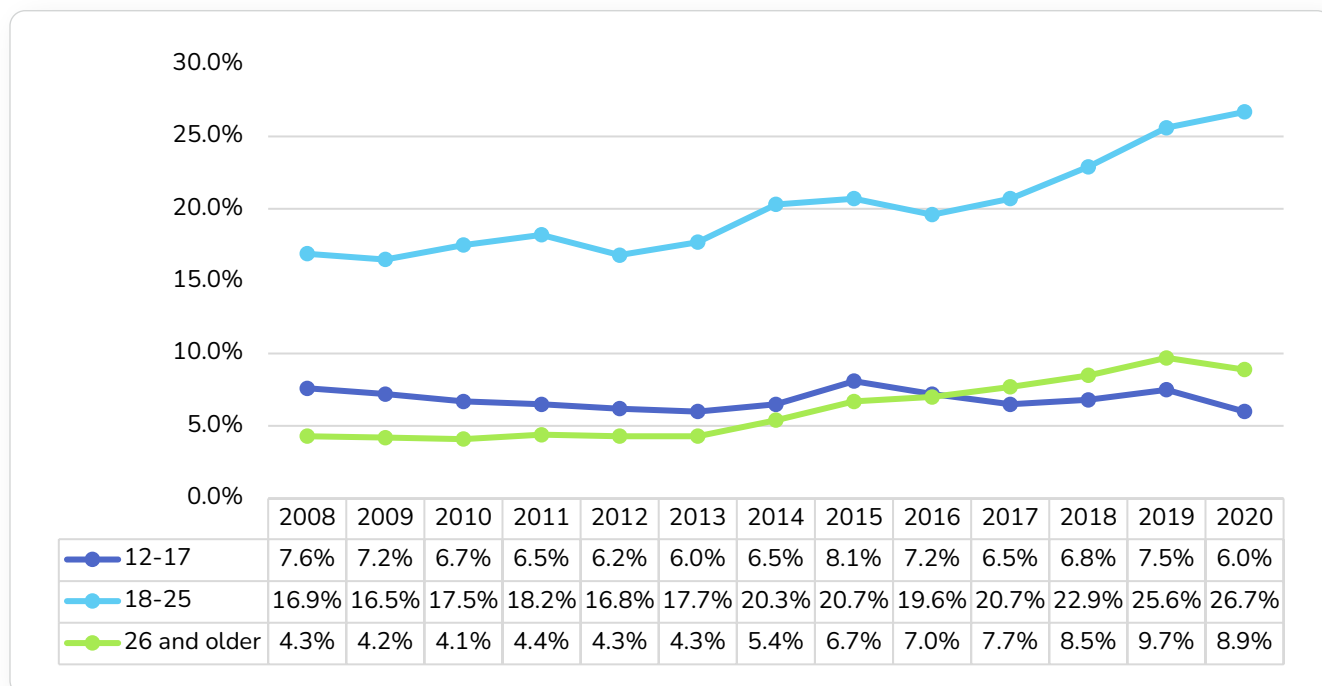
11.7%; 95% CI: 11.0–12.3) and 6.0% (95% CI: 4.4–8.0) reported using within the past month. See Figure 4.2 for current rates of marijuana use by age group.

Figure 4.1 Percentage of Indiana and U.S. Population (Ages 12 and Older) Reporting Current Marijuana Use (National Survey on Drug Use and Health, 2020)



Source: SAMHSA, 2021

Figure 4.2 Percentage of Indiana Residents Reporting Current Marijuana Use, by Age Group (National Survey on Drug Use and Health, 2008–2020)



Source: SAMHSA, 2021

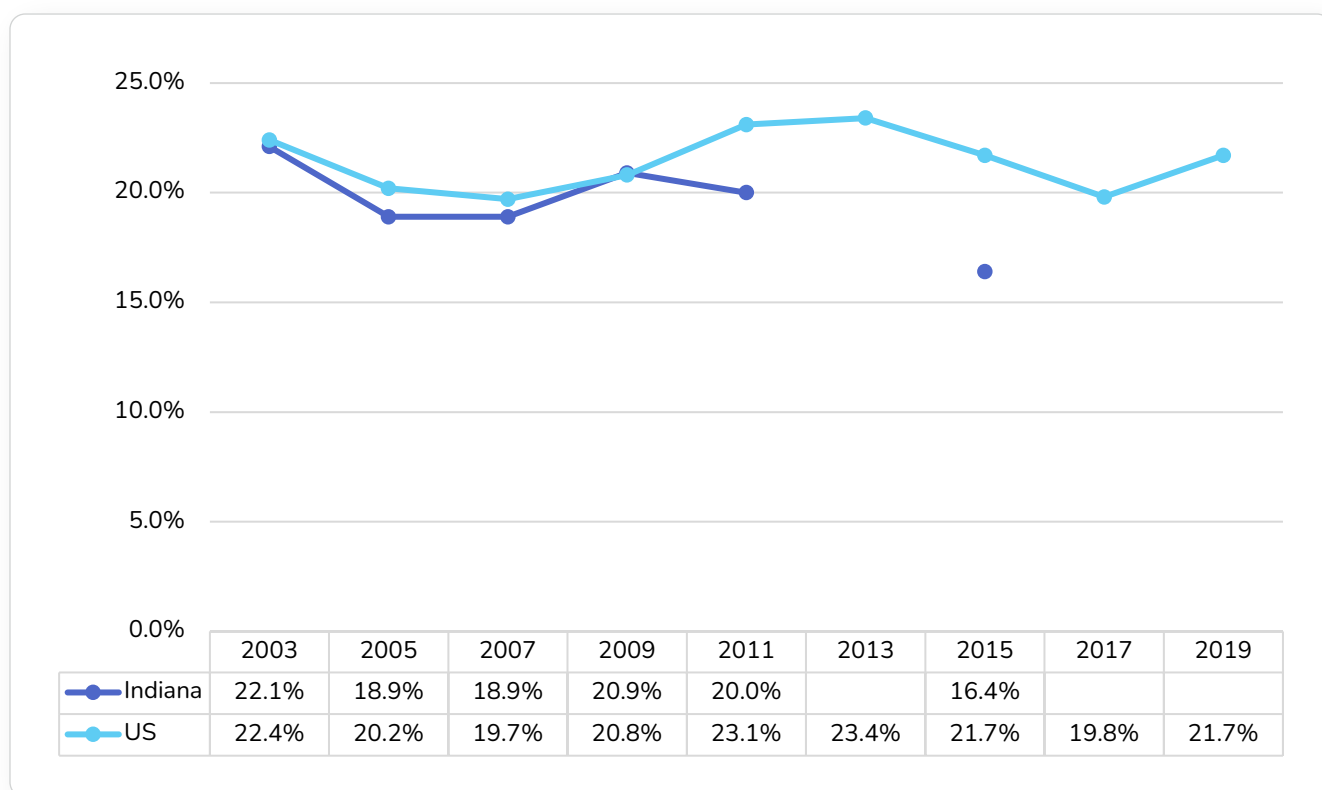
Adolescents and young adults largely reported first time marijuana use; an estimated 8.8% (95% CI: 6.9–11.2) of Hoosiers ages 18 to 25 initiated marijuana use in the past year (U.S.: 8.2%; 95% CI: 7.7–8.9), as did 4.8% (95% CI: 3.7–6.1) of Indiana youth ages 12 to 17 (U.S.: 5.1%; 95% CI: 4.7–5.4). Initiation rates were significantly lower in adults ages 26 and older for both Indiana and national rates (IN: 0.7%; 95% CI: 0.5–0.9; U.S.: 0.7%; 95% CI: 0.6–0.8).

school students used marijuana in the past month which is significantly lower than the national average of 21.7% (95% CI: 19.3–24.2). Black and Hispanic students and students in higher grade levels were more likely to use marijuana. For detailed information refer to Figure 4.3 and Table 4.1. In 2015, 6.2% (95% CI: 5.3–7.4) of Indiana students reported experimenting with marijuana before the age of 13 which was comparable to the national rate (7.5%; 95% CI: 6.5–8.7).

Youth Risk Behavior Surveillance System

Youth Risk Behavior Surveillance System (YRBSS) reported 16.4% (95% CI: 14.1–18.9) of Indiana’s high

Figure 4.3 Percentage of Indiana and U.S. High School Students Currently Using Marijuana (Youth Risk Behavior Surveillance System, 2003–2019)



Source: CDC, 1991-2019

Note: Due to low response rates, estimates for 2013, 2017, and 2019 are not available for Indiana.

Table 4.1 Percentage of Indiana and U.S. High School Students Reporting Current (Past Month) Marijuana Use, by Grade, Gender, and Race/Ethnicity (Youth Risk Behavior Surveillance System, 2015)

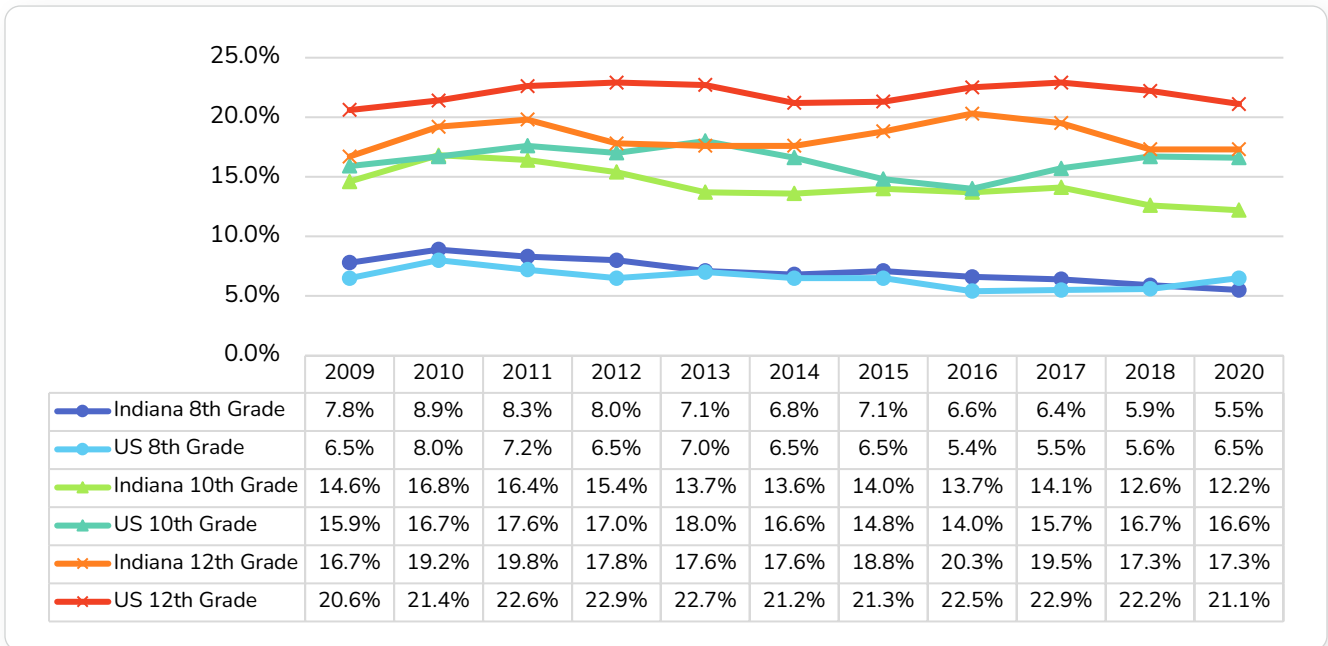
| | | Indiana (95% CI) | U.S. (95% CI) |
|-----------------------|----------|--------------------------|--------------------------|
| Grade | 9th | 13.7% (10.4–17.9) | 15.2% (13.3–17.3) |
| | 10th | 16.8% (12.5–22.2) | 20.0% (16.5–24.1) |
| | 11th | 17.0% (13.2–21.7) | 24.8% (22.3–27.5) |
| | 12th | 18.4% (14.1–23.7) | 27.6% (23.8–31.6) |
| Gender | Male | 16.4% (13.8–19.4) | 23.2% (20.4–26.3) |
| | Female | 15.9% (12.7–19.7) | 20.1% (17.6–22.9) |
| Race/Ethnicity | Black | 23.2% (17.1–30.7) | 27.1% (24.0–30.4) |
| | White | 14.9% (12.4–17.8) | 19.9% (16.8–23.5) |
| | Hispanic | 18.1% (13.6–23.6) | 24.5% (21.6–27.6) |
| Total | | 16.4% (14.1–18.9) | 21.7% (19.3–24.2) |

Source: CDC, 1991-2019

Indiana Youth Survey

at every grade level. See Figure 4.4 for monthly use of Indiana Youth Survey and Monitoring the Future reported that marijuana by grade level in Indiana and the U.S. for 2020 marijuana use increased with grade level/age. Additionally, and Appendix 4A by region and grade. usage is lower in the state of Indiana than national use

Figure 4.4 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use (Indiana Youth Survey and Monitoring the Future Survey, 2009–2020)



Source: Gassman et al., 2020; ICPSR, 2020

Note: The data for year 2019 is not available because the Indiana Youth Survey (INYS) changed the data collection to biennial after 2018.

Indiana College Substance Use Survey

In 2021, Indiana College Substance Use Survey (ICSUS) reported 21.3% of Indiana college students currently use marijuana.

More males (22.4%) than females (20%) reported past month marijuana use ($p < 0.05$).

Marijuana use within college students for groups under the age of 21 and 21-25 were statistically similar (19.6% vs 23.4%)

Use of Marijuana in Treatment Population

Treatment Episode Data Set

Treatment Episode Data Set (TEDS) reports data from patients being admitted for substance abuse treatment. Indiana reported significant higher percent of treatment episodes reported in comparison to the United States (46.5% versus 29.2%). See Figure 4.5 for the trends of

marijuana use and dependence using TEDS data in 2019. Table 4.2 shows the distribution of marijuana use and dependence by demographic characteristics.

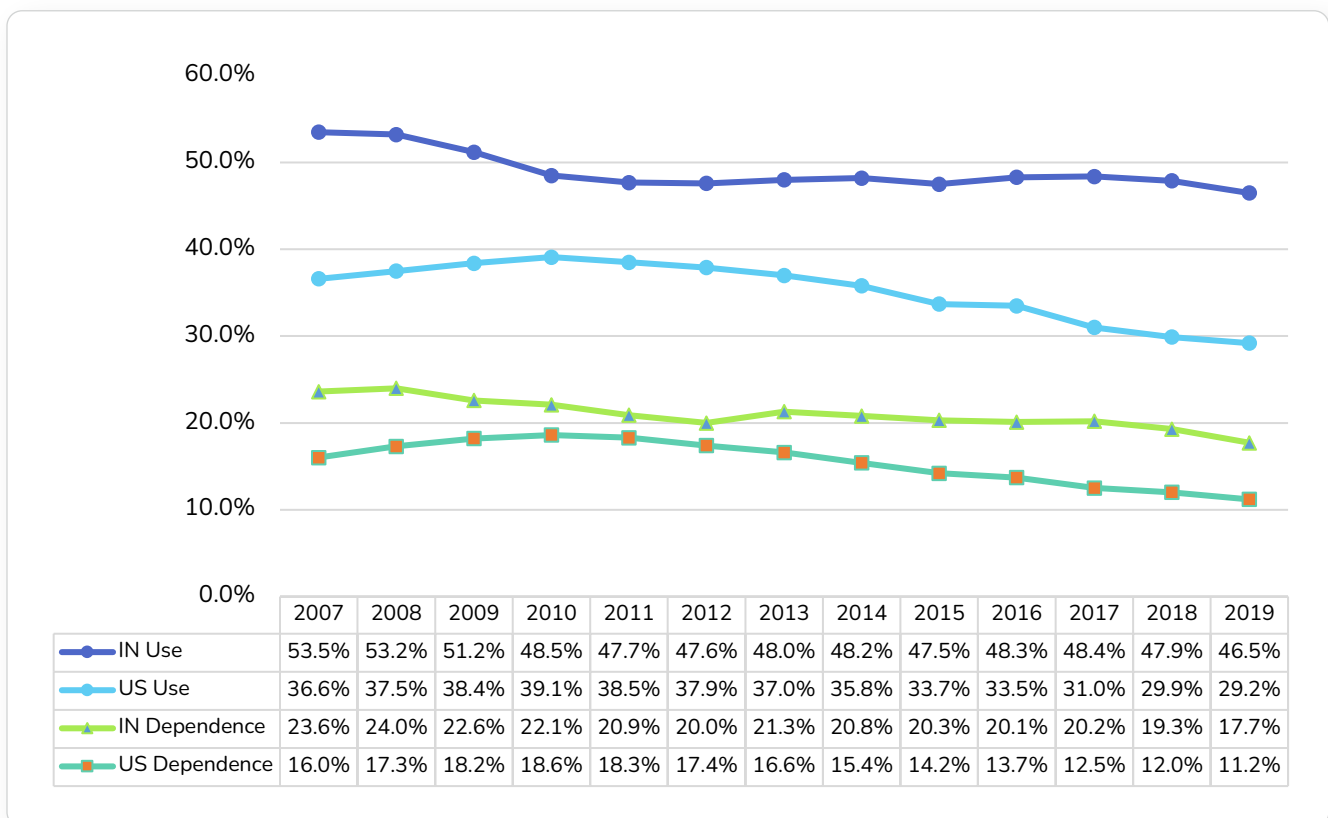
Gender: Males reported higher marijuana use (49.2%) as compared to females (42.7%). Marijuana dependence follows a similar pattern.

Race: Percent of Blacks reported higher marijuana use (57.0%) compared to Whites (44.9%) or other races (47.5%).

Age: Highest marijuana use was reported in adolescents under the age of 18 (89.5%) and the lowest use was reported amongst adults ages 55 and older (27.0%).

Further, Appendix 4B shows the treatment admissions with marijuana use and dependence for SFY 2021 by county.

Figure 4.5 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Use and Marijuana Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2007–2019)



Source: SAMHDA, 2021

Table 4.2 Percentage of Indiana Treatment Admissions with Reported Marijuana Use and Dependence, by Gender, Race, and Age Group (Treatment Episode Data Set, 2019)

| | | Marijuana Use | Marijuana Dependence |
|--------------|--------------|---------------|----------------------|
| Gender | Male | 49.2% | 19.3% |
| | Female | 42.7% | 15.5% |
| Race | White | 44.9% | 15.3% |
| | Black | 57.0% | 33.2% |
| | Other | 47.5% | 20.8% |
| Ethnicity | Hispanic | 50.0% | 24.5% |
| | Non-Hispanic | 46.4% | 17.5% |
| Age Group | Under 18 | 89.5% | 75.4% |
| | 18-24 | 68.8% | 37.6% |
| | 25-34 | 48.7% | 16.5% |
| | 35-44 | 41.6% | 12.7% |
| | 45-54 | 34.5% | 9.7% |
| | 55+ | 27.0% | 7.6% |
| Total | | 46.5% | 17.7% |

Source: SAMHDA, 2021

CONSEQUENCES OF MARIJUANA USE

Marijuana use during adolescence and young adulthood can lead to brain function impairment and adverse effects on the developing brain (CDC, 2021b). Marijuana use can negatively impact teen lives by increasing the risk of mental health issues, reducing coordination, increasing difficulty maintaining attention, impairing memory, impairing learning, and affecting school and social lives (CDC, 2021b). Center of Disease Control (CDC) monitors and addresses the use of marijuana and the effects it has on health and social outcomes. Continuous education is provided by partnering up with public safety, schools, and community coalitions. An effort is made to improve public knowledge and awareness by developing web content and fact sheets for public education (CDC, 2021a).

Driving under the influence of marijuana was reported to be at 4.7% in ages greater than or equal to 16 during 2018 within the U.S. (Azofeifa, et. al., 2019). Marijuana can have negative effects on drivers including reduced reaction time, altered mental status, and increased in lane

weaving. Marijuana related traffic deaths in Colorado have increased 35% since recreational marijuana was legalized (The Legalization of Marijuana in Colorado: The Impact, 2019).

Medical Uses of Marijuana

Unapproved medical marijuana is commonly used in the United States as a treatment to relieve chronic pain, AIDS wasting, epilepsy, neuropathic pain and spasticity from multiple sclerosis (FDA, 2020). Several clinical trials are currently taking place to understand the role of marijuana-based and CBD medications. Nabiximols (CBD+THC) is a mouth spray currently approved in the United Kingdom, Canada, and several European countries for the treatment of spasticity and neuropathic pain (Berlekamp, 2016). Current FDA approved THC medications are dronabinol and nabilone, which are both prescribed for treatment of nausea in patients receiving chemotherapy and as an appetite stimulant treatment. Epidiolex is a current CBD based FDA approved drug used for a rare type of childhood epilepsy.

COVID-19 and Marijuana

A U.S. based study looked at the effects of COVID-19 on marijuana use and found that about 35% of the patients reported increased marijuana use vs only 25% decreased their marijuana use (Boehnke et al., 2020). During the pandemic, an increase in marijuana use was attributed to boredom and anxiety about COVID-19. Another study examined adolescent drug use before and during the U.S. national COVID-19 social distancing policies (Miech et al., 2021). After reviewing the data, it was concluded that availability of marijuana, alcohol, and vaping devices declined during the pandemic. However, that did not reduce the prevalence of marijuana and alcohol use (NIH, 2021a).

Marijuana Use During Pregnancy

More research is needed on how the use of marijuana affects the unborn child. Animal studies have shown an increased risk of miscarriages when marijuana is used, but no human data exists yet. Some evidence suggests that the use of marijuana during pregnancy can lead to developmental disorders in the children (CDC, 2021c). Limited data exists on marijuana use causing low birth weight or premature birth. However, long-term use can increase the chances. The American College of Obstetricians and Gynecologists recommends against the use of marijuana during pregnancy, when trying to get pregnant, and during breast feeding (NIH, 2021b).

APPENDIX 4A

Percentage of Indiana Students Reporting Monthly Marijuana Use, by Region and Grade (Indiana Youth Survey, 2020)

| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 6th Grade | 1.00% | 0.90% | 0.80% | 2.4%* | 1.20% | 0.50% | 0.00% | 0.80% | 0.5%* | 1.00% | 0.40% |
| 7th Grade | 2.80% | 3.60% | 3.7%* | 4.3%* | 1.7%* | 2.90% | 1.1%* | 3.60% | 1.2%* | 3.10% | 2.00% |
| 8th Grade | 5.5%* | 8.3%* | 5.70% | 8.8%* | 3.0%* | 4.6%* | 5.4%* | 5.40% | 3.4%* | 5.90% | 6.00% |
| 9th Grade | 8.20% | 7.40% | 6.90% | 9.50% | 7.10% | 7.00% | 11.0%* | 10.10% | 7.70% | 9.30% | 6.50% |
| 10th Grade | 12.20% | 15.3%* | 9.9%* | 15.4%* | 9.6%* | 11.00% | 16.5%* | 14.6%* | 8.8%* | 12.70% | 10.20% |
| 11th Grade | 12.90% | 14.50% | 10.6%* | 16.4%* | 14.30% | 10.50% | 16.3%* | 13.80% | 12.90% | 11.80% | 9.60% |
| 12th Grade | 17.30% | 20.6%* | 13.3%* | 23.5%* | 16.00% | 10.0%* | 22.5%* | 20.80% | 15.30% | 18.50% | 9.30% |

Source: Gassman et al., 2020

Notes: * is used to indicate local rate that varies significantly from the state rate ($P < .05$).

Data from INYS at the state and regional levels is provided. Until 2018, there were 8 regions. DMHA changed the number of regions to 10 in 2020. The counties in each region include:

Region 1: Lake, LaPorte, Porter

Region 2: Cass, Elkhart, Fulton, Howard, Kosciusko, Marshall, Miami, Pulaski, St. Joseph, Starke, Wabash

Region 3: Adams, Allen, DeKalb, Huntington, Lagrange, Noble, Steuben, Wells, Whitley

Region 4: Benton, Boone, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, White

Region 5: Blackford, Delaware, Grant, Hamilton, Hancock, Henry, Jay, Madison, Randolph, Tipton, Wayne

Region 6: Clay, Hendricks, Monroe, Morgan, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo

Region 7: Marion

Region 8: Daviess, Dubois, Gibson, Greene, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, Warrick

Region 9: Bartholomew, Brown, Clark, Crawford, Floyd, Harrison, Jackson, Johnson, Lawrence, Orange, Scott, Washington

Region 10: Dearborn, Decatur, Fayette, Franklin, Jefferson, Jennings, Ohio, Ripley, Rush, Shelby, Switzerland, Union

APPENDIX 4B

Number of Treatment Admissions with Marijuana Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, SFY 2021)

| County | Treatment Episodes | Marijuana Use | | Marijuana Dependence | |
|-------------|--------------------|---------------|-------|----------------------|-------|
| | Total | Number | % | Number | % |
| Adams | 34 | 17 | 50.0% | 9 | 26.5% |
| Allen | 805 | 416 | 51.7% | 141 | 17.5% |
| Bartholomew | 317 | 160 | 50.5% | 61 | 19.2% |
| Benton | 43 | 20 | 46.5% | 10 | 23.3% |
| Blackford | 89 | 49 | 55.1% | 14 | 15.7% |
| Boone | 333 | 191 | 57.4% | 84 | 25.2% |
| Brown | 45 | 25 | 55.6% | 8 | 17.8% |
| Carroll | 49 | 22 | 44.9% | 12 | 24.5% |
| Cass | 89 | 30 | 33.7% | 7 | 7.9% |
| Clark | 337 | 113 | 33.5% | 51 | 15.1% |
| Clay | 51 | 29 | 56.9% | 10 | 19.6% |
| Clinton | 111 | 59 | 53.2% | 28 | 25.2% |
| Crawford | 47 | 9 | 19.1% | <5 | N/A |
| Daviess | 113 | 48 | 42.5% | 17 | 15.0% |
| Dearborn | 314 | 158 | 50.3% | 55 | 17.5% |
| Decatur | 119 | 52 | 43.7% | 17 | 14.3% |
| DeKalb | 165 | 83 | 50.3% | 38 | 23.0% |
| Delaware | 611 | 253 | 41.4% | 60 | 9.8% |
| Dubois | 124 | 52 | 41.9% | 18 | 14.5% |
| Elkhart | 365 | 161 | 44.1% | 64 | 17.5% |
| Fayette | 237 | 84 | 35.4% | 29 | 12.2% |
| Floyd | 276 | 126 | 45.7% | 36 | 13.0% |
| Fountain | 57 | 35 | 61.4% | 12 | 21.1% |
| Franklin | 74 | 36 | 48.6% | 5 | 6.8% |
| Fulton | 47 | 28 | 59.6% | 7 | 14.9% |
| Gibson | 174 | 99 | 56.9% | 40 | 23.0% |
| Grant | 338 | 160 | 47.3% | 46 | 13.6% |
| Greene | 66 | 30 | 45.5% | 9 | 13.6% |
| Hamilton | 640 | 309 | 48.3% | 159 | 24.8% |
| Hancock | 213 | 85 | 39.9% | 38 | 17.8% |
| Harrison | 52 | 10 | 19.2% | <5 | N/A |
| Hendricks | 508 | 282 | 55.5% | 130 | 25.6% |

| County | Treatment Episodes | Marijuana Use | | Marijuana Dependence | |
|------------|--------------------|---------------|-------|----------------------|-------|
| | Total | Number | % | Number | % |
| Henry | 326 | 147 | 45.1% | 66 | 20.2% |
| Howard | 526 | 228 | 43.3% | 56 | 10.6% |
| Huntington | 113 | 57 | 50.4% | 28 | 24.8% |
| Jackson | 223 | 98 | 43.9% | 28 | 12.6% |
| Jasper | 90 | 33 | 36.7% | 6 | 6.7% |
| Jay | 143 | 71 | 49.7% | 28 | 19.6% |
| Jefferson | 232 | 111 | 47.8% | 44 | 19.0% |
| Jennings | 138 | 67 | 48.6% | 16 | 11.6% |
| Johnson | 195 | 76 | 39.0% | 23 | 11.8% |
| Knox | 166 | 82 | 49.4% | 35 | 21.1% |
| Kosciusko | 146 | 73 | 50.0% | 24 | 16.4% |
| LaGrange | 76 | 37 | 48.7% | 17 | 22.4% |
| Lake | 1,033 | 409 | 39.6% | 168 | 16.3% |
| LaPorte | 433 | 119 | 27.5% | 32 | 7.4% |
| Lawrence | 190 | 98 | 51.6% | 22 | 11.6% |
| Madison | 1,108 | 589 | 53.2% | 268 | 24.2% |
| Marion | 3,521 | 1,626 | 46.2% | 773 | 22.0% |
| Marshall | 69 | 38 | 55.1% | 15 | 21.7% |
| Martin | 17 | 7 | 41.2% | <5 | N/A |
| Miami | 72 | 34 | 47.2% | 5 | 6.9% |
| Monroe | 689 | 342 | 49.6% | 97 | 14.1% |
| Montgomery | 456 | 268 | 58.8% | 55 | 12.1% |
| Morgan | 345 | 168 | 48.7% | 57 | 16.5% |
| Newton | 18 | 11 | 61.1% | 5 | 27.8% |
| Noble | 159 | 93 | 58.5% | 31 | 19.5% |
| Ohio | 26 | 12 | 46.2% | <5 | N/A |
| Orange | 61 | 20 | 32.8% | 11 | 18.0% |
| Owen | 76 | 32 | 42.1% | 7 | 9.2% |
| Parke | 24 | 14 | 58.3% | 9 | 37.5% |
| Perry | 60 | 20 | 33.3% | 14 | 23.3% |
| Pike | 40 | 19 | 47.5% | 6 | 15.0% |
| Porter | 329 | 121 | 36.8% | 31 | 9.4% |
| Posey | 102 | 61 | 59.8% | 32 | 31.4% |
| Pulaski | 39 | 21 | 53.8% | 7 | 17.9% |
| Putnam | 229 | 135 | 59.0% | 58 | 25.3% |

| | Treatment Episodes | Marijuana Use | | Marijuana Dependence | |
|--------------|--------------------|---------------|-------|----------------------|-------|
| County | Total | Number | % | Number | % |
| Randolph | 156 | 67 | 42.9% | 15 | 9.6% |
| Ripley | 127 | 60 | 47.2% | 20 | 15.7% |
| Rush | 131 | 70 | 53.4% | 29 | 22.1% |
| Saint Joseph | 761 | 336 | 44.2% | 115 | 15.1% |
| Scott | 251 | 75 | 29.9% | 24 | 9.6% |
| Shelby | 147 | 55 | 37.4% | 15 | 10.2% |
| Spencer | 47 | 11 | 23.4% | 5 | 10.6% |
| Starke | 159 | 63 | 39.6% | 9 | 5.7% |
| Steuben | 114 | 64 | 56.1% | 31 | 27.2% |
| Sullivan | 30 | 17 | 56.7% | 8 | 26.7% |
| Switzerland | 66 | 24 | 36.4% | 6 | 9.1% |
| Tippecanoe | 574 | 215 | 37.5% | 66 | 11.5% |
| Tipton | 56 | 23 | 41.1% | 7 | 12.5% |
| Union | 25 | 11 | 44.0% | 5 | 20.0% |
| Vanderburgh | 1142 | 727 | 63.7% | 358 | 31.3% |
| Vermillion | 19 | 12 | 63.2% | <5 | N/A |
| Vigo | 233 | 118 | 50.6% | 48 | 20.6% |
| Wabash | 83 | 44 | 53.0% | 21 | 25.3% |
| Warren | 17 | 7 | 41.2% | <5 | N/A |
| Warrick | 211 | 134 | 63.5% | 63 | 29.9% |
| Washington | 65 | 21 | 32.3% | <5 | N/A |
| Wayne | 529 | 206 | 38.9% | 49 | 9.3% |
| Wells | 92 | 50 | 54.3% | 24 | 26.1% |
| White | 131 | 74 | 56.5% | 31 | 23.7% |
| Whitley | 77 | 40 | 51.9% | 16 | 20.8% |
| Indiana | 23573 | 11102 | 47.1% | 4277 | 18.1% |

Source: Indiana Family and Social Services Administration, 2022

Notes: Marijuana dependence is defined as those receiving substance abuse treatment who at admission listed Marijuana as their primary substance.

The percentages are calculated by taking the count of reported marijuana use and dependence and dividing by the count of treatment episodes. As a result of confidentiality concerns, data was suppressed if the count of treatment episodes was less than 5.

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Opioid Use in Indiana: Prevalence and Consequences

INTRODUCTION

Opioids are a class of pain-reducing drugs that include both legal and illegal substances. Legal prescription pain-relievers include hydrocodone (e.g., Vicodin®), oxycodone (e.g., OxyContin®, Percocet®), oxymorphone (e.g., Opana®), codeine, morphine, and fentanyl. The use of fentanyl alone is 50 to 100 times more potent than morphine. Illegal opioids include heroin and illicitly manufactured versions of prescription opioids. The effect on the body is chemically similar across the entire drug class, as opioids block pain signals to the brain, which causes a release of dopamine that users often experience as ‘euphoria’ or a ‘surge of pleasure’ (NIDA, 2021a; 2021b; 2021c).

This sensation can lessen from frequent use due to tolerance to the drug class. As a result, stronger and more potent drug products have developed to counteract this tolerance while also addressing severe-pain cases. Prescribers have tried to curtail this dependence and addiction by only issuing these drugs to patients for short periods while under strict supervision. Despite these efforts, regular use, even as prescribed, can lead to patients needing stronger doses of medication to counteract the lessened effects.

Patients who develop addiction and dependence on these drug products pursue them through licit and illicit means. One of the more common semi-synthetic variations of morphine is heroin. It is often in the form of a white or brown powder, but it can also come in a ‘black tar’ variation. Due to its potency, street-made variations of fentanyl sell in the form of a powder mixed with several other drug products like heroin, cocaine, methamphetamine, and MDMA (NIDA, 2021a).

The advent of COVID-19 has further increased the dangers of opioid abuse. Patients who suffer from substance abuse are 1.5 times more likely to have a COVID-19 diagnosis than those who do not. The pandemic has also resulted in an increase in drug overdoses, possibly from a combination of social isolation, increased stress, and less

access to treatment programs. A comparison of overdose deaths over a 12-month period showed that 2020 had a 30% increase versus 2019. Not only that, but 2020 had the highest number of drug overdose deaths ever recorded over a 12-month period at 93,000 (NIDA, 2021d).

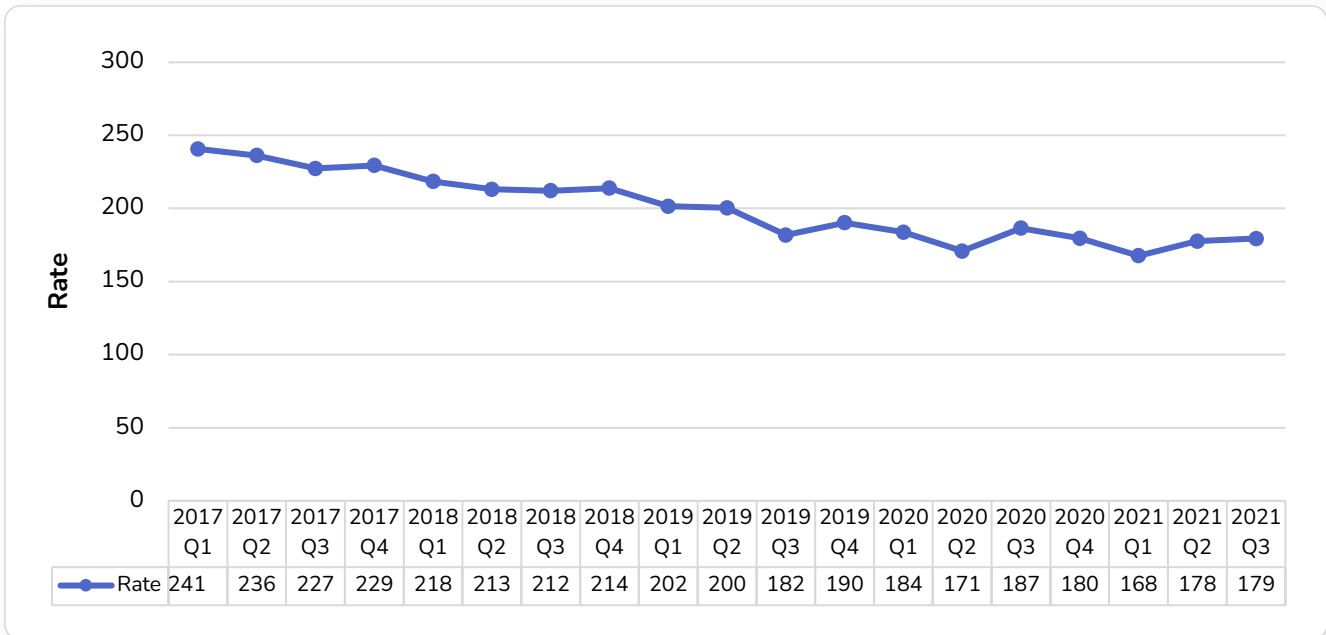
PREVALENCE OF OPIOID CONSUMPTION IN THE GENERAL POPULATION

Prescription Drug Monitoring Program

Every state has a prescription drug monitoring program (PDMP) that collects data on all controlled substances (DEA Schedule II-V) dispensed within their respective states. The INSPECT system, Indiana’s PDMP, has shown a steady decline in both the rate and number of opioid dispensations. Based on the Indiana Department of Health’s most recent estimates, the state dispensed 179.4 opioid prescriptions per 1,000 population during the third quarter of 2021 (see Figure 5.1) (Indiana Department of Health [IDOH], 2021a). This opioid prescription includes opioid analgesics, opioid antidiarrheal/antitussives, and opioid antagonists and treatment addiction medications. For county-level information on annual dispensations, see Appendix 5A.



Figure 5.1 Number and Rate (per 1,000 Population) of Opioids Dispensed in Indiana per Quarter (INSPECT, 2017- 2021)



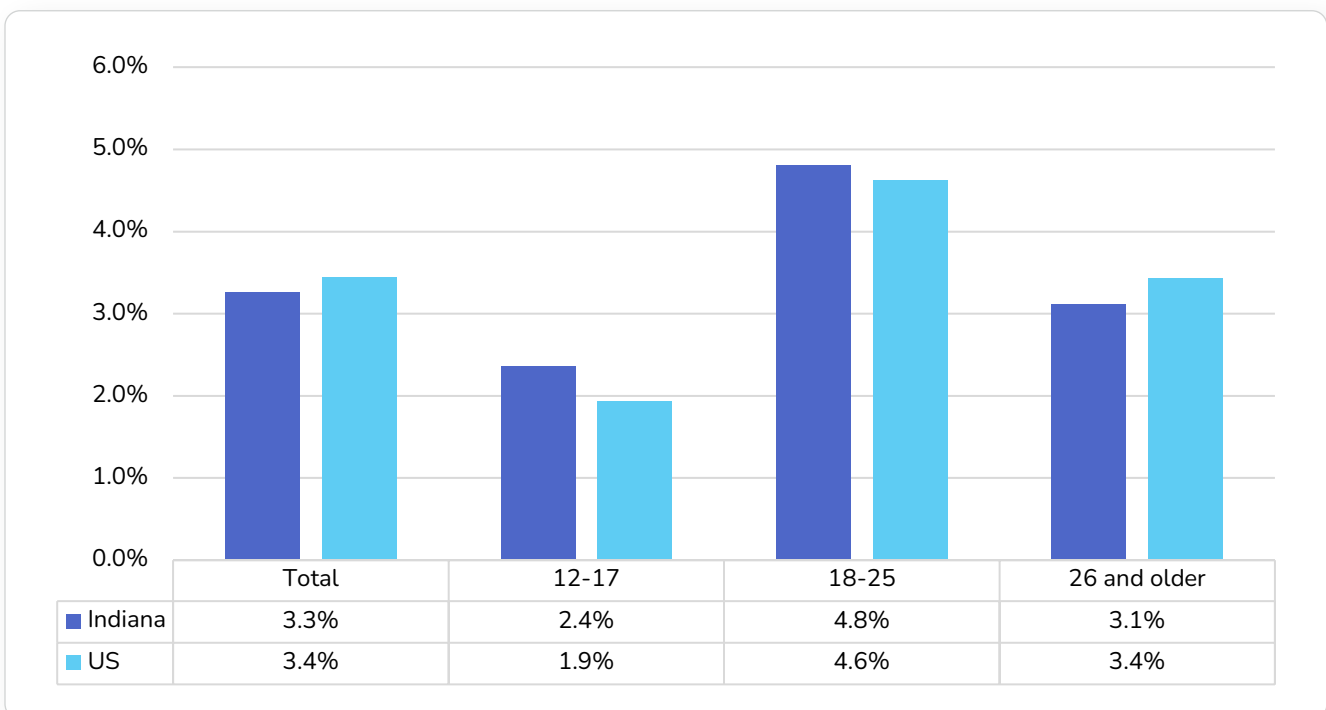
Source: IDOH, 2021a

National Survey on Drug Use and Health

The Substance Abuse and Mental Health Services Administration (SAMHSA)'s National Survey on Drug Use and Health (NSDUH) calculated the 2019-2020 averages for Indiana residents aged 12 and older. They found an estimated 3.3% (95% Confidence Interval [CI]: 2.6-4.0) of

those within this population misused pain relievers in the past year (U.S.: 3.4%; 95% CI: 3.2-3.6). The highest rate of misuse was found in those aged 18 to 25 years, at 4.8% (95% CI: 3.5-6.5). This data was similar to the national rate within that same age group (4.6%; 95% CI: 4.2-5.1) (SAMHSA, 2021). For additional rates by age group, see Figure 5.2.

Figure 5.2 Prevalence of Past-Year Pain Reliever Misuse in Indiana and the United States, by Age Group (National Survey on Drug Use and Health, 2019-2020)

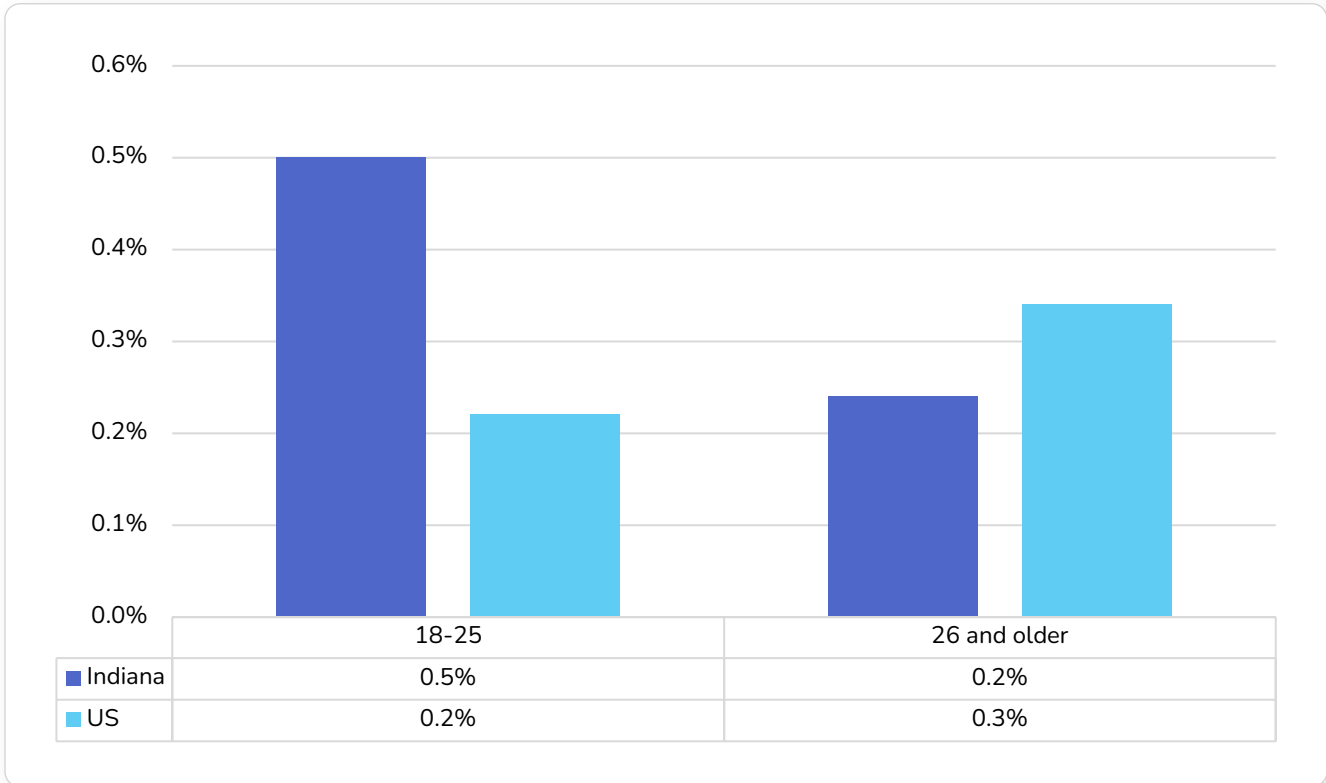


Source: SAMHSA, 2021

Indiana, in particular, has attempted to develop sources of state-specific data and surveillance to try and battle the increase in heroin overdose fatalities (Indiana Department of Health [IDOH], 2021b). Based on data collected from the 2019-2020 NSDUH, heroin use was at the highest

rate among young adults ages 18 to 25 over the past year at 0.5% (95% CI: 0.3-1.0) (SAMHSA, 2021). The NSDUH could not provide the overall rate in 2020 due to the lack of a national estimate for the 12-17 age group. For heroin use rates by age group, see Figure 5.3.

Figure 5.3 Percentage of Indiana and U.S. Population (12 years and older) Reporting Past-Year Heroin Use, by Age Group (National Survey on Drug Use and Health, 2019-2020)



Source: SAMHSA, 2021

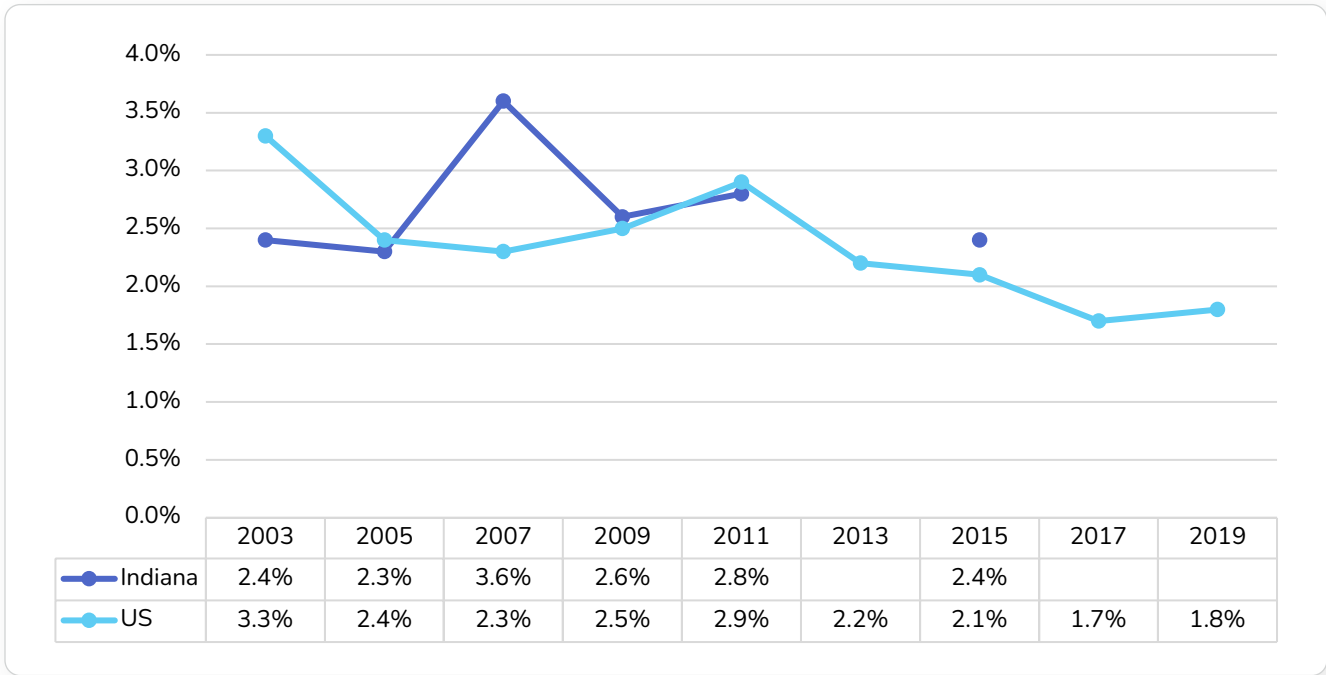
Youth Risk Behavior Surveillance System

According to the 2015 Youth Risk Behavior Surveillance System (YRBSS), Indiana high school students (grades 9-12) reported trying heroin at least once in their life at a rate of 2.4% (95% CI: 1.3-4.4). Compared to the national rate (2.1% with a 95% CI: 1.5-2.8) (See Figure 5.4), Indiana had a similar reported figure. According to the CDC, lifetime heroin usage among American high school students has been relatively stable from 2005 to 2015, with no statistically significant differences between race,

gender, and grade level (Centers for Disease Control and Prevention [CDC], 1991-2019).

From the 2015 YRBSS data, both Indiana and the nation itself have statistically similar reports of high school students injecting illegal drugs into their bodies one or more times in their lives: (2.2%; 95% CI: 1.1-4.3) and (1.8%; 95% CI: 1.3-2.3) respectively (CDC-YRBSS, 1991-2019). Additionally, the 2015 YRBSS that provided this information does not provide specific data on prescription pain reliever misuse.

Figure 5.4 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Who Have Used Heroin at Least Once During their Lifetime (Youth Risk Behavior Surveillance System, 2003–2019)



Source: CDC-YRBSS, 1991-2019

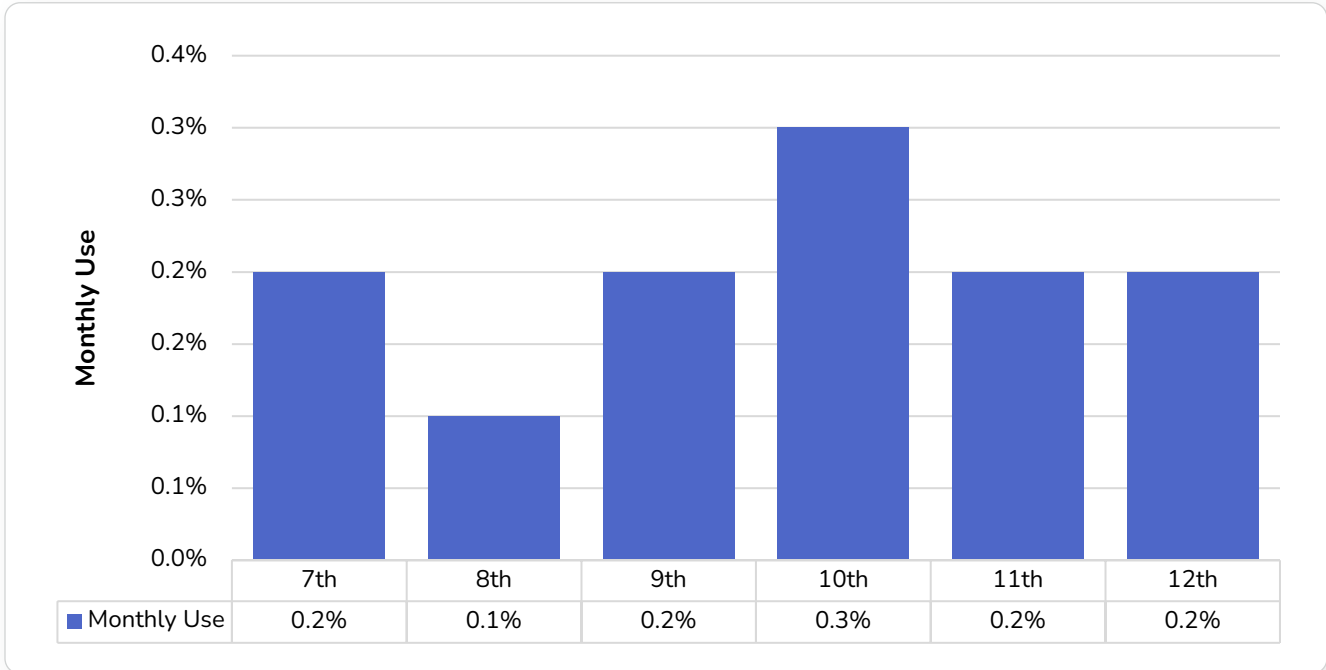
Note: Due to sample size, the estimates for 2013, 2017 and 2019 for Indiana are not available.

Indiana Youth Survey

According to the 2020 Indiana Youth Survey (INYS), past-month heroin-use among children in grades 7th through 12th ranged between 0.1% and 0.3% (see Figure 5.5).

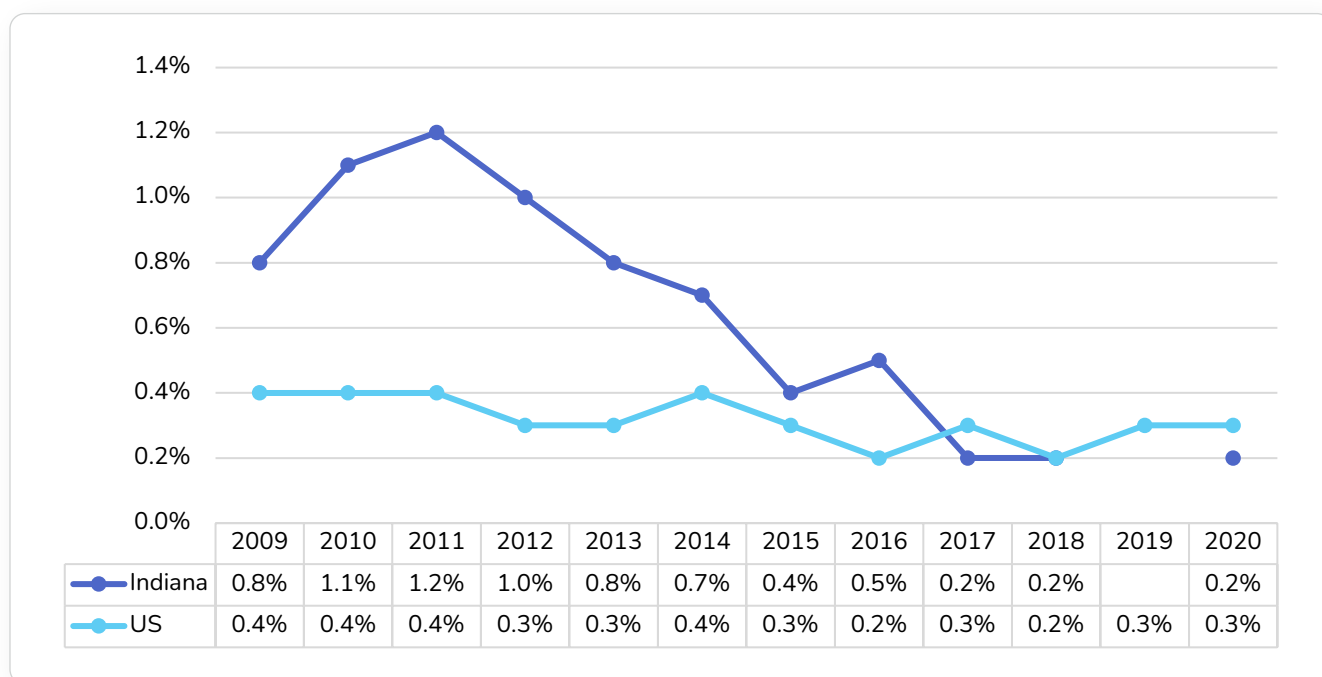
For Indiana 12th graders, heroin use reached its peak in 2011 at 1.2%, but has now dropped to 0.2% (see Figure 5.6) (Gassman et al., 2020). See Appendix 5B for monthly heroin use rates in Indiana by region and grade level.

Figure 5.5 Percentage of Indiana 7th through 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey, 2020)



Source: Gassman et al., 2020

Figure 5.6 Percentage of Indiana and U.S. 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey and Monitoring the Future Survey, 2009–2020)



Source: Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020
 Note: Since 2018 the Indiana Youth Survey (INYS) changed the data collection to biennial.

Indiana College Substance Use Survey

The Indiana College Substance Use Survey (ICSUS) includes questions on the past-month use of opioids and prescription painkillers not prescribed to the student. The result of the 2019 survey showed that 0.7% of Indiana college students misused a prescription of painkillers in

the past month. These rates did not differ significantly by gender or age group. Regarding heroin abuse, the rate among college students was 0.1% in the past month. Similar to prescription painkillers, these rates did not differ significantly among gender or age groups (King & Jun, 2019).

USE OF OPIOIDS IN THE TREATMENT POPULATION

Treatment Episode Data Set

The Treatment Episode Data Set (TEDS) can track opioid misuse through individuals reporting either opioid misuse or heroin use at the time of substance use treatment admission. In 2019, the state of Indiana reported 17.6% prescription opioid misuse among treatment admissions,

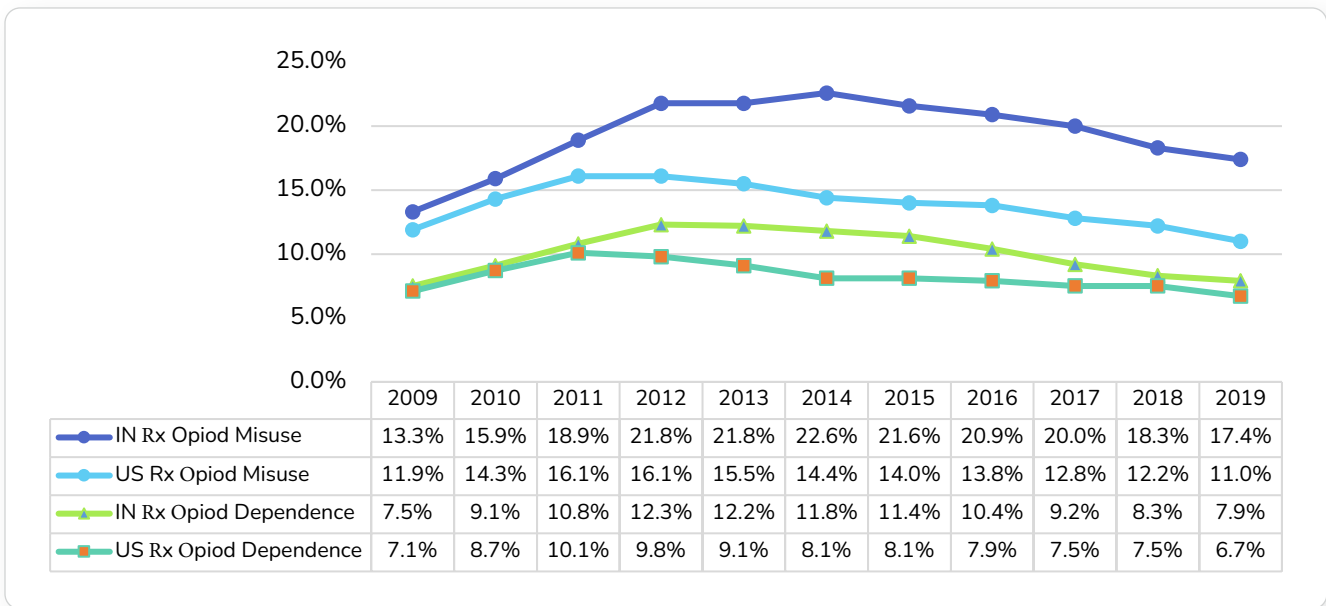
compared to 11% nationally. In 2019, 7.9% of cases reported dependence (SAMHDA, 2021). Women, whites, non-Hispanics, and adults between 25 and 44 were most likely to misuse or depend on substances (See Table 5.1). Between 2008 and 2019, prescription opioid misuse among treatment admissions increased and peaked in 2014. (See Figure 5.7) (County level data in Appendix 5C).

Table 5.1 Percentage of Indiana Treatment Episodes with Prescription Opioid Misuse and Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019)

| | | Misuse | Dependence |
|--------------|--------------|--------------|-------------|
| Gender | Male | 15.4% | 6.4% |
| | Female | 20.7% | 10.2% |
| Race | White | 19.5% | 8.7% |
| | Black | 5.6% | 2.5% |
| | Other | 16.0% | 8.5% |
| Ethnicity | Hispanic | 13.8% | 6.5% |
| | Non-Hispanic | 17.7% | 8.0% |
| Age Group | Under 18 | 3.6% | 0.5% |
| | 18-24 | 11.4% | 4.3% |
| | 25-34 | 20.7% | 8.9% |
| | 35-44 | 20.3% | 9.4% |
| | 45-54 | 14.2% | 7.2% |
| | 55+ | 13.9% | 7.9% |
| Total | | 17.6% | 7.9% |

Source: SAMHDA, 2021

Figure 5.7 Percentage of Indiana and U.S. Treatment Episodes with Prescription Opioid Misuse and Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2009–2019)



Source: SAMHDA, 2021

Over 20% of Indiana treatment admissions were due to heroin in 2019, while dependence was 16.9% (SAMHDA 2021). Compared to the national average of heroin admissions, Indiana was still lower between 2009 and 2019, but there were significant increases in admissions for heroin within the state over this period (See Figure 5.8 for additional trends).

Based on the current data set, differences between gender, race, and age were noted within Indiana’s treatment

population.

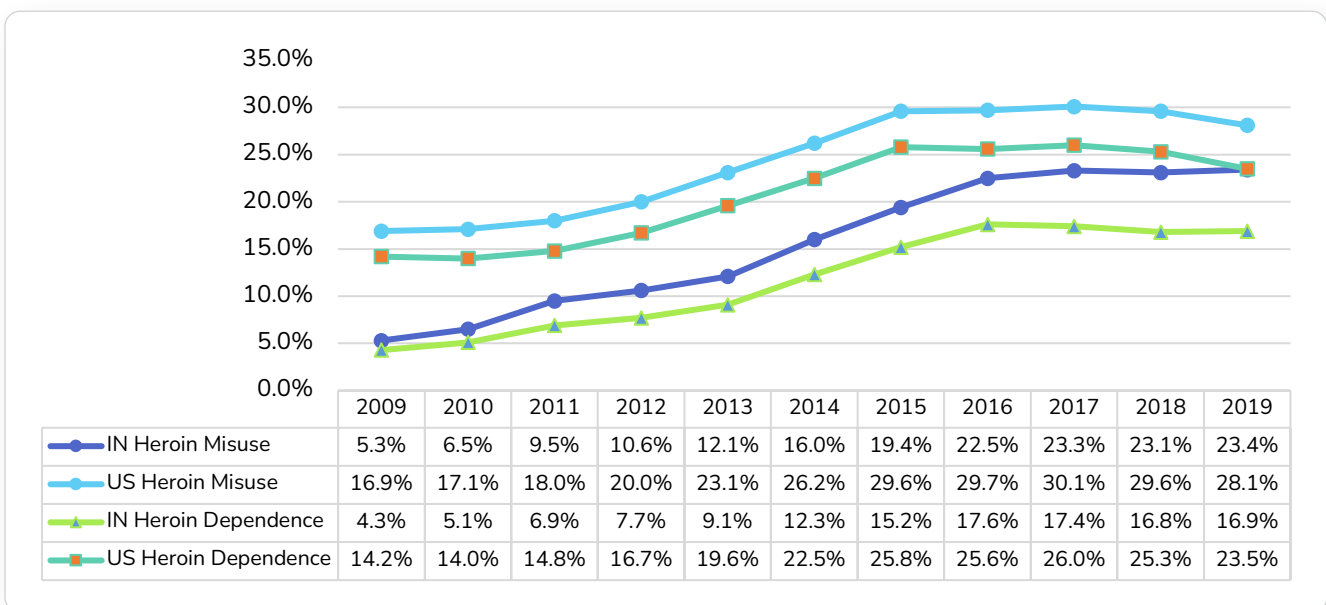
Gender: Heroin use and dependence were reported higher in females than males.

Race: Whites had the highest reported heroin use and dependence compared to the rest of the races.

Age: Between the ages of 25-44, heroin use and dependence were at its highest for Indiana’s treatment population.

See Table 5.2 and county-level data in Appendix 5C

Figure 5.8 Percentage of Indiana and U.S. Treatment Episodes with Heroin Use and Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2009–2019)



Source: SAMHDA, 2021

Table 5.2 Percentage of Indiana Treatment Episodes with Heroin Use and Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019)

| | | Misuse | Dependence |
|-----------|--------------|--------|------------|
| Gender | Male | 21.7% | 15.5% |
| | Female | 25.9% | 18.9% |
| Race | White | 25.4% | 18.3% |
| | Black | 8.8% | 6.8% |
| | Other | 24.3% | 18.1% |
| Ethnicity | Hispanic | 19.0% | 14.8% |
| | Non-Hispanic | 23.4% | 16.9% |
| Age Group | Under 18 | 0.7% | 0.5% |
| | 18-24 | 19.3% | 13.7% |
| | 25-34 | 32.9% | 24.2% |
| | 35-44 | 23.1% | 16.0% |
| | 45-54 | 13.0% | 9.6% |
| | 55+ | 10.6% | 8.2% |
| Total | | 23.4% | 16.9% |

Source: SAMHDA, 2021

Opioid Treatment Programs

Opioid Treatment Programs (OTPs) are certified by SAMHSA, accredited by an independent SAMHSA-approved accrediting body, and licensed by the state they operate within. Their primary purpose is to provide medication-assisted treatment to opioid use disorder patients. Federal law requires their list of services to

include medical, counseling, vocational, educational, and other assessments. In addition, OTPs provide prescription medication for therapy. A total of 15,123 unique patients received treatment in OTPs within Indiana in 2021, while the number of patients in 2020 was 14,739 (Indiana Family and Social Services Administration, 2022).

CONSEQUENCES OF OPIOID USE

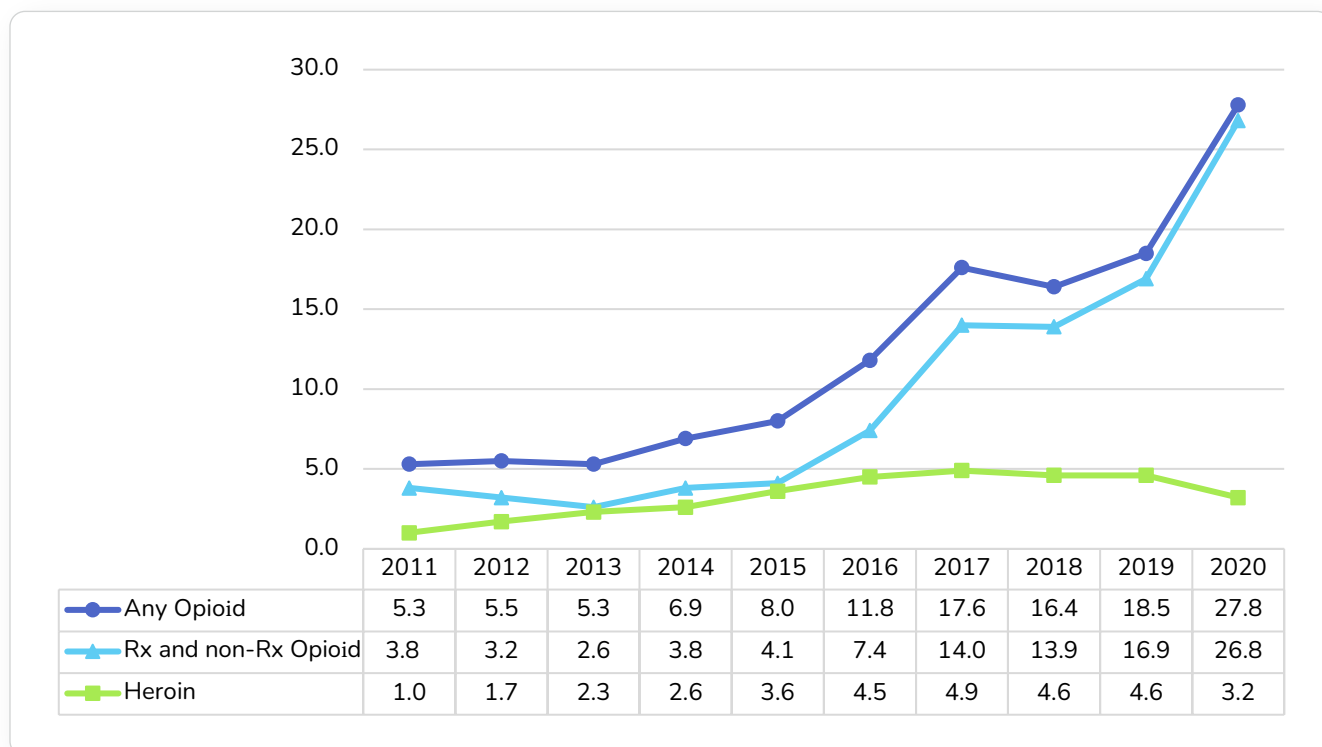
Fatal and Non-Fatal Drug Overdoses

As a drug depressant, high doses of opioids can cause respiratory depression, leading to the user's death. When combined with alcohol and certain other drugs, the chances of death go up even higher (NIDA, 2021d). The CDC reported a ten-year increase in overdose deaths from all drugs in Indiana. In 2005, the age-adjusted rate for drug-induced causes of death (including unintentional/suicide/homicide/undetermined overdoses) was 10.7 (95 CI: 9.99-11.6) deaths per 100,000 population in Indiana, which was slightly lower than the national rate of 11.3 (95% CI:

11.2 – 11.4). By 2020, the age-adjusted death rate due to drug-induced causes jumped to 37.4 (95% CI: 35.9-38.9) per 100,000 population in Indiana, much higher than the national rate of 29.5 (95% CI: 29.3-29.7) (CDC-wonder 2005 to 2020).

A large percentage of these drug overdoses involved opioids. The state of Indiana saw a rise in opioid overdose deaths between 2011 (347 deaths) and 2020 (1,875 deaths) (IDOH, 2021b). See Figure 5.9 for overdose mortality rates involving opioids over time (IDOH, 2021b). Regarding the emergency department (ED) visits, Indiana recorded 7,191 visits due to any opioid in 2020 (IDOH, 2021b).

Figure 5.9 Drug Overdose Deaths Involving Opioids, Rate per 100,000 Population (Indiana, 2011–2020)



Source: IDOH, 2021b

Note: “Rx and non-Rx opioid” could include prescribed or illicitly prescribed/made opioid

HIV/AIDS and Viral Hepatitis

Injectable drug products, especially opioids, have a significant risk factor for transmitting human immunodeficiency virus (HIV) infection and hepatitis B and C, primarily due to needle-sharing among drug users (NIDA, 2021e). In 2020, the annual HIV/AIDS prevalence rate was 185.6 per 100,000 people, resulting in 12,593 individuals living with the disease in Indiana. In 2020 alone, there were 448 new cases of HIV/AIDS. (IDOH, 2022). In nearly 10% of new cases in the U.S., injection drug use (IDU) was responsible (either partially or entirely) for transmitting HIV/AIDS (CDC, 2018). The age-adjusted HIV/AIDS mortality rate (ICD10 code: B20 to B24) in 2020 for Indiana was 1.1 per 100,000 population (95% CI, 0.9-1.4). Compared to the national rate of 1.4 per 100,000 (95% CI: 1.4-1.4), Indiana was just slightly lower (CDC, 1999-2020).

Hepatitis is a viral infection of the liver. In Indiana,

about 2,566 cases of hepatitis A were reported between November 2017 and May 2021 (IDOH, 2022). The B and C strains of the virus are usually transmitted from the blood of an infected person, which is more likely to occur among injection drug users (IDU). Hepatitis C-infected drug users are likely to infect an estimated 20 other people, harming themselves and everyone around them that share their addiction (NIDA, 2021f). In 2020, Indiana had 98 acute cases and 872 chronic cases of hepatitis B. The instances of hepatitis C were far higher, with 264 acute and 4924 chronic cases (IDOH, 2021g). For Indiana in 2020, the combined, age-adjusted mortality rate due to viral hepatitis (ICD10: B15 to B19) was 0.6 per 100,000 population (95% CI: 0.4-0.8). When compared to the national rate of 0.9 per 100,000 population (95% CI: 0.9-1.0), the state’s age-adjusted mortality rate for viral hepatitis was slightly lower (CDC, 1999-2020).

COVID-19 and Consequences

The destructive consequences of opioid abuse are well documented. However, the advent of the COVID-19 pandemic has shown that this vice can become even deadlier. IDU can increase the likelihood of contracting HIV/AIDS and hepatitis B and C. These infectious disease states can leave patients severely ill if they were to contract COVID-19. COVID-19 infection, along with respiratory depression that can occur with opioid abuse, will likely leave a patient hospitalized or on a ventilator (CDC, 2022).

COVID-19's initial impact on opioid use and abuse was uneven in the early days of the U.S. pandemic. A recent study analyzed the prescriptions of opioid and buprenorphine products. By distinguishing between new and current patients receiving these drug products, the study found that the initial months of the pandemic period (March 2020-May 2020) hindered new patients from obtaining their opioid prescriptions. This trend was similar for buprenorphine, which may have contributed to the number of overdose cases, as patients did not receive adequate treatment for OUD. However, these drops returned to normal by May 2020. It was also noted that people currently receiving their

prescription opioid and buprenorphine products did not see an overall change in the amount of drug products received over this initial period (Currie, et al, 2021).

Regarding illicit drug use, an analysis of urine sample tests was conducted during the 4 months leading into and 4 months following the start of the U.S. pandemic. The results demonstrated a statistically significant increase in positive test results for cocaine, methamphetamine, fentanyl, and heroin (Wainwright et al., 2020). Combined with the results from the previous study (Currie et al., 2021), and the record high in overdose deaths (NIDA, 2021b), COVID-19 resulted in a step backward in the U.S. for potential positive change in the opioid epidemic.

Opioid drug abuse, like all substance abuse, does not just affect the person abusing the drug products. Hospitalization and treatment for opioid abuse will cause a decrease in the workforce, as well as a financial burden for the patient's loved ones. Crime rates will increase, and the subsequent loss of life from this addiction will result in emotional turmoil. It is important, now more than ever, to monitor opioid abuse, not just for patients, but for the population around them.

APPENDIX 5A

Annual Number and Rate (per 1,000 Population) of Opioid Dispensations in Indiana, by County of Patient's Residence (INSPECT, 2021)

| County | Rate of Opioid Dispensations per 1,000 |
|-------------|--|
| Adams | 418.2 |
| Allen | 544.8 |
| Bartholomew | 789.2 |
| Benton | 565.5 |
| Blackford | 1131.4 |
| Boone | 568.1 |
| Brown | 875.0 |
| Carroll | 539.5 |
| Cass | 666.0 |
| Clark | 887.7 |
| Clay | 606.4 |
| Clinton | 666.7 |
| Crawford | 1009.8 |
| Daviess | 671.7 |
| Dearborn | 881.8 |
| Decatur | 747.4 |
| DeKalb | 596.8 |
| Delaware | 893.0 |
| Dubois | 620.4 |
| Elkhart | 449.9 |
| Fayette | 1536.6 |
| Floyd | 797.4 |
| Fountain | 747.7 |
| Franklin | 756.9 |
| Fulton | 787.6 |
| Gibson | 710.2 |
| Grant | 1015.0 |
| Greene | 858.8 |
| Hamilton | 408.3 |
| Hancock | 688.4 |
| Harrison | 749.4 |
| Hendricks | 515.9 |
| Henry | 1162.2 |

| County | Rate of Opioid Dispensations per 1,000 |
|------------|--|
| Howard | 1012.2 |
| Huntington | 723.9 |
| Jackson | 740.1 |
| Jasper | 822.0 |
| Jay | 697.9 |
| Jefferson | 1059.0 |
| Jennings | 925.3 |
| Johnson | 670.4 |
| Knox | 1069.8 |
| Kosciusko | 595.8 |
| LaGrange | 298.5 |
| Lake | 580.0 |
| LaPorte | 768.7 |
| Lawrence | 1103.5 |
| Madison | 1007.7 |
| Marion | 562.2 |
| Marshall | 544.6 |
| Martin | 916.7 |
| Miami | 790.9 |
| Monroe | 502.7 |
| Montgomery | 701.4 |
| Morgan | 897.6 |
| Newton | 696.6 |
| Noble | 596.5 |
| Ohio | 990.3 |
| Orange | 867.5 |
| Owen | 899.4 |
| Parke | 581.4 |
| Perry | 653.7 |
| Pike | 1017.9 |
| Porter | 686.4 |
| Posey | 908.0 |
| Pulaski | 852.2 |

| County | Rate of Opioid Dispensations per 1,000 |
|-------------|--|
| Putnam | 674.4 |
| Randolph | 779.3 |
| Ripley | 790.9 |
| Rush | 849.0 |
| Scott | 1042.4 |
| Shelby | 740.5 |
| Spencer | 614.6 |
| St. Joseph | 488.0 |
| Starke | 1037.8 |
| Steuben | 486.2 |
| Sullivan | 637.3 |
| Switzerland | 899.2 |
| Tippecanoe | 404.6 |
| Tipton | 905.8 |
| Union | 637.2 |
| Vanderburgh | 893.4 |
| Vermillion | 691.8 |
| Vigo | 625.5 |
| Wabash | 890.6 |
| Warren | 574.4 |
| Warrick | 733.9 |
| Washington | 886.2 |
| Wayne | 990.5 |
| Wells | 657.4 |
| White | 556.8 |
| Whitley | 644.0 |
| INDIANA | 684.4 |

Source: Indiana PDMP Dashboard (INSPECT, 2021)

Notes: Data for dispense of opioid prescriptions have been combined into three categories. They are (1) opioid analgesics, (2) opioid antidiarrheals/antitussives, and (3) opioid antagonists and treatment addiction medications.

APPENDIX 5B

Percentage of Indiana Students Reporting Monthly Heroin Use, by Region and Grade (Indiana Youth Survey, 2020)

| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 7th Grade | 0.2% | 0.1% | 0.3% | 0.3% | 0.2% | 0.1% | 0.0% | 0.1% | 0.0% | 0.1% | 0.1% |
| 8th Grade | 0.1% | 0.1% | 0.3%* | 0.1% | 0.0% | 0.2% | 0.1% | 0.0% | 0.0% | 0.1% | 0.0% |
| 9th Grade | 0.2% | 0.1% | 0.1% | 0.2% | 0.0% | 0.4% | 0.0% | 0.1% | 0.3% | 0.3% | 0.2% |
| 10th Grade | 0.3% | 0.0% | 0.3% | 0.2% | 0.6% | 0.7% | 0.4% | 0.2% | 0.4% | 0.2% | 0.0% |
| 11th Grade | 0.2% | 0.3% | 0.2% | 0.3% | 0.3% | 0.0% | 0.0% | 0.2% | 0.1% | 0.0% | 0.2% |
| 12th Grade | 0.2% | 0.3% | 0.4% | 0.2% | 0.2% | 0.3% | 0.3% | 0.3% | 0.3% | 0.1% | 0.3% |

Source: Gassman et al., 2020

Notes: * is used to indicate local rate that varies significantly from the state rate ($P < .05$).

Data from INYS at the state and regional levels is provided. Until 2018, there were 8 regions. DMHA changed the number of regions to 10 in 2020. The counties in these regions include:

Region 1: Lake, LaPorte, Porter

Region 2: Cass, Elkhart, Fulton, Howard, Kosciusko, Marshall, Miami, Pulaski, St. Joseph, Starke, Wabash

Region 3: Adams, Allen, DeKalb, Huntington, Lagrange, Noble, Steuben, Wells, Whitley

Region 4: Benton, Boone, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, White

Region 5: Blackford, Delaware, Grant, Hamilton, Hancock, Henry, Jay, Madison, Randolph, Tipton, Wayne

Region 6: Clay, Hendricks, Monroe, Morgan, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo

Region 7: Marion

Region 8: Daviess, Dubois, Gibson, Greene, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, Warrick

Region 9: Bartholomew, Brown, Clark, Crawford, Floyd, Harrison, Jackson, Johnson, Lawrence, Orange, Scott, Washington

Region 10: Dearborn, Decatur, Fayette, Franklin, Jefferson, Jennings, Ohio, Ripley, Rush, Shelby, Switzerland, Union

APPENDIX 5C

Number of Treatment Episodes with Prescription (Rx) Opioid Misuse and Dependence and Heroin Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2021)

| County | Treatment Episodes | Rx Opioid Misuse | | Rx Opioid Dependence | | Heroin Use | | Heroin Dependence | |
|-------------|--------------------|------------------|-------|----------------------|-------|------------|-------|-------------------|-------|
| | Total | Number | % | Number | % | Number | % | Number | % |
| Adams | 34 | 7 | 20.6% | <5 | N/A | 9 | 26.5% | 7 | 20.6% |
| Allen | 805 | 110 | 13.7% | 56 | 7.0% | 127 | 15.8% | 86 | 10.7% |
| Bartholomew | 317 | 48 | 15.1% | 18 | 5.7% | 72 | 22.7% | 44 | 13.9% |
| Benton | 43 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Blackford | 89 | 14 | 15.7% | 8 | 9.0% | 35 | 39.3% | 16 | 18.0% |
| Boone | 333 | 42 | 12.6% | 14 | 4.2% | 65 | 19.5% | 43 | 12.9% |
| Brown | 45 | 5 | 11.1% | <5 | N/A | 14 | 31.1% | 10 | 22.2% |
| Carroll | 49 | <5 | N/A | <5 | N/A | 6 | 12.2% | <5 | N/A |
| Cass | 89 | 8 | 9.0% | <5 | N/A | 22 | 24.7% | 16 | 18.0% |
| Clark | 337 | 64 | 19.0% | 40 | 11.9% | 93 | 27.6% | 73 | 21.7% |
| Clay | 51 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Clinton | 111 | 14 | 12.6% | 5 | 4.5% | 22 | 19.8% | 10 | 9.0% |
| Crawford | 47 | 6 | 12.8% | <5 | N/A | <5 | N/A | <5 | N/A |
| Daviess | 113 | 27 | 23.9% | 10 | 8.8% | 20 | 17.7% | 14 | 12.4% |
| Dearborn | 314 | 86 | 27.4% | 37 | 11.8% | 86 | 27.4% | 54 | 17.2% |
| Decatur | 119 | 15 | 12.6% | <5 | N/A | 24 | 20.2% | 14 | 11.8% |
| DeKalb | 165 | 18 | 10.9% | 9 | 5.5% | 21 | 12.7% | 8 | 4.8% |
| Delaware | 611 | 90 | 14.7% | 55 | 9.0% | 166 | 27.2% | 108 | 17.7% |
| Dubois | 124 | 11 | 8.9% | 7 | 5.6% | 10 | 8.1% | 7 | 5.6% |
| Elkhart | 365 | 53 | 14.5% | 24 | 6.6% | 38 | 10.4% | 18 | 4.9% |
| Fayette | 237 | 64 | 27.0% | 19 | 8.0% | 79 | 33.3% | 52 | 21.9% |
| Floyd | 276 | 44 | 15.9% | 29 | 10.5% | 55 | 19.9% | 45 | 16.3% |
| Fountain | 57 | 5 | 8.8% | <5 | N/A | 5 | 8.8% | <5 | N/A |
| Franklin | 74 | 14 | 18.9% | 8 | 10.8% | 18 | 24.3% | 12 | 16.2% |
| Fulton | 47 | 12 | 25.5% | <5 | N/A | 16 | 34.0% | 11 | 23.4% |
| Gibson | 174 | 24 | 13.8% | 11 | 6.3% | <5 | N/A | <5 | N/A |
| Grant | 338 | 74 | 21.9% | 22 | 6.5% | 140 | 41.4% | 95 | 28.1% |
| Greene | 66 | 13 | 19.7% | 6 | 9.1% | 14 | 21.2% | 7 | 10.6% |
| Hamilton | 640 | 85 | 13.3% | 28 | 4.4% | 168 | 26.3% | 117 | 18.3% |
| Hancock | 213 | 38 | 17.8% | 16 | 7.5% | 44 | 20.7% | 29 | 13.6% |
| Harrison | 52 | 13 | 25.0% | 7 | 13.5% | 13 | 25.0% | 10 | 19.2% |

| | Treatment Episodes | Rx Opioid Misuse | | Rx Opioid Dependence | | Heroin Use | | Heroin Dependence | |
|------------|--------------------|------------------|-------|----------------------|-------|------------|-------|-------------------|-------|
| County | Total | Number | % | Number | % | Number | % | Number | % |
| Hendricks | 508 | 88 | 17.3% | 24 | 4.7% | 161 | 31.7% | 114 | 22.4% |
| Henry | 326 | 112 | 34.4% | 52 | 16.0% | 45 | 13.8% | 25 | 7.7% |
| Howard | 526 | 77 | 14.6% | 29 | 5.5% | 150 | 28.5% | 104 | 19.8% |
| Huntington | 113 | 20 | 17.7% | 10 | 8.8% | 21 | 18.6% | 12 | 10.6% |
| Jackson | 223 | 36 | 16.1% | 11 | 4.9% | 42 | 18.8% | 24 | 10.8% |
| Jasper | 90 | 13 | 14.4% | 6 | 6.7% | 20 | 22.2% | 14 | 15.6% |
| Jay | 143 | 21 | 14.7% | 10 | 7.0% | 50 | 35.0% | 29 | 20.3% |
| Jefferson | 232 | 52 | 22.4% | 16 | 6.9% | 36 | 15.5% | 20 | 8.6% |
| Jennings | 138 | 29 | 21.0% | 12 | 8.7% | 39 | 28.3% | 25 | 18.1% |
| Johnson | 195 | 45 | 23.1% | 18 | 9.2% | 58 | 29.7% | 44 | 22.6% |
| Knox | 166 | 34 | 20.5% | 14 | 8.4% | 18 | 10.8% | 7 | 4.2% |
| Kosciusko | 146 | 25 | 17.1% | 11 | 7.5% | 29 | 19.9% | 19 | 13.0% |
| LaGrange | 76 | 6 | 7.9% | <5 | N/A | 10 | 13.2% | 5 | 6.6% |
| Lake | 1,033 | 67 | 6.5% | 42 | 4.1% | 215 | 20.8% | 171 | 16.6% |
| LaPorte | 433 | 54 | 12.5% | 35 | 8.1% | 128 | 29.6% | 105 | 24.2% |
| Lawrence | 190 | 33 | 17.4% | 15 | 7.9% | 44 | 23.2% | 26 | 13.7% |
| Madison | 1,108 | 309 | 27.9% | 113 | 10.2% | 182 | 16.4% | 102 | 9.2% |
| Marion | 3,521 | 492 | 14.0% | 219 | 6.2% | 973 | 27.6% | 791 | 22.5% |
| Marshall | 69 | 13 | 18.8% | <5 | N/A | 16 | 23.2% | 14 | 20.3% |
| Martin | 17 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Miami | 72 | 12 | 16.7% | 5 | 6.9% | 27 | 37.5% | 21 | 29.2% |
| Monroe | 689 | 117 | 17.0% | 35 | 5.1% | 205 | 29.8% | 125 | 18.1% |
| Montgomery | 456 | 54 | 11.8% | 10 | 2.2% | 172 | 37.7% | 124 | 27.2% |
| Morgan | 345 | 45 | 13.0% | 22 | 6.4% | 79 | 22.9% | 54 | 15.7% |
| Newton | 18 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Noble | 159 | 15 | 9.4% | 7 | 4.4% | 9 | 5.7% | 5 | 3.1% |
| Ohio | 26 | 11 | 42.3% | 6 | 23.1% | 5 | 19.2% | <5 | N/A |
| Orange | 61 | 12 | 19.7% | 5 | 8.2% | <5 | N/A | <5 | N/A |
| Owen | 76 | 10 | 13.2% | 5 | 6.6% | 8 | 10.5% | <5 | N/A |
| Parke | 24 | 5 | 20.8% | <5 | N/A | <5 | N/A | <5 | N/A |
| Perry | 60 | 5 | 8.3% | <5 | N/A | <5 | N/A | <5 | N/A |
| Pike | 40 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Porter | 329 | 56 | 17.0% | 36 | 10.9% | 123 | 37.4% | 95 | 28.9% |
| Posey | 102 | 17 | 16.7% | 9 | 8.8% | 6 | 5.9% | <5 | N/A |

| County | Treatment Episodes | Rx Opioid Misuse | | Rx Opioid Dependence | | Heroin Use | | Heroin Dependence | |
|--------------|--------------------|------------------|-------|----------------------|-------|------------|-------|-------------------|-------|
| | Total | Number | % | Number | % | Number | % | Number | % |
| Pulaski | 39 | 12 | 30.8% | 8 | 20.5% | 9 | 23.1% | 6 | 15.4% |
| Putnam | 229 | 53 | 23.1% | 20 | 8.7% | 37 | 16.2% | 30 | 13.1% |
| Randolph | 156 | 35 | 22.4% | 11 | 7.1% | 57 | 36.5% | 38 | 24.4% |
| Ripley | 127 | 32 | 25.2% | 9 | 7.1% | 33 | 26.0% | 19 | 15.0% |
| Rush | 131 | 21 | 16.0% | 9 | 6.9% | 14 | 10.7% | 10 | 7.6% |
| Saint Joseph | 761 | 67 | 8.8% | 42 | 5.5% | 194 | 25.5% | 145 | 19.1% |
| Scott | 251 | 83 | 33.1% | 58 | 23.1% | 78 | 31.1% | 59 | 23.5% |
| Shelby | 147 | 16 | 10.9% | 9 | 6.1% | 40 | 27.2% | 27 | 18.4% |
| Spencer | 47 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Starke | 159 | 45 | 28.3% | 37 | 23.3% | 69 | 43.4% | 60 | 37.7% |
| Steuben | 114 | 9 | 7.9% | <5 | N/A | <5 | N/A | <5 | N/A |
| Sullivan | 30 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Switzerland | 66 | 27 | 40.9% | 10 | 15.2% | 14 | 21.2% | 9 | 13.6% |
| Tippecanoe | 574 | 100 | 17.4% | 35 | 6.1% | 151 | 26.3% | 107 | 18.6% |
| Tipton | 56 | 11 | 19.6% | 6 | 10.7% | 16 | 28.6% | 9 | 16.1% |
| Union | 25 | <5 | N/A | <5 | N/A | 6 | 24.0% | <5 | N/A |
| Vanderburgh | 1142 | 138 | 12.1% | 49 | 4.3% | 82 | 7.2% | 46 | 4.0% |
| Vermillion | 19 | <5 | N/A | <5 | N/A | <5 | N/A | <5 | N/A |
| Vigo | 233 | 34 | 14.6% | 13 | 5.6% | 25 | 10.7% | 15 | 6.4% |
| Wabash | 83 | 22 | 26.5% | 8 | 9.6% | 28 | 33.7% | 20 | 24.1% |
| Warren | 17 | 6 | 35.3% | <5 | N/A | <5 | N/A | <5 | N/A |
| Warrick | 211 | 25 | 11.8% | 9 | 4.3% | 12 | 5.7% | 5 | 2.4% |
| Washington | 65 | 12 | 18.5% | 6 | 9.2% | 14 | 21.5% | 10 | 15.4% |
| Wayne | 529 | 87 | 16.4% | 49 | 9.3% | 200 | 37.8% | 132 | 25.0% |
| Wells | 92 | 14 | 15.2% | <5 | N/A | 18 | 19.6% | 12 | 13.0% |
| White | 131 | 7 | 5.3% | <5 | N/A | 13 | 9.9% | 10 | 7.6% |
| Whitley | 77 | 16 | 20.8% | 9 | 11.7% | 5 | 6.5% | <5 | N/A |
| Indiana | 23573 | 3788 | 16.1% | 1656 | 7.0% | 5402 | 22.9% | 3790 | 16.1% |

Source: Indiana Family and Social Services Administration, 2022

Notes: Prescription opioid (or Heroin) dependence is defined as those receiving substance abuse treatment who at admission listed prescription opioids (or Heroin) as their primary substance.

The percentages are calculated by taking the count of reported drug use and dependence and dividing by the count of treatment episodes. As a result of confidentiality concerns, data was suppressed if the count of treatment episodes was less than 5.

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Stimulant Use in Indiana: Prevalence and Consequences

INTRODUCTION

Stimulants, much like opioids, are a group of drug substances that include both legal and illegal products. What these two drug class have in common is a physiological mechanism of action that creates a rush of euphoria and pleasure. This sensation comes from a surge of dopamine in the brain, which is a chemical often associated with the reinforcement of rewarding behaviors, movement, and motivation. Other commonly reported side effects include increased wakefulness/alertness, motivation, mental focus, and libido. There are a number of drug products that qualify as stimulants, but the ones known for being abused the most include illicit products like cocaine/crack and methamphetamine, along with legal drug products like prescription stimulants.

Cocaine, derived from the leaves of the coca plant, is a highly addictive stimulant that is often associated with illicit use. While cocaine does have some legal, medicinal use, the majority of its presence is through abuse. The product generally comes in two forms: a fine, white powder called 'cocaine,' and the processed, crystalized form called 'crack.' The powdered form can be inhaled or snorted, while the crack form is heated to inhale the vapors. When consumed, the dopamine increase results in short-lived, intense highs dependent on the form. The powdered form lasts between 15 and 30 minutes, whereas crack only produces 5 to 10 minutes of increased dopamine (NIDA, 2021a).

Methamphetamine (referred to as 'meth,' 'crystal,' or 'ice') is derived from the chemical substance amphetamine. Meth is taken in through a variety of methods, but injection and inhalation are the more popular means of administration. Whereas cocaine has a short, intense 'rush,' meth has an additional high that extends up to 12 hours due to the drug's lengthy half-life. While the body's response to these drug products can be dependent on the person, oral/nasal ingestion can have a longer-lasting, but less intense high compared to smoking/injecting. The latter produces a brief, but stronger rush (NIDA, 2021b).

Prescription stimulants cover several, legal drug

products, including dextroamphetamine (Dexedrine®), methylphenidate (Ritalin®), amphetamine sulfate (Adderall®), and lisdexamfetamine (Vyvanse®). As these are prescription medications, their primary function is to treat conditions such as narcolepsy and attention deficit hyperactivity disorder (ADHD). They are designed to increase alertness, attention, and energy. However, abuse of this drug product is not limited to just achieving a high. There have been reports of people inappropriately using these drugs to improve school/work performance or improve their memory (NIDA, 2021c).

As with all other addictive substances, the advent of the COVID-19 pandemic has made stimulant abuse even more dangerous. One recent study found that those with a recent diagnosis of substance use disorder (SUD) were more likely to be diagnosed with COVID-19, with cocaine use disorder having a 6.5 higher instance of catching the virus. Likewise, lifetime SUD diagnoses were 1.5 times more likely to contract COVID-19, with lifetime cocaine use disorder patients having 1.6 times higher chance (Wang et al., 2020). Perhaps the most dangerous aspect of stimulant abuse is that the chemicals can damage the lungs if they were to be inhaled. Combined with the way that COVID-19 targets affects the respiratory system, stimulant abuse patients can worsen their diagnosis.

PREVALENCE OF STIMULANT CONSUMPTION IN THE GENERAL POPULATION

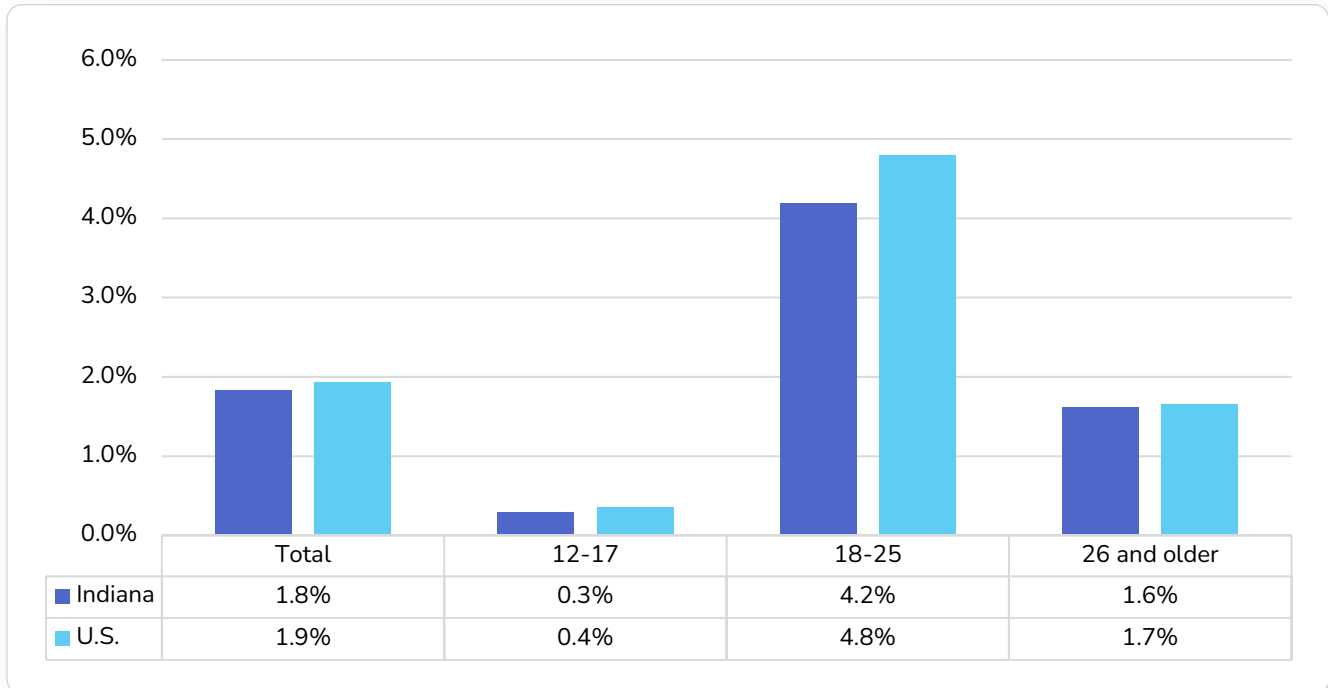
National Survey on Drug Use and Health (NSDUH)

When analyzing children 12 years and older on the use of cocaine in the past year, the state of Indiana had a similar rate of abuse when compared to the nation in 2019. Indiana estimated a rate 1.8% (95% CI: 1.3-2.5) versus the country's rate of 1.9% (95% CI: 1.8-2.1). Both the U.S. and Indiana found that cocaine use was highest among people

aged 18-25 years. Estimated rates were 4.2% (95% CI: 2.9-6.1) in Indiana and 4.8% (95% CI: 4.4-5.3) in the U.S. (See Figure 6.1). The past-year cocaine use rate in both

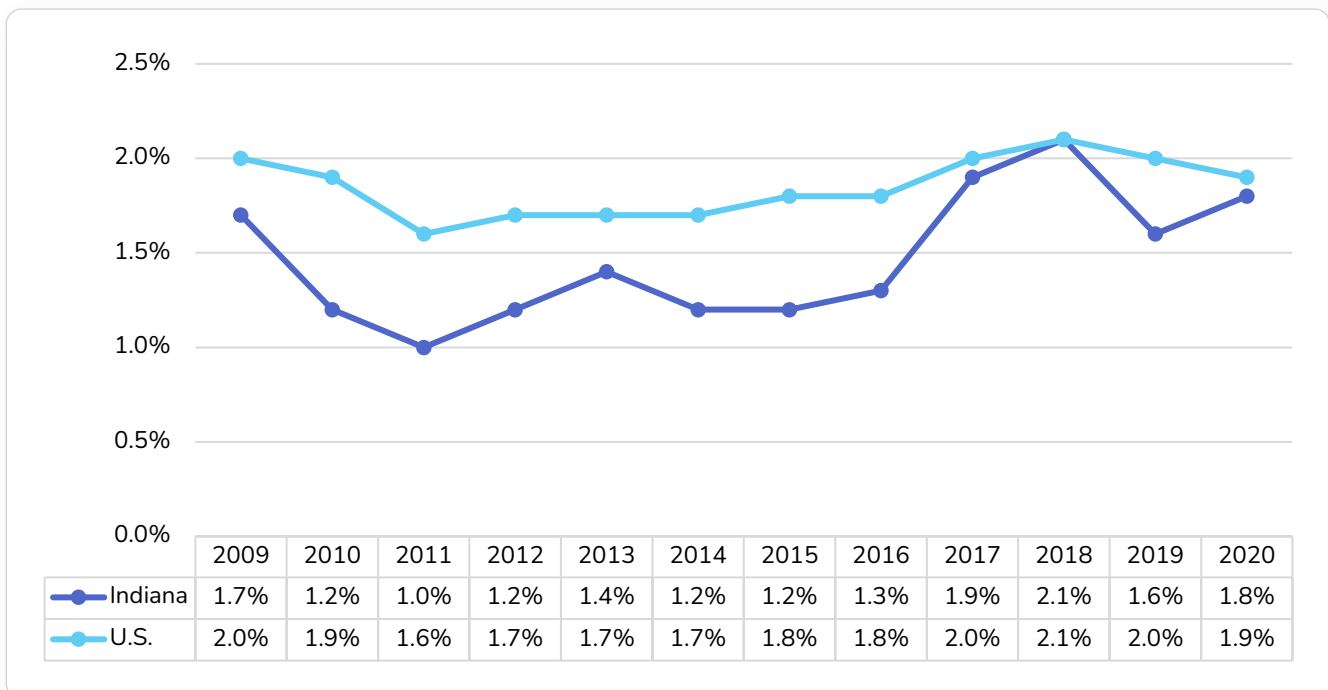
the U.S. and Indiana has remained mostly stable over the past decade (See Figure 6.2) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2021).

Figure 6.1 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cocaine Use in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020)



Source: SAMSHA, 2021

Figure 6.2 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cocaine Use in the Past Year (National Survey on Drug Use and Health, 2009-2020)



Source: SAMSHA, 2021

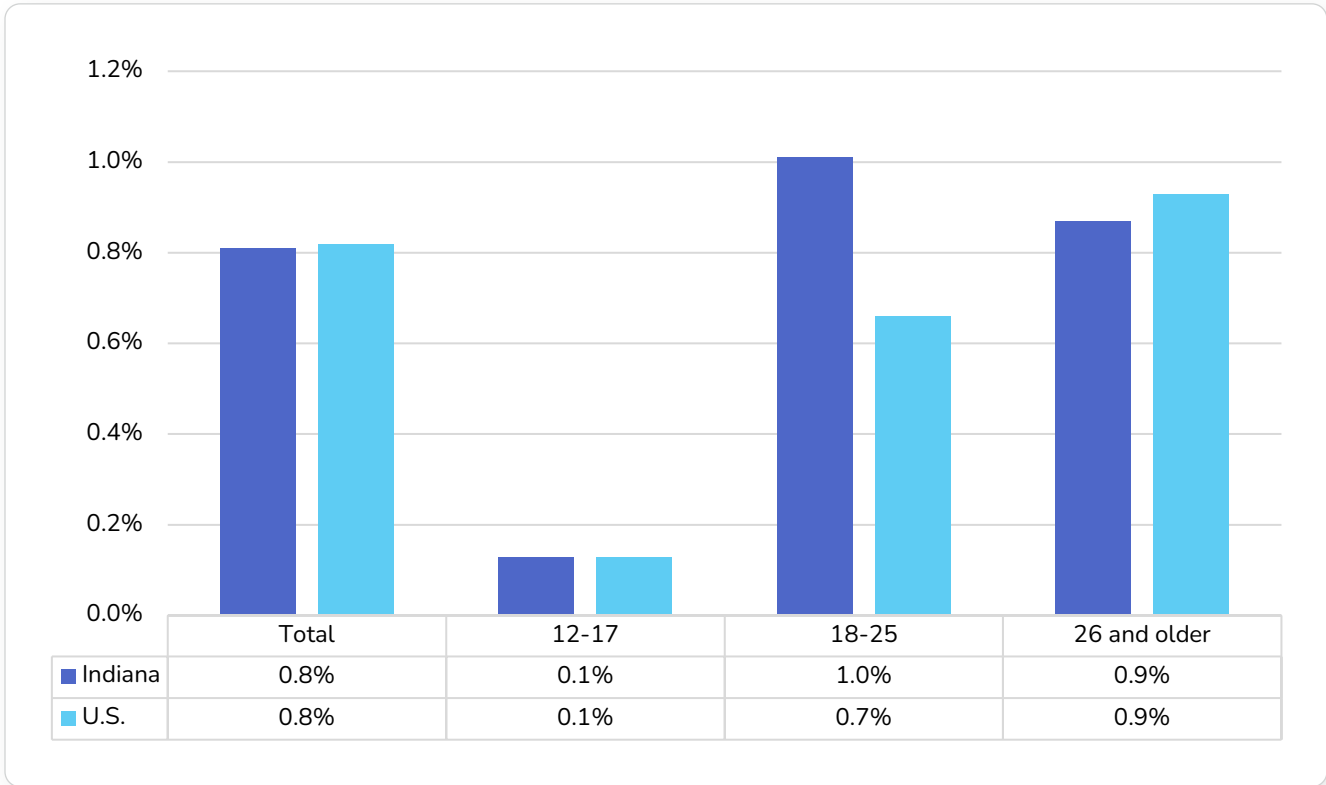
2020 became the fourth year that state-level NSDUH estimates on methamphetamine usage became available for analysis. Indiana-state citizens reported using meth over the past year at a rate of 0.8% (95% CI: 0.6-1.2). Similar rates were found across the whole of the United States at a rate of 0.8% (95% CI: 0.7-0.9). Prevalence rates by age group are found in Figure 6.3 (SAMHSA, 2021).

Youth Risk Behavior Surveillance Survey

The Youth Risk Behavior Surveillance System (YRBSS) surveyed Indiana high school students from grades 9 to 12 regarding cocaine use in their lifetime. The 2015 data (latest year available for Indiana) shows that the rate among

high school students in the state was 4.0% (9.5% CI: 2.9-5.7). When compared to the national rate of 5.2% (95% CI: 4.3-6.2), the results were slightly lower, but still similar. Differences in Indiana prevalence rates by gender, race/ethnicity, or grade level were not found to be statistically significant (See Table 6.1)(CDC, 1991-2019). According to the YRBSS in 2015, meth usage among high school students within Indiana and the U.S. had similar rates [2.9% (95% CI: 1.5-5.4) versus 3.0% (95% CI: 2.4-3.8), respectively]. The usage of cocaine and meth has steadily declined among Indiana high school students since 2003 (see Figure 6.4). The YRBSS did not ask any of the students to describe any prescription stimulant abuse.

Figure 6.3 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Methamphetamine Use in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020)



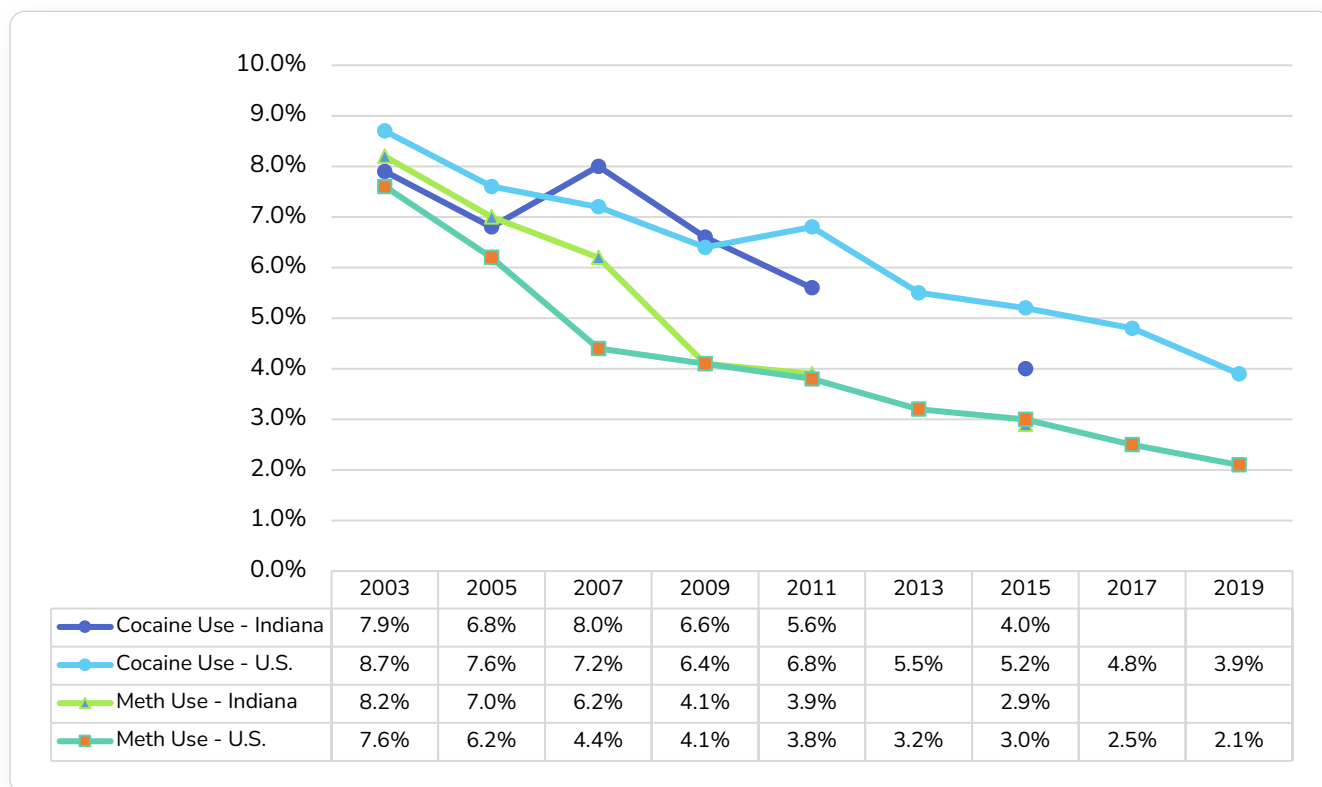
Source: SAMHSA, 2021

Table 6.1 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Lifetime Cocaine or Methamphetamine Use, by Gender, Race/Ethnicity, and Grade (Youth Risk Behavior Surveillance System, 2015)

| | | Cocaine | | Methamphetamine | |
|----------------|----------|---------------------|------------------|---------------------|------------------|
| | | Indiana (95% CI) | U.S. (95% CI) | Indiana (95% CI) | U.S. (95% CI) |
| Gender | Male | 5.2% (3.4–7.9) | 6.3% (5.1–7.9) | 4.1% (2.0–8.2) | 3.6% (2.6–4.9) |
| | Female | 2.7% (1.7–4.2) | 3.8% (3.1–4.6) | 1.4% (0.8–2.6) | 2.3% (1.7–3.0) |
| Race/Ethnicity | White | 3.6% (2.3–5.6) | 4.1% (3.3–5.2) | 2.4% (1.1–5.3) | 2.1% (1.5–2.8) |
| | Black | 3.7% (1.2–10.7) | 3.8% (2.5–6.0) | 3.7% (1.2–10.7) | 2.8% (1.5–5.1) |
| | Hispanic | 7.8% (4.2–14.1) | 8.0% (6.6–9.7) | 3.2% (1.4–7.0) | 4.4% (3.3–5.9) |
| Grade | 9 | 3.5% (1.6–7.2) | 3.4% (2.6–4.5) | 3.5% (1.6–7.8) | 2.0% (1.5–2.7) |
| | 10 | 4.7% (3.4–6.5) | 5.1% (3.8–6.8) | 2.3% (1.4–3.8) | 3.3% (2.3–4.9) |
| | 11 | 4.7% (2.6–8.6) | 5.0% (3.9–6.5) | 3.7% (1.5–8.9) | 2.8% (1.9–4.0) |
| | 12 | 3.4% (1.8–6.3) | 7.2% (5.6–9.1) | 1.6% (0.4–6.6) | 3.8% (2.7–5.3) |
| Total | | 4.0% (2.9–5.7) | 5.2% (4.3–6.2) | 2.9% (1.5–5.4) | 3.0% (2.4–3.8) |

Source: CDC, 1991-2019

Figure 6.4 Percentage of Indiana and U.S. High School Students (9th-12th Grade) Reporting Lifetime Methamphetamine Use (Youth Risk Behavior Surveillance System, 2003-2019)



Source: CDC, 1991-2019

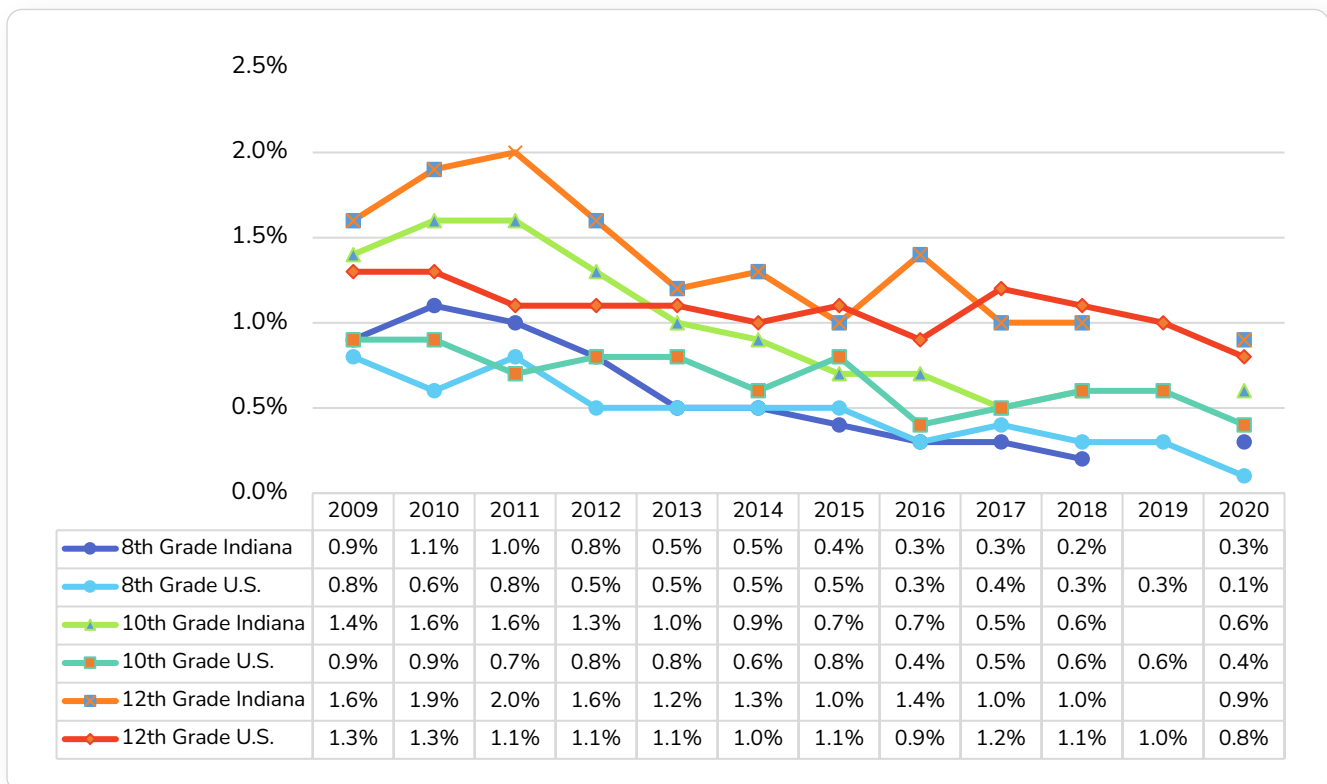
Note: Due to low response rates, estimates for 2013, 2017, and 2019 are not available for Indiana.

Indiana Youth Survey and Monitoring the Future Survey

The Indiana Youth Survey (INYS) and Monitoring the Future Survey (MTF) both provide estimates of cocaine and meth use among 8th, 10th, and 12th graders. The INYS focuses on Indiana state rates, whereas the MTF handles national rates. Neither of them report current inappropriate use of prescription stimulants. Based on the 2020 INYS survey results, only a few share of Indiana's youth reported any

current use of cocaine or meth. The prevalence of both substances among youth in Indiana has been declining over the past decade, which is consistent with trends over the United States (see Figures 6.5 and 6.6)(Gassman et al., 2020; Inter-university Consortium for Political and Social Research [ICPSR], 2020). The latest available 2020 data on cocaine/crack and meth use among students (grades 7-12) by Indiana region can be found in Appendix 6A.

Figure 6.5 Percentage of 8th, 10th, and 12th Grade Students Reporting Current Cocaine/Crack Use (Indiana Youth Survey and Monitoring the Future Survey, 2009-2020)



Source: Gassman et al., 2020; ICPSR, 2020

Note: The data for year 2019 is not available because the Indiana Youth Survey (INYS) changed the data collection to biennial after 2018.

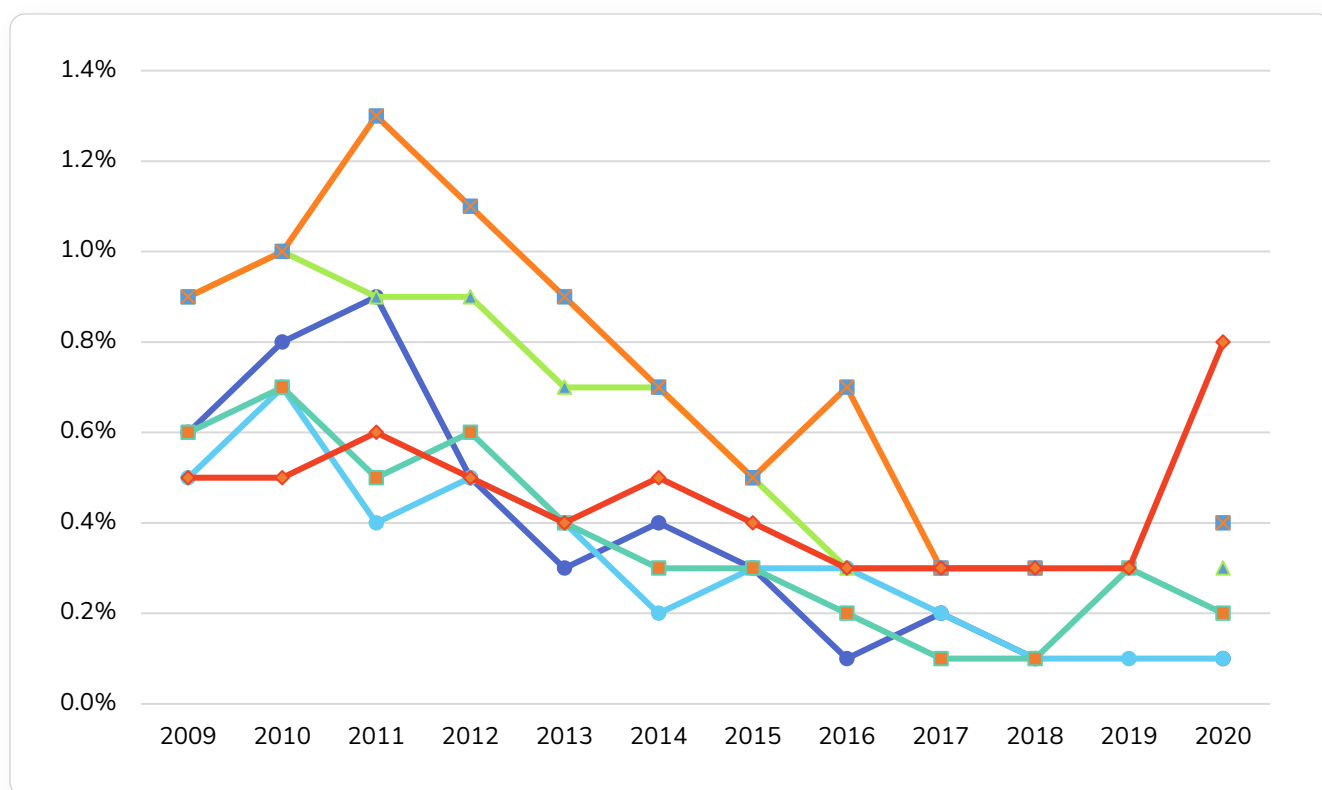
The Indiana College Substance Use Survey

The Indiana College Substance Use Survey (ICSUS) estimates alcohol, tobacco, and other such drug use within the population of Indiana college students. The 2021 survey on 23 participating colleges and universities found the following:

- 1.1% of Indiana college student had reportedly used cocaine within the past month.
- 0.2% reported the use of methamphetamines.
- 2.6% reported the use prescription stimulants that weren't prescribed for them.

The highest percentage of students started abusing cocaine after beginning college (67.1%). This same pattern was seen with prescription stimulants as well (57.9%). With regards to meth use, the percentage was reported as 46%. Prescription stimulants saw higher use among those aged 21 to 25 years when compared to students under 21 years old. Major gender disparities among college students were found in cocaine use (males: 1.4%, females: 0.8%) and prescription stimulant use (males: 3.5%, females: 2.0%) (King & Jun, 2019).

Figure 6.6 Percentage of 8th, 10th, and 12th Grade Students Reporting Current Meth Use (Indiana Youth Survey and Monitoring the Future Survey, 2009-2020)



Source: Gassman et al., 2020; ICPSR, 2020

Note: The data for year 2019 is not available because the Indiana Youth Survey (INYS) changed the data collection to biennial after 2018.

USE OF STIMULANTS IN THE TREATMENT POPULATION

Treatment Episode Data Set

Methamphetamine was the most widely used stimulant among Indiana’s treatment population, according to the Treatment Episode Data Set. In 2019, 39.0% of Indiana treatment admissions had reported methamphetamine use. This percentage was noticeably higher when compared to the United States (18.3%). Meth use was also seen more among certain demographics. Most notably, this was seen in women, white people, and adults between the ages of 18 to 44 (See Table 6.2). Meth use among the Indiana treatment population has tripled since 2008 (see Figure 6.7). The second most frequently used stimulant among the state’s treatment population was cocaine at 12.0%, based on treatment admissions in 2019. By comparison, the U.S. statistic was higher at 19.6%. The key demographics for cocaine use were different compared

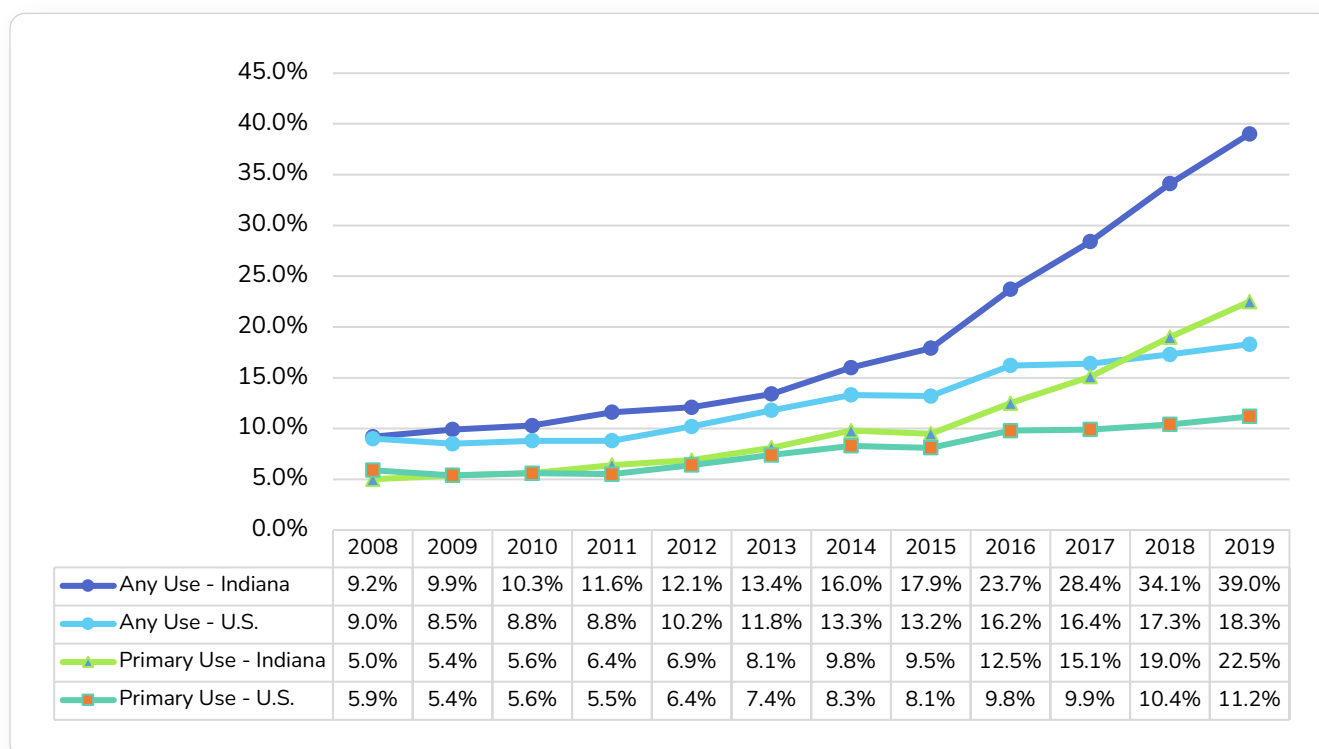
to meth. Cocaine use was seen more among black people and those aged 45 to 54 years (see Table 6.2). In contrast to meth use, cocaine use has dropped by over 40% since 2008 regarding treatment patients (see Figure 6.8). Abuse of prescription stimulants was lower by comparison, as only 1.3% of Indiana treatment admissions reported misuse of them in 2019. This percentage was lower than that reported on a national level (2.0%). Misuse of these prescription stimulants within the state’s treatment population has changed little over the past 11 years. The only noticeable change was a spike from 2011-2012, but otherwise the data has remained consistent (See Figure 6.9). Treatment patients under the age of 45 were more likely to report misuse (see Table 6.2)(Substance Abuse and Mental Health Data Archive [SAMHDA], 2021). See Appendix B for the distribution of treatment episodes by county for cocaine, meth, and prescription stimulant use and dependence.

Table 6.2 Stimulant Misuse and Dependence (Primary Use) Reported at Substance Use Treatment Admission in Indiana, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019)

| | | Methamphetamine | | Cocaine | | Prescription Stimulants | |
|-----------|--------------|-----------------|------------|---------|------------|-------------------------|------------|
| | | Any Use | Dependence | Any Use | Dependence | Any Use | Dependence |
| Gender | Male | 34.9% | 20.0% | 11.8% | 3.9% | 1.2% | 0.4% |
| | Female | 44.7% | 25.9% | 12.2% | 4.4% | 1.4% | 0.3% |
| Race | White | 44.5% | 25.7% | 9.4% | 2.5% | 1.4% | 0.4% |
| | Black | 7.5% | 4.0% | 29.2% | 14.7% | 0.7% | 0.2% |
| | Other | 27.0% | 14.9% | 13.2% | 4.4% | 1.5% | 0.2% |
| Ethnicity | Hispanic | 20.6% | 11.3% | 14.3% | 4.3% | 1.4% | 0.2% |
| | Non-Hispanic | 39.8% | 23.0% | 11.8% | 4.1% | 1.3% | 0.4% |
| Age | Under 18 | 9.7% | 4.9% | 2.0% | 20.0% | 2.9% | 0.7% |
| | 18 to 24 | 35.4% | 20.7% | 8.2% | 1.9% | 1.1% | 0.3% |
| | 25 to 34 | 45.5% | 24.8% | 9.6% | 2.4% | 1.4% | 0.4% |
| | 35 to 44 | 44.2% | 26.3% | 12.1% | 3.9% | 1.5% | 0.4% |
| | 45 to 54 | 31.8% | 19.9% | 19.4% | 8.8% | 0.9% | 0.4% |
| | 55 or Older | 17.1% | 10.7% | 18.4% | 9.2% | 0.6% | 0.2% |
| Total | | 39.0% | 22.5% | 12.0% | 4.1% | 1.3% | 0.4% |

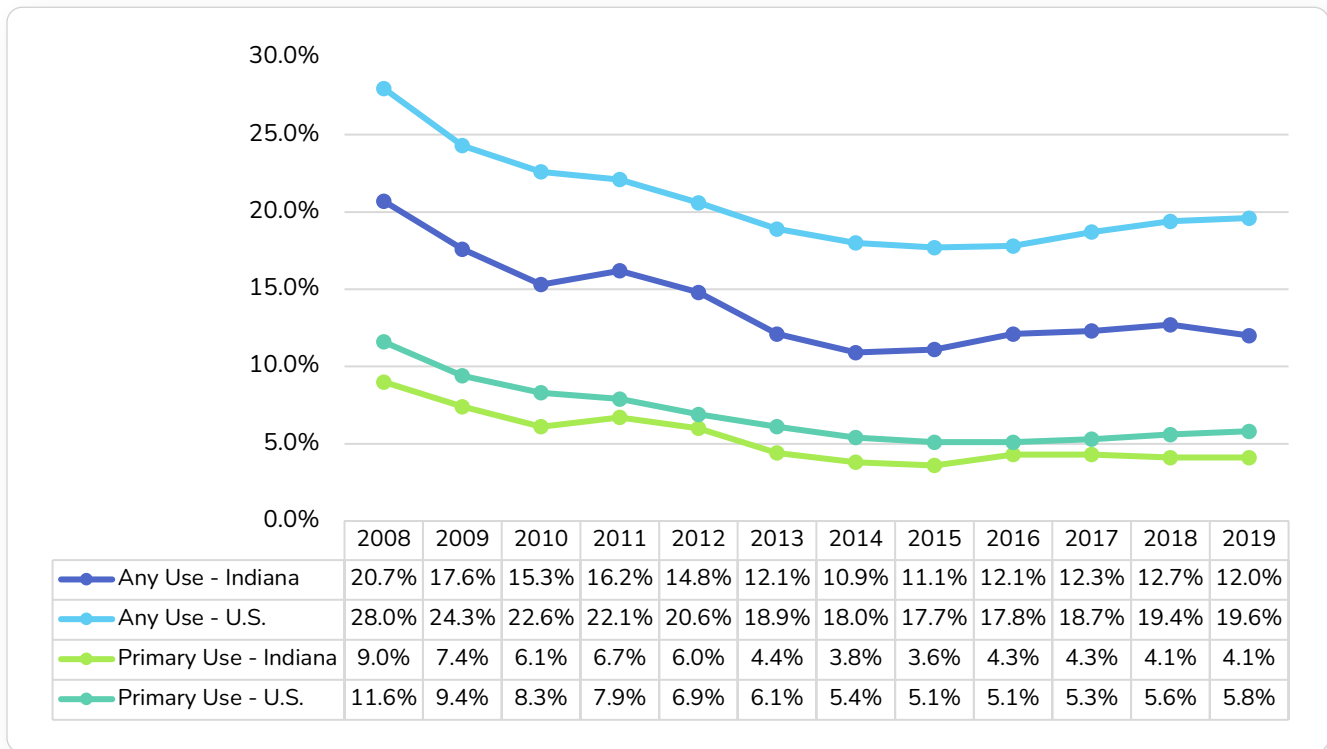
Source: SAMHSA, 2021

Figure 6.7 Percentage of Treatment Episodes with Reported Meth Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019)



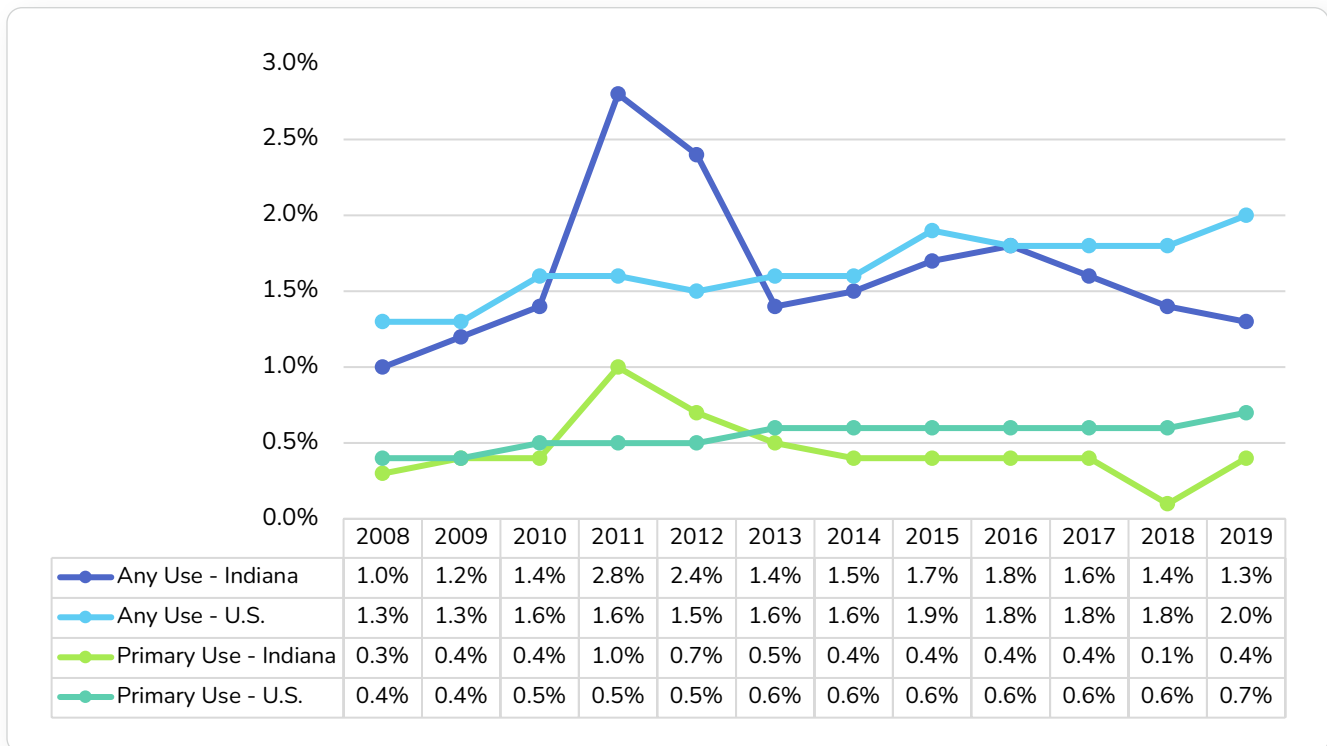
Source: SAMHDA, 2021

Figure 6.8 Percentage of Treatment Episodes with Reported Cocaine Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019)



Source: SAMHDA, 2021

Figure 6.9 Percentage of Treatment Episodes with Reported Prescription Stimulant Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019)



Source: SAMHDA, 2021

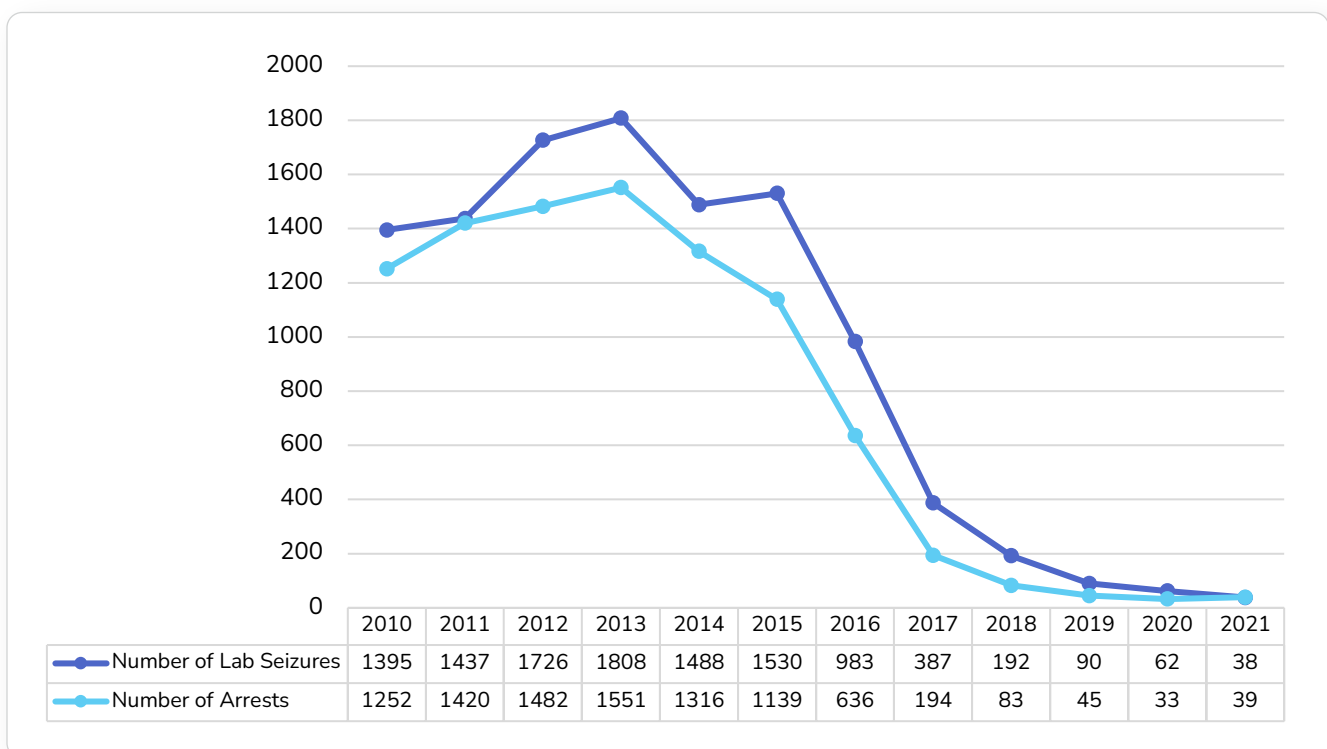
LEGAL CONSEQUENCES

Indiana State Police Meth Lab Seizures

While the vast majority of meth in the U.S. is made at 'superlabs' in Mexico, smaller, clandestine labs are sometimes formed to create the illicit material. These smaller labs gather the ingredients (pseudoephedrine, lithium batteries, fertilizer, etc) to create meth, or the drug can be created with one-pot/'shake and bake' methods that combine all of the substances into one container to shake together. As these labs are not sterile or monitored by any regulatory body, there is a significant risk to people within the labs or around them. Toxic fumes, chemical

contamination, fires/explosions, and other such dangers are commonplace in this form of meth production. Not only that, but the bottles used for the 'shake and bake' method would be cast aside to become a potential harm to the environment. Indiana State Police (ISP) made 39 meth lab related arrests along with seizing 33 clandestine labs in 2021. The one-pot method was used on majority of these labs, with 82% (n=31) reported to have used this method. The state has seen a noticeable decline in lab seizures after the peak in 2013 (1808 lab seizures)(see Figure 6.10) (ISP, 2021).

Figure 6.10 Number of Clandestine Methamphetamine Labs Seized and Number of Arrests Made at Methamphetamine Labs by the Indiana Law Enforcement Agencies (Indiana Meth Lab Statistics, 2010-2021)



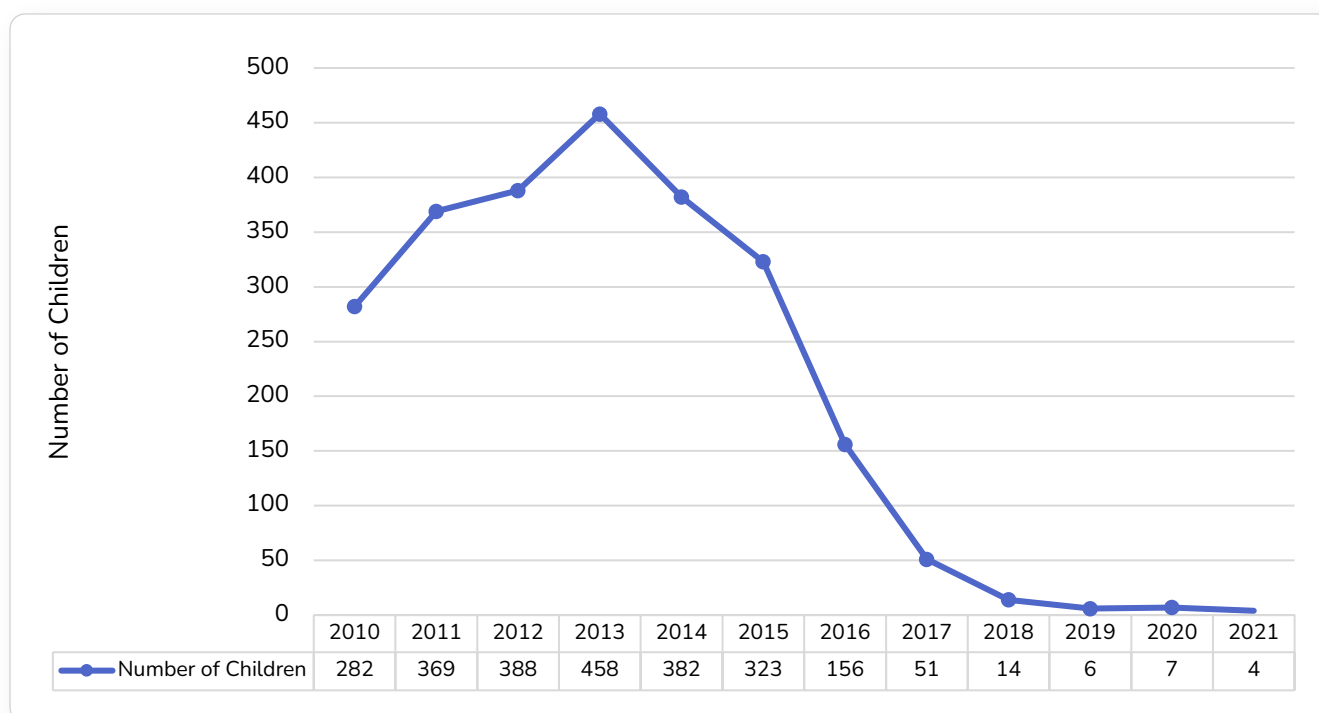
Source: ISP, 2021

Children Taken from Methamphetamine Lab Homes

The social consequences that come with substance abuse is prevalent. This is especially so when examining the impact of meth lab homes on the children and families related to them. Interpersonal conflicts, violence, financial issues, and poor parenting are just a small number of possible,

negative consequences. The family unit is also disrupted by the incarceration of the parents and the placement of children in protective custody. Much like with lab seizures, 2013 was the peak of ISP removing children from meth lab homes (458 children). The number has since dropped to 4 in 2021 (See Figure 6.11)(ISP, 2021).

Figure 6.11 Number of Indiana Children Taken by the Indiana State Police from Methamphetamine Lab Homes (Indiana Meth Lab Statistics, 2010-2021)



Source: ISP, 2021

HEALTH CONSEQUENCES

Stimulant Abuse Health Issues

Meth abuse can create short-term highs, but the long-term consequences can leave a negative impact for many years to come. Meth users demonstrate severe weight loss, dental problems, anxiety, memory loss, paranoia, hallucinations, and violent behavior (NIDA, 2021c). These effects can create destructive behavior that affects not only themselves, but the people around them. With cocaine, the long-term problems depend on the means of ingestion. Snorting creates loss of smell, nosebleeds, and a plethora of other nasal issues. Smoking leads to asthma, respiratory distress, and an increased risk of lung infections (NIDA, 2021a). Misuse of prescription stimulants, much like meth, can create instances of psychosis, anger, and paranoia (NIDA, 2021b). All of these stimulants are highly addictive, making withdrawal difficult. This is made especially worse as those recovering experience depression, fatigue, and slowed thinking.

COVID-19 and Further Consequences

COVID-19 impacts those with substance use disorders at a statistically higher rate than those without it. Cocaine users, both lifetime and new users, have markedly higher risks. Meth abusers in particular alter the functionality of

their immune system, as well as the health of their lungs. The innate and adaptive immune systems can be inhibited, making the person more susceptible to infections. This is further compounded by the accumulation of meth in the lungs, as well as the inflammation that can arise from inhalation (Hossain HK et al., 2020). The overall weakness of the lungs will make COVID-19 more detrimental to a person's health, and it can lead to hospitalizations, ventilators, and possibly death.

While all illegal drug use has a criminal element, stimulant abuse has noted problems with meth labs that lead to higher incidences of incarcerations for its users. Given that prisons and detention centers place numerous people in tight spaces, the chances of catching COVID-19 can be higher (CDC, 2021). With the COVID-19 pandemic demonstrating increased usage of drugs like cocaine and meth (Wainwright, J. et al., 2020), these prison populations could potentially increase COVID-19 infection numbers. Between the legal and social calamities that come with imprisonment, the addition of worsening health paints a picture of drug abuse with far-reaching consequences not perceived by those that seek out the short-term highs with stimulant drugs.

APPENDIX 6A

Percentage of Indiana Students Reporting Monthly Cocaine and Methamphetamine Use, by Region and Grade
(Indiana Youth Survey, 2018)

| Cocaine | | | | | | | | | | | |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
| 7th Grade | 0.4% | 0.1% | 0.7*% | 0.7*% | 0.1% | 0.4% | 0.0% | 0.5% | 0.1% | 0.4% | 0.1% |
| 8th Grade | 0.3% | 0.3% | 0.5% | 0.5% | 0.3% | 0.0% | 0.1% | 0.1% | 0.2% | 0.3% | 0.1% |
| 9th Grade | 0.4% | 0.3% | 0.3% | 0.6% | 0.3% | 0.7% | 0.3% | 0.7% | 0.3% | 0.4% | 0.2% |
| 10th Grade | 0.6% | 0.6% | 0.6% | 0.6% | 0.5% | 1.5*% | 0.0% | 0.6% | 0.4% | 0.7% | 0.6% |
| 11th Grade | 0.5% | 0.4% | 0.6% | 0.9% | 0.8% | 0.6% | 0.2% | 1.0% | 0.4% | 0.3% | 0.7% |
| 12th Grade | 0.9% | 0.8% | 1.5% | 0.6% | 1.7% | 0.3% | 0.3% | 1.3% | 0.9% | 0.4% | 1.6% |

| Methamphetamine | | | | | | | | | | | |
|-----------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | Indiana | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Region 8 | Region 9 | Region 10 |
| 7th Grade | 0.2% | 0.0% | 0.3% | 0.5*% | 0.2% | 0.0% | 0.0% | 0.1% | 0.1% | 0.2% | 0.0% |
| 8th Grade | 0.1% | 0.0% | 0.3% | 0.3% | 0.2% | 0.2% | 0.0% | 0.1% | 0.1% | 0.1% | 0.0% |
| 9th Grade | 0.3% | 0.2% | 0.3% | 0.6% | 0.3% | 0.1% | 0.0% | 0.4% | 0.2% | 0.3% | 0.3% |
| 10th Grade | 0.3% | 0.2% | 0.5% | 0.2% | 0.1% | 0.7% | 0.2% | 0.2% | 0.3% | 0.2% | 0.3% |
| 11th Grade | 0.2% | 0.1% | 0.2% | 0.3% | 0.7% | 0.0% | 0.2% | 0.0% | 0.3% | 0.3% | 0.5% |
| 12th Grade | 0.4% | 0.8% | 0.4% | 0.5% | 0.2% | 0.0% | 0.0% | 0.3% | 0.7% | 0.3% | 0.0% |

Source: Gassman et al., 2020

Notes: * is used to indicate local rate that varies significantly from the state rate ($P < .05$).

Data from INYS at the state and regional levels is provided. Until 2018, there were 8 regions. DMHA changed the number of regions to 10 in 2020. The counties in each region include:

Region 1: Lake, LaPorte, Porter

Region 2: Cass, Elkhart, Fulton, Howard, Kosciusko, Marshall, Miami, Pulaski, St. Joseph, Starke, Wabash

Region 3: Adams, Allen, DeKalb, Huntington, Lagrange, Noble, Steuben, Wells, Whitley

Region 4: Benton, Boone, Carroll, Clinton, Fountain, Jasper, Montgomery, Newton, Tippecanoe, Warren, White

Region 5: Blackford, Delaware, Grant, Hamilton, Hancock, Henry, Jay, Madison, Randolph, Tipton, Wayne

Region 6: Clay, Hendricks, Monroe, Morgan, Owen, Parke, Putnam, Sullivan, Vermillion, Vigo

Region 7: Marion

Region 8: Daviess, Dubois, Gibson, Greene, Knox, Martin, Perry, Pike, Posey, Spencer, Vanderburgh, Warrick

Region 9: Bartholomew, Brown, Clark, Crawford, Floyd, Harrison, Jackson, Johnson, Lawrence, Orange, Scott, Washington

Region 10: Dearborn, Decatur, Fayette, Franklin, Jefferson, Jennings, Ohio, Ripley, Rush, Shelby, Switzerland, Union

APPENDIX 6B

Number of Treatment Episodes with Cocaine, Meth, and Prescription Stimulant Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2021)

| County | Treatment Episodes | Cocaine Use | | Cocaine Dependence | | Meth Use | | Meth Dependence | | Rx Stimulant Use | | Rx Stimulant Dependence | |
|-------------|--------------------|-------------|-------|--------------------|------|----------|-------|-----------------|-------|------------------|------|-------------------------|-----|
| | | Number | % | Number | % | Number | % | Number | % | Number | % | Number | % |
| Adams | 34 | <5 | N/A | <5 | N/A | 15 | 44.1% | 8 | 23.5% | <5 | N/A | <5 | N/A |
| Allen | 805 | 172 | 21.4% | 70 | 8.7% | 221 | 27.5% | 120 | 14.9% | 10 | 1.2% | <5 | N/A |
| Bartholomew | 317 | 11 | 3.5% | <5 | N/A | 168 | 53.0% | 110 | 34.7% | <5 | N/A | <5 | N/A |
| Benton | 43 | <5 | N/A | <5 | N/A | 14 | 32.6% | 13 | 30.2% | <5 | N/A | <5 | N/A |
| Blackford | 89 | 5 | 5.6% | <5 | N/A | 63 | 70.8% | 37 | 41.6% | <5 | N/A | <5 | N/A |
| Boone | 333 | 27 | 8.1% | <5 | N/A | 116 | 34.8% | 60 | 18.0% | 16 | N/A | <5 | N/A |
| Brown | 45 | <5 | N/A | <5 | N/A | 22 | 48.9% | 12 | 26.7% | <5 | N/A | <5 | N/A |
| Carroll | 49 | <5 | N/A | <5 | N/A | 28 | 57.1% | 19 | 38.8% | <5 | N/A | <5 | N/A |
| Cass | 89 | 5 | 5.6% | <5 | N/A | 52 | 58.4% | 35 | 39.3% | <5 | N/A | <5 | N/A |
| Clark | 337 | 16 | 4.7% | 5 | 1.5% | 141 | 41.8% | 80 | 23.7% | <5 | N/A | <5 | N/A |
| Clay | 51 | <5 | N/A | <5 | N/A | 38 | 74.5% | 29 | 56.9% | <5 | N/A | <5 | N/A |
| Clinton | 111 | 5 | 4.5% | <5 | N/A | 58 | 52.3% | 37 | 33.3% | <5 | N/A | <5 | N/A |
| Crawford | 47 | <5 | N/A | <5 | N/A | 32 | 68.1% | 27 | 57.4% | <5 | N/A | <5 | N/A |
| Daviess | 113 | <5 | N/A | <5 | N/A | 76 | 67.3% | 46 | 40.7% | <5 | N/A | <5 | N/A |
| Dearborn | 314 | 38 | 12.1% | 7 | 2.2% | 121 | 38.5% | 62 | 19.7% | 7 | 2.2% | <5 | N/A |
| Decatur | 119 | 5 | 4.2% | <5 | N/A | 64 | 53.8% | 47 | 39.5% | <5 | N/A | <5 | N/A |
| DeKalb | 165 | 9 | 5.5% | <5 | N/A | 76 | 46.1% | 49 | 29.7% | <5 | N/A | <5 | N/A |
| Delaware | 611 | 73 | 11.9% | 32 | 5.2% | 299 | 48.9% | 177 | 29.0% | 7 | 1.1% | <5 | N/A |
| Dubois | 124 | <5 | N/A | <5 | N/A | 46 | 37.1% | 30 | 24.2% | <5 | N/A | <5 | N/A |
| Elkhart | 365 | 37 | 10.1% | 13 | 3.6% | 159 | 43.6% | 117 | 32.1% | 7 | 1.9% | <5 | N/A |
| Fayette | 237 | <5 | N/A | <5 | N/A | 152 | 64.1% | 95 | 40.1% | 6 | 2.5% | <5 | N/A |
| Floyd | 276 | 15 | 5.4% | 10 | 3.6% | 147 | 53.3% | 101 | 36.6% | <5 | N/A | <5 | N/A |
| Fountain | 57 | <5 | N/A | <5 | N/A | 33 | 57.9% | 20 | 35.1% | <5 | N/A | <5 | N/A |
| Franklin | 74 | <5 | N/A | <5 | N/A | 35 | 47.3% | 22 | 29.7% | <5 | N/A | <5 | N/A |
| Fulton | 47 | <5 | N/A | <5 | N/A | 26 | 55.3% | 17 | 36.2% | <5 | N/A | <5 | N/A |
| Gibson | 174 | 5 | 2.9% | <5 | N/A | 101 | 58.0% | 61 | 35.1% | <5 | N/A | <5 | N/A |
| Grant | 338 | 32 | 9.5% | 11 | 3.3% | 179 | 53.0% | 91 | 26.9% | 12 | 3.6% | <5 | N/A |
| Greene | 66 | 6 | 9.1% | <5 | N/A | 49 | 74.2% | 29 | 43.9% | <5 | N/A | <5 | N/A |
| Hamilton | 640 | 72 | 11.3% | 14 | 2.2% | 158 | 24.7% | 58 | 9.1% | 13 | 2.0% | <5 | N/A |
| Hancock | 213 | 26 | 12.2% | 8 | 3.8% | 65 | 30.5% | 39 | 18.3% | <5 | N/A | <5 | N/A |
| Harrison | 52 | <5 | N/A | <5 | N/A | 28 | 53.8% | 19 | 36.5% | <5 | N/A | <5 | N/A |
| Hendricks | 508 | 41 | 8.1% | 7 | 1.4% | 185 | 36.4% | 84 | 16.5% | 10 | 2.0% | <5 | N/A |
| Henry | 326 | 20 | 6.1% | 12 | 3.7% | 182 | 55.8% | 105 | 32.2% | <5 | N/A | <5 | N/A |
| Howard | 526 | 55 | 10.5% | 19 | 3.6% | 291 | 55.3% | 155 | 29.5% | <5 | N/A | <5 | N/A |

| County | Treatment Episodes | Cocaine Use | | Cocaine Dependence | | Meth Use | | Meth Dependence | | Rx Stimulant Use | | Rx Stimulant Dependence | |
|--------------|--------------------|-------------|-------|--------------------|-------|----------|-------|-----------------|-------|------------------|------|-------------------------|------|
| | Total | Number | % | Number | % | Number | % | Number | % | Number | % | Number | % |
| Huntington | 113 | <5 | N/A | <5 | N/A | 32 | 28.3% | 25 | 22.1% | <5 | N/A | <5 | N/A |
| Jackson | 223 | <5 | N/A | <5 | N/A | 149 | 66.8% | 117 | 52.5% | <5 | N/A | <5 | N/A |
| Jasper | 90 | 9 | 10.0% | <5 | N/A | 45 | 50.0% | 31 | 34.4% | <5 | N/A | <5 | N/A |
| Jay | 143 | 8 | 5.6% | <5 | N/A | 74 | 51.7% | 45 | 31.5% | <5 | N/A | <5 | N/A |
| Jefferson | 232 | 5 | 2.2% | <5 | N/A | 125 | 53.9% | 91 | 39.2% | <5 | N/A | <5 | N/A |
| Jennings | 138 | <5 | N/A | <5 | N/A | 81 | 58.7% | 47 | 34.1% | <5 | N/A | <5 | N/A |
| Johnson | 195 | 15 | 7.7% | <5 | N/A | 70 | 35.9% | 42 | 21.5% | <5 | N/A | <5 | N/A |
| Knox | 166 | <5 | N/A | <5 | N/A | 94 | 56.6% | 55 | 33.1% | <5 | N/A | <5 | N/A |
| Kosciusko | 146 | 11 | 7.5% | <5 | N/A | 67 | 45.9% | 40 | 27.4% | 5 | 3.4% | <5 | N/A |
| LaGrange | 76 | <5 | N/A | <5 | N/A | 34 | 44.7% | 23 | 30.3% | <5 | N/A | <5 | N/A |
| Lake | 1,033 | 221 | 21.4% | 106 | 10.3% | 68 | 6.6% | 36 | 3.5% | 12 | 1.2% | <5 | N/A |
| LaPorte | 433 | 68 | 15.7% | 26 | 6.0% | 94 | 21.7% | 60 | 13.9% | 6 | 1.4% | <5 | N/A |
| Lawrence | 190 | 5 | 2.6% | <5 | N/A | 111 | 58.4% | 71 | 37.4% | <5 | N/A | <5 | N/A |
| Madison | 1,108 | 134 | 12.1% | 35 | 3.2% | 579 | 52.3% | 302 | 27.3% | 27 | 2.4% | 5 | N/A |
| Marion | 3,521 | 601 | 17.1% | 208 | 5.9% | 866 | 24.6% | 359 | 10.2% | 35 | 1.0% | 8 | 0.2% |
| Marshall | 69 | 5 | 7.2% | <5 | N/A | 34 | 49.3% | 15 | 21.7% | <5 | N/A | <5 | N/A |
| Martin | 17 | <5 | N/A | <5 | N/A | 7 | 41.2% | 5 | 29.4% | <5 | N/A | <5 | N/A |
| Miami | 72 | 5 | 6.9% | <5 | N/A | 44 | 61.1% | 26 | 36.1% | <5 | N/A | <5 | N/A |
| Monroe | 689 | 55 | 8.0% | 8 | 1.2% | 383 | 55.6% | 223 | 32.4% | 10 | 1.5% | <5 | N/A |
| Montgomery | 456 | 17 | 3.7% | <5 | N/A | 303 | 66.4% | 158 | 34.6% | 12 | 2.6% | <5 | N/A |
| Morgan | 345 | 16 | 4.6% | <5 | N/A | 181 | 52.5% | 130 | 37.7% | <5 | N/A | <5 | N/A |
| Newton | 18 | <5 | N/A | <5 | N/A | 7 | 38.9% | 5 | 27.8% | <5 | N/A | <5 | N/A |
| Noble | 159 | 5 | 3.1% | <5 | N/A | 87 | 54.7% | 61 | 38.4% | <5 | N/A | <5 | N/A |
| Ohio | 26 | <5 | N/A | <5 | N/A | 8 | 30.8% | <5 | N/A | <5 | N/A | <5 | N/A |
| Orange | 61 | <5 | N/A | <5 | N/A | 27 | 44.3% | 19 | 31.1% | <5 | N/A | <5 | N/A |
| Owen | 76 | <5 | N/A | <5 | N/A | 47 | 61.8% | 41 | 53.9% | <5 | N/A | <5 | N/A |
| Parke | 24 | <5 | N/A | <5 | N/A | 12 | 50.0% | 5 | 20.8% | <5 | N/A | <5 | N/A |
| Perry | 60 | <5 | N/A | <5 | N/A | 26 | 43.3% | 23 | 38.3% | <5 | N/A | <5 | N/A |
| Pike | 40 | <5 | N/A | <5 | N/A | 16 | 40.0% | 9 | 22.5% | <5 | N/A | <5 | N/A |
| Porter | 329 | 52 | 15.8% | 16 | 4.9% | 55 | 16.7% | 30 | 9.1% | 12 | 3.6% | <5 | N/A |
| Posey | 102 | <5 | N/A | <5 | N/A | 45 | 44.1% | 25 | 24.5% | <5 | N/A | <5 | N/A |
| Pulaski | 39 | <5 | N/A | <5 | N/A | 17 | 43.6% | 10 | 25.6% | <5 | N/A | <5 | N/A |
| Putnam | 229 | <5 | N/A | <5 | N/A | 123 | 53.7% | 60 | 26.2% | 6 | 2.6% | <5 | N/A |
| Randolph | 156 | 13 | 8.3% | 5 | 3.2% | 89 | 57.1% | 55 | 35.3% | <5 | N/A | <5 | N/A |
| Ripley | 127 | <5 | N/A | <5 | N/A | 52 | 40.9% | 31 | 24.4% | <5 | N/A | <5 | N/A |
| Rush | 131 | 10 | 7.6% | <5 | N/A | 69 | 52.7% | 47 | 35.9% | <5 | N/A | <5 | N/A |
| Saint Joseph | 761 | 174 | 22.9% | 72 | 9.5% | 222 | 29.2% | 135 | 17.7% | 14 | 1.8% | <5 | N/A |

| County | Treatment Episodes | Cocaine Use | | Cocaine Dependence | | Meth Use | | Meth Dependence | | Rx Stimulant Use | | Rx Stimulant Dependence | |
|-------------|--------------------|-------------|-------|--------------------|------|----------|-------|-----------------|-------|------------------|------|-------------------------|------|
| | Total | Number | % | Number | % | Number | % | Number | % | Number | % | Number | % |
| Scott | 251 | 6 | 2.4% | <5 | N/A | 123 | 49.0% | 64 | 25.5% | <5 | N/A | <5 | N/A |
| Shelby | 147 | 7 | 4.8% | <5 | N/A | 90 | 61.2% | 58 | 39.5% | <5 | N/A | <5 | N/A |
| Spencer | 47 | <5 | N/A | <5 | N/A | 22 | 46.8% | 19 | 40.4% | <5 | N/A | <5 | N/A |
| Starke | 159 | 8 | 5.0% | <5 | N/A | 57 | 35.8% | 28 | 17.6% | 7 | 4.4% | <5 | N/A |
| Steuben | 114 | <5 | N/A | <5 | N/A | 37 | 32.5% | 26 | 22.8% | <5 | N/A | <5 | N/A |
| Sullivan | 30 | <5 | N/A | <5 | N/A | 15 | 50.0% | 8 | 26.7% | <5 | N/A | <5 | N/A |
| Switzerland | 66 | <5 | N/A | <5 | N/A | 40 | 60.6% | 26 | 39.4% | <5 | N/A | <5 | N/A |
| Tippecanoe | 574 | 45 | 7.8% | 20 | 3.5% | 257 | 44.8% | 154 | 26.8% | 15 | 2.6% | 6 | 1.0% |
| Tipton | 56 | <5 | N/A | <5 | N/A | 35 | 62.5% | 18 | 32.1% | <5 | N/A | <5 | N/A |
| Union | 25 | <5 | N/A | <5 | N/A | 14 | 56.0% | 9 | 36.0% | <5 | N/A | <5 | N/A |
| Vanderburgh | 1142 | 57 | 5.0% | 14 | 1.2% | 542 | 47.5% | 337 | 29.5% | 13 | 1.1% | 7 | 0.6% |
| Vermillion | 19 | <5 | N/A | <5 | N/A | 14 | 73.7% | 10 | 52.6% | <5 | N/A | <5 | N/A |
| Vigo | 233 | 15 | 6.4% | <5 | N/A | 144 | 61.8% | 92 | 39.5% | <5 | N/A | <5 | N/A |
| Wabash | 83 | <5 | N/A | <5 | N/A | 46 | 55.4% | 23 | 27.7% | <5 | N/A | <5 | N/A |
| Warren | 17 | <5 | N/A | <5 | N/A | 10 | 58.8% | 7 | 41.2% | <5 | N/A | <5 | N/A |
| Warrick | 211 | <5 | N/A | <5 | N/A | 105 | 49.8% | 62 | 29.4% | <5 | N/A | <5 | N/A |
| Washington | 65 | <5 | N/A | <5 | N/A | 34 | 52.3% | 22 | 33.8% | <5 | N/A | <5 | N/A |
| Wayne | 529 | 70 | 13.2% | 17 | 3.2% | 236 | 44.6% | 140 | 26.5% | 6 | 1.1% | <5 | N/A |
| Wells | 92 | 15 | 16.3% | <5 | N/A | 45 | 48.9% | 26 | 28.3% | <5 | N/A | <5 | N/A |
| White | 131 | 8 | 6.1% | <5 | N/A | 58 | 44.3% | 39 | 29.8% | <5 | N/A | <5 | N/A |
| Whitley | 77 | <5 | N/A | <5 | N/A | 33 | 42.9% | 23 | 29.9% | <5 | N/A | <5 | N/A |
| Indiana | 23573 | 2419 | 10.3% | 800 | 3.4% | 9746 | 41.3% | 5667 | 24.0% | 370 | 1.6% | 89 | 0.4% |

Source: Indiana Family and Social Services Administration, 2022

Notes: Cocaine/Meth/Prescription stimulant dependence is defined as those receiving substance abuse treatment who at admission listed Cocaine/Meth/Prescription stimulant as their primary substance.

The percentages are calculated by taking the count of reported Cocaine/Meth/Prescription stimulant use and dependence and dividing by the count of treatment episodes. As a result of confidentiality concerns, data was suppressed if the count of treatment episodes was less than 5.

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Mental Health Prevalence and Suicide in Indiana

INTRODUCTION

Mental illness is one of the most common conditions worldwide. More than 50% of Americans will be diagnosed with a mental illness or disorder at some point in their lifetime. Poor mental and physical health can lead to mental illness, as well as trauma, substance abuse and feelings of loneliness or isolation. Untreated mental illness can increase the risk of other conditions like diabetes and heart disease (CDC, 2021a).

There are several different mental disorders, and there is no one cause for any mental illness. Anxiety disorders and depression are the most common mental illnesses, and eating disorders are also considered mental illness. Another potential consequence of mental illness is the risk of suicide, which is the second leading cause of death in ages 10-34, and is in the top 10 leading causes of death for all ages in the U.S (Hedgegaard et al., 2021).

One of the many consequences the COVID-19 pandemic was the decline of mental health among Americans, as more than half reported that COVID-19 had a negative impact on their mental health (Robbins et al., 2020). In 2021, 38.5% of Indiana adults reported symptoms of anxiety or depression, while the U.S. rate was reported at 41% of adults (Kirzinger, et. al., 2020; CDC, 2021a). The COVID-19 pandemic and safety measures affected many Americans' mental health; 47% of those who were sheltered in place reported experiencing negative mental health effects related to COVID-19 (Kirzinger et al., 2020). A 2020 survey on college students in a U.S. university found that 71% of participants reported increased stress and anxiety due to the COVID-19 pandemic. In 2021, emergency department visits for suspected suicide attempts among 12- to 25-year-olds dramatically increased up to 50% higher than the data from 2019 (Yard et al., 2021). During the height of the COVID-19 pandemic, 40% of U.S. adults reported struggling with mental health and substances, while 11% reported seriously considering suicide (Czeisler, 2020).

PREVALENCE OF MENTAL ILLNESS AND PSYCHOLOGICAL DISTRESS

National Survey on Drug Use and Health

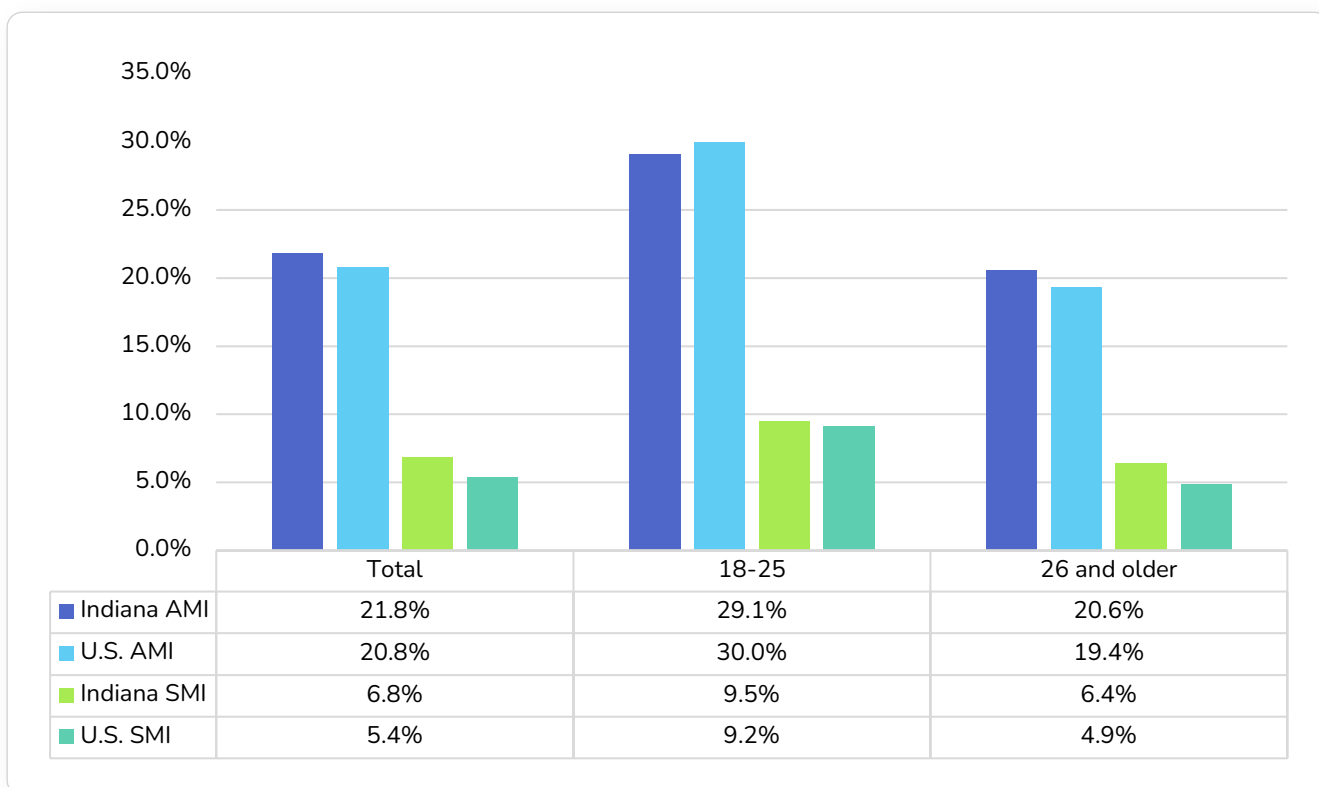
The prevalence of mental illness in the U.S is reported by the National Survey on Drug Use and Health (NSDUH). The following definitions are used in the collection of survey data:

- Any mental illness (AMI): a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder.
- Serious mental illness (SMI): having a mental illness that results in serious functional impairment (NSDUH).

The 2020 NSDUH data estimated that 52.9 million U.S. adults over 18 years lived with AMI, accounting for 21% of all U.S. adults. An estimated 20.8% (95% CI: 20.3 – 21.3) of U.S. adults reported having AMI in the past year. In Indiana, an estimated 21.8% (95% CI: 19.4 - 24.5) reported having AMI in the past year. The reported prevalence of SMI in Indiana (6.8%; 95% CI: 5.7-8.3) is closely followed by the U.S. reported prevalence rates (5.4%; 95% CI: 5.2-5.7). See Figure 7.1 for the distribution of AMI and SMI by age group. Figure 7.2 shows the AMI and SMI trends.

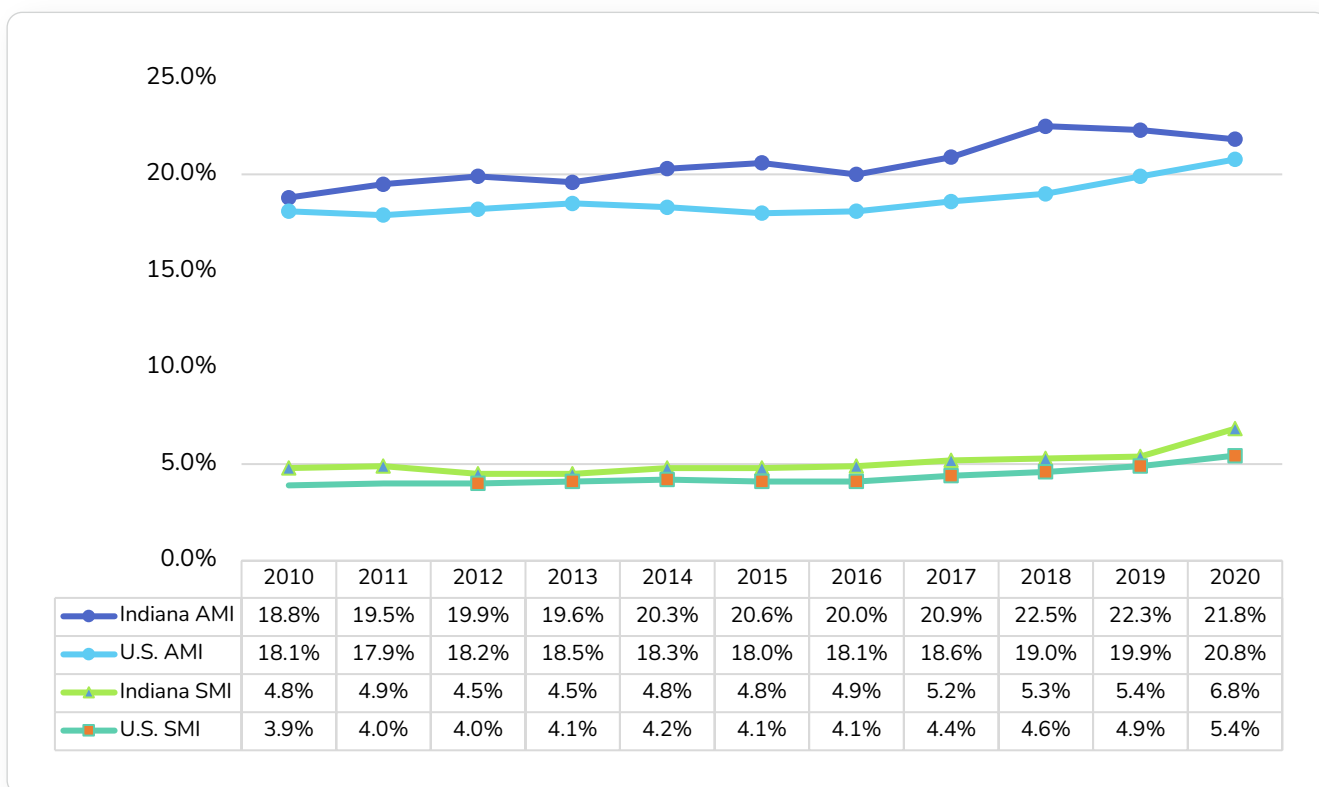


Figure 7.1 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020)



Source: SAMHSA, 2021

Figure 7.2 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year (National Survey on Drug Use and Health, 2010-2020)

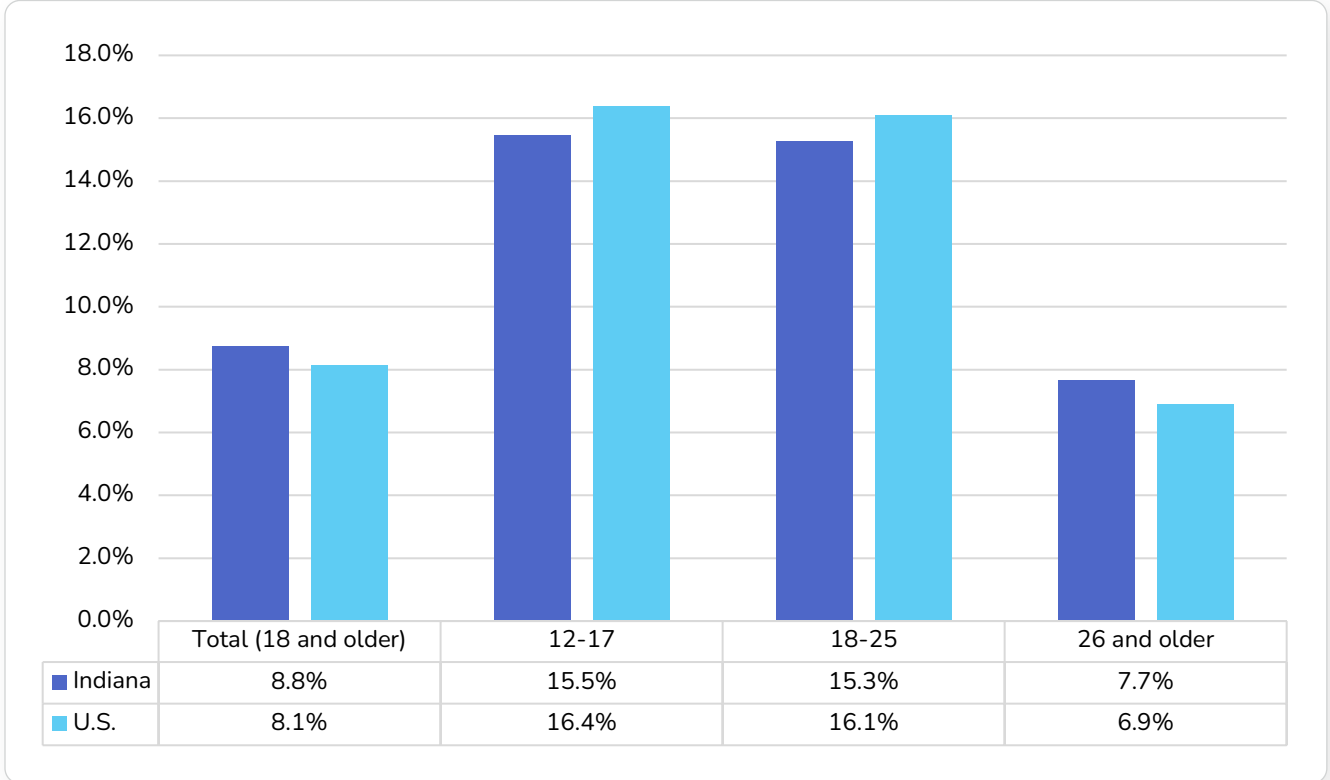


Source: SAMHSA, 2021

Major depressive episodes (MDE) occur when an individual experiences a depressed mood or loss of interest or pleasure in daily activities for at least two weeks (American Psychiatric Association, 2013). 8.8% of Indiana adults (95% CI: 7.3-10.4) reported having one MDE in the past year in 2020. The COVID-19 pandemic brought about even more mental stress, as more than half of Americans reported a negative impact on mental health stemming from the pandemic (NAMI, 2021).

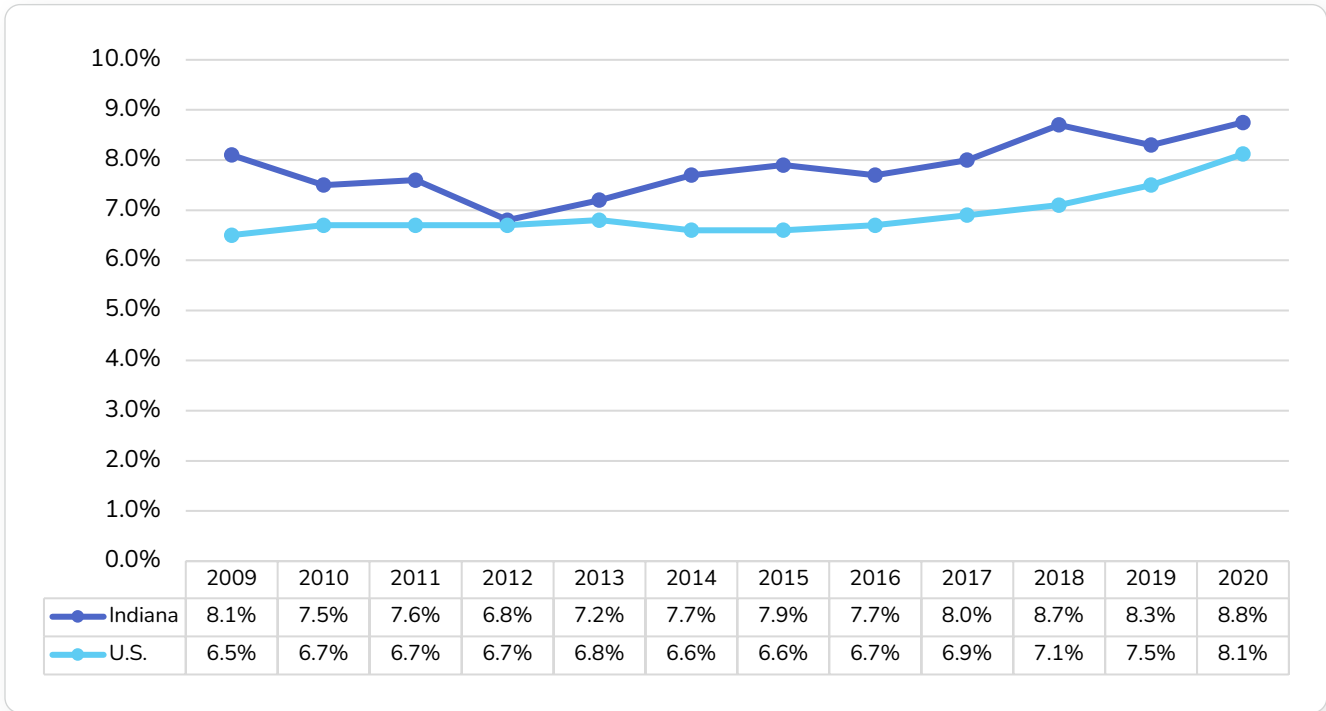
Mental illness and substance abuse often co-occur, with one leading to another. According to SAMHSA 2020 data, 17 million U.S. adults had a co-occurring mental illness and substance use disorder. Co-occurring conditions are often more chronic, and typically have poorer responses to treatment. State-level estimates for co-occurring disorders are currently not available (SAMHSA, 2021). Figure 7.3 shows the share of the population reporting at least one MDE by age group. Figure 7.4 shows the MDE trends.

Figure 7.3 Percentage of Indiana and U.S. Population Reporting at Least One Major Depressive Episode in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020)



Source: SAMHSA, 2021

Figure 7.4 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting at Least One Major Depressive Episode in the Past Year (National Survey on Drug Use and Health, 2009–2020)



Source: SAMHSA, 2021

Behavioral Risk Factor Surveillance System

Hoosiers identified as American Indians or Alaskan natives reported a history of depression higher than any other group at 31.2% (95% CI:16.7 – 45.7) (CDC-BRFSS, 2021b). Between genders, a much higher percentage of females (27.7% (95% CI: 26.1 - 29.4)) reported a history of depression than males (15.8% (95% CI: 14.4 - 17.3) (See Table 7.1).

Most adults in the age group 25-34 reported a history of depression, more than any other age group (27.9% (95% CI: 24.6– 31.3)). Poor mental health days measure the average number of mentally unhealthy days reported in the past 30 days. According to the latest County Health Rankings using data from 2019, Indiana residents experience 4.8 (range between 4.0 and 5.7) poor mental health days in the past 30 days; U.S residents average 4.53 poor mental health days (County Health Rankings & Roadmaps, 2022). Further, in 2019, about 15% (range between 12% and 19%) of Indiana residents reported frequent mental distress, defined as 14 or more days of poor mental health per month. Appendix 7A shows the mental health indicators by county.

Table 7.1 Percentage of Indiana Population (18 Years and Older) Reporting a History of Depression (Behavioral Risk Factor Surveillance System, 2020)

| | | Indiana (95% CI) |
|--------------------|-----------------------------------|---------------------|
| Gender | Male | 15.8% (14.4 - 17.3) |
| | Female | 27.7% (26.1 - 29.4) |
| Race/ Ethnicity | White | 22.9% (21.7 - 24.1) |
| | Black | 17.4% (13.6 - 21.2) |
| | American Indian or Alaskan Native | 31.2% (16.7 - 45.7) |
| | Multiracial | 30.4% (20.4 - 40.4) |
| | Hispanic | 17.8% (13.1 - 22.4) |
| Age Group | 18-24 | 25.0% (20.8 - 29.1) |
| | 25-34 | 27.9% (24.6 - 31.3) |
| | 35-44 | 22.4% (19.5 - 25.2) |
| | 45-54 | 21.2% (18.7 - 23.6) |
| | 55-64 | 21.6% (19.4 - 23.8) |
| | 65+ | 16.0% (14.4 - 17.6) |
| Total | | 21.9% (20.8 - 23.0) |

Source: CDC, 2021

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) data show that 29.3% of Indiana high school students (grades 9-12) reported feeling sad or hopeless in 2015, similar to the national average of 29.9% (CDC, 1991-2019). Female

high school students reported much higher rates (39.2% (95% CI: 33.6–45.0) than male counterparts (19.8% (95% CI: 17.5–22.3), and rates were highest in students who self-identified as gay, lesbian, or bisexual (57.8% (95% CI: 44.8–69.8) (see Table 7.2) (CDC, 1991-2019).

Table 7.2 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Feeling Sad or Hopeless (Youth Risk Behavior Surveillance System, 2015)

| | | Indiana (95% CI) | U.S. (95% CI) |
|-----------------|---------------------------|-------------------|-------------------|
| Gender | Male | 19.8% (17.5–22.3) | 20.3% (18.9–21.8) |
| | Female | 39.2% (33.6–45.0) | 39.8% (36.5–43.2) |
| Race/Ethnicity | White | 28.4% (25.8–31.1) | 28.6% (25.8–31.5) |
| | Black | 31.2% (22.2–41.8) | 25.2% (21.7–29.1) |
| | Hispanic | 36.8% (27.8–46.8) | 35.3% (32.3–38.4) |
| Grade | 9th | 26.9% (23.0–31.2) | 28.4% (25.9–31.0) |
| | 10th | 33.3% (27.8–39.3) | 29.8% (26.6–33.1) |
| | 11th | 31.8% (25.7–38.7) | 31.4% (28.3–34.8) |
| | 12th | 26.0% (21.6–30.8) | 30.0% (27.5–32.6) |
| Sexual Identity | Heterosexual | 25.2% (22.5–28.0) | 26.4% (24.6–28.4) |
| | Gay, Lesbian, or Bisexual | 57.8% (44.8–69.8) | 60.4% (55.1–65.4) |
| | Not Sure | 44.6% (28.6–61.9) | 46.5% (41.2–51.8) |
| Total | | 29.3% (27.0–31.9) | 29.9% (28.0–31.8) |

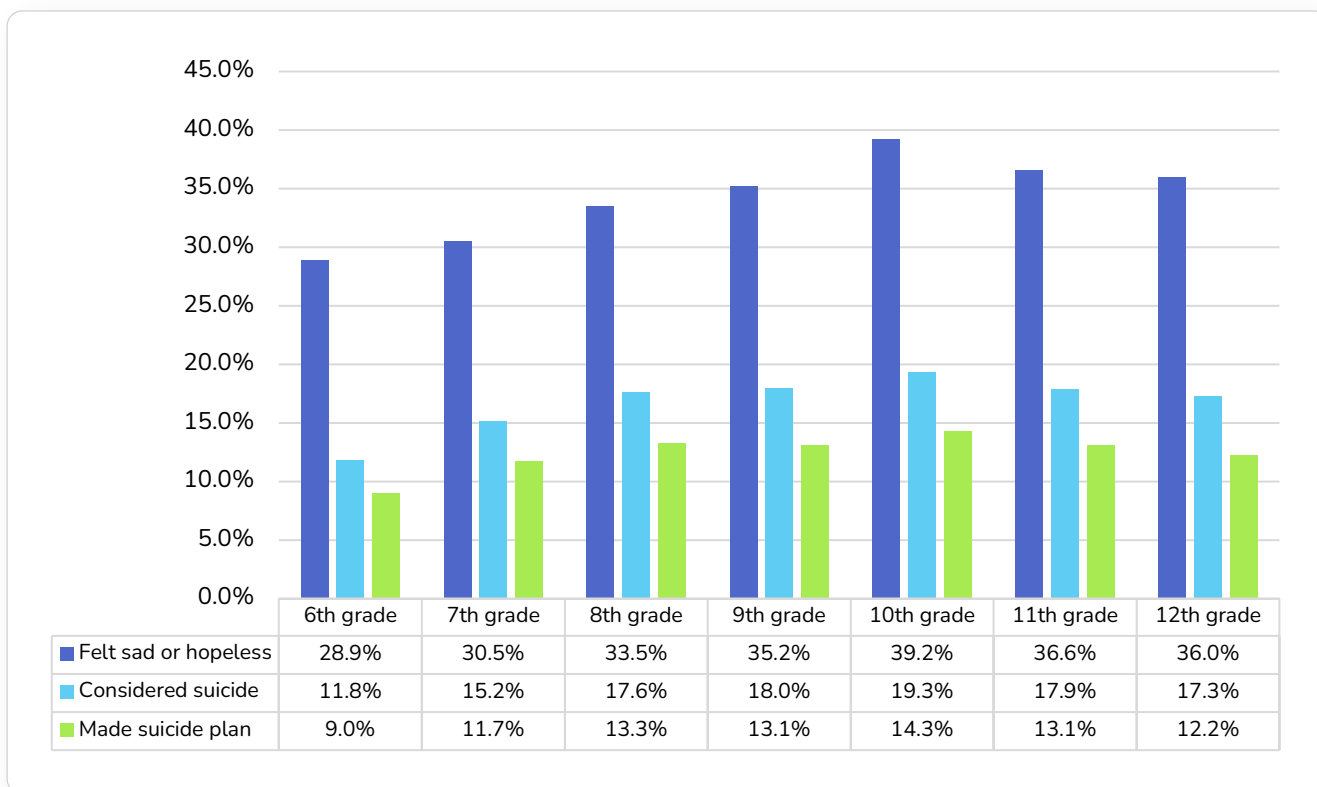
Source: CDC, 1991-2019

Indiana Youth Survey:

The Indiana Youth Survey is a biannual report that includes mental health assessments of students in grades 6-12 from the past 12 months. The 2020 survey found that over 25% of students in each grade reported feeling sad or hopeless. Each grade reported double-digit averages for students

who reported considering attempting suicide; grades 7-12 reported double-digit averages for making a plan about attempting suicide. In all grades and all categories, females reported higher averages than their male counterparts (See Figure 7.5) (Gassman et al., 2020).

Figure 7.5 Percentage of Students who Experienced Feeling Sad or Hopeless, Considered Suicide, or Made a Suicide Plan in the Past 12 Months, Grades 6 through 12 (Indiana Youth Survey, 2020)



Source: Gassman et al., 2020

Indiana College Substance Use Survey

Over 8,000 college students from 23 Indiana colleges were surveyed in the 2021 Indiana College Substance Use Survey (King and Jun, 2021). About 38.7% of the students reported feeling sad or hopeless in the past year, and a majority of those students were female (42.7%). Unhealthy

mental days are defined in the survey as days that include stress, depression, and problems with emotion. Students on average experienced 10.2 unhealthy mental days, with females reporting a higher number of days (11.7) versus their males (7.7) (Gassman, et.al., 2020).

TREATMENT UTILIZATION

National Survey on Drug Use and Health

Based on 2019 NSDUH data, an estimated 20.8% (95% CI: 20.3 – 21.3) of adult Americans experienced a mental illness in the past year. The prevalence in Indiana was slightly higher; 21.8% of adults experienced a mental illness in the past year. In the U.S. more than half of all people with a mental health condition did not receive treatment in the last year (NAMI, 2021). Within the past year, 19.3% (95% CI: 17.0 - 21.8) of adult Hoosiers received mental health services, whereas the national rate was 16.5% (95% CI: 16.1 – 17.0) (SAMHSA, 2021).

(DMHA) serves as the state’s mental health authority. The DMHA serves children who meet the federal definition for severe emotional disturbance (SED) and adults who meet the federal definition for serious mental illness (SMI). In 2020, 138,697 clients were served by the DMHA and nearly all were treated in community settings rather than state hospitals. About 28.7% of the adults and 2.5% of children were seen by the DMHA, who received services for co-occurring mental illness and substance abuse (SAMHSA/CMHS, 2020). See Table 7.3 for the demographic characteristics of clients served by DMHA.

Uniform Reporting System

The Indiana Division of Mental Health and Addiction

Table 7.3 Demographic Characteristics of Adults with SMI and Children with SED Served by the Indiana Division of Mental Health and Addiction, FY 2020

| | | Indiana |
|----------------------|----------------------------------|---------|
| Gender | Male | 47.2% |
| | Female | 52.8% |
| Race/ Ethnicity | White | 76.8% |
| | Black | 13.9% |
| | Other/Unknown | 9.4% |
| | Hispanic | |
| Age Group | Children 0-17 | 40.5% |
| | Adults 18+ | 59.5% |
| Medicaid Status | Medicaid only | 63.4% |
| | Both Medicaid and other funds | 9.8% |
| | Non-Medicaid | 26.8% |
| Total (N=138,697) | | |

Source: SAMHSA/CMHS, 2020

Suicide

In 2020, suicide was the 12th leading cause of death in the US, with a prevalence of 14% (rate derived from (the number of suicides/population) multiplied by 100,000) and 45,979 deaths. Currently, suicide is the third leading cause of death among people aged 15–24 years. On average, every 11.5 minutes, a person commits suicide. Males considered suicide 41.5 minutes sooner than females (i.e., one male died every 14.4 minutes, compared to one female who died every 55.9 minutes). In 2020, males were far more suicidal than females (22.5% versus 5.6%, respectively). Whites considered suicide at a higher rate than any other

race (15.7% versus 7.8%, respectively), and white males accounted for over 32,000 deaths.

Suicide by firearm was the most common method (52.8%), followed by suffocation/hanging (27.2%) and poison (12.0%) (Drapeau and McIntosh, 2021). Indiana ranks 27th in the U.S. for suicide rates (14%). From 2000 to 2018, Indiana’s crude suicide rate (total incidence of suicide per 100,000 people) was higher than the national crude rate. The state’s confirmed suicide rate surpassed 1,000 in 2016 and remained above 1,000 until 2019 when the crude rate fell by 10.42%. From March 2020 to June 2021, the daily average of EMS/ED visits dealing with suicide/harm increased; the daily average peaked in May 2021 at 195 visits per day. Whites made up the majority of EMS/ED visits due to suicide/self-harm, and the total number of visits increased year by year from 2018 to 2020. The age group with the highest total number of EMS/ED visits was 25–44 years old, and the total number of visits increased from 2018 to 2020. This was followed by adults 45–64 and adults 18–24 years (Drapeau, 2021).

National Survey on Drug Use and Health

In the U.S. 4.8% (95% CI: 4.6–5.1) of adults reported having serious thoughts of suicide in the past year. In Indiana, 5.8% of adults reported having serious thoughts of suicide in the past year; The highest rates were found in the age group 18–25 (12.5%; 95% CI: 9.7–15.9) (SAMHSA, 2021).

Youth Risk Behavior Surveillance System

Based on 2019 YRBSS data, about 1 in 5 U.S high school students seriously consider suicide. In the U.S, the rate of students who have attempted suicide has steadily climbed over the years, reaching its peak in 2019 at 8.9% (Ivey-Stephenson et al., 2020). Data from 2015 YRBSS found that 9.9% of Indiana students attempted suicide in the past year, however, data for later years were not available (Kann et al., 2016). See Table 7.4 for demographic information on high school students attempting suicide in Indiana.

Table 7.4 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Attempting Suicide in the Past Year (Youth Risk Behavior Surveillance System, 2015)

| | | Indiana (95% CI) | U.S. (95% CI) |
|-----------------|---------------------------|-------------------|-------------------|
| Gender | Male | 8.7% (6.0–12.5) | 5.5% (4.7–6.4) |
| | Female | 10.9% (8.3–14.1) | 11.6% (9.7–13.7) |
| Race/Ethnicity | White | 8.7% (6.5–11.5) | 6.8% (5.5–8.4) |
| | Black | 14.5% (8.8–23.1) | 8.9% (6.7–11.9) |
| | Hispanic | 15.5% (8.9–25.8) | 11.3% (9.9–13.0) |
| Grade | 9th | 12.8% (8.5–18.7) | 9.9% (8.5–11.5) |
| | 10th | 11.4% (8.6–14.9) | 9.4% (7.6–11.6) |
| | 11th | 10.0% (6.4–15.2) | 8.0% (6.8–9.5) |
| | 12th | 5.0% (2.7–9.0) | 6.2% (4.9–7.9) |
| Sexual Identity | Heterosexual | 6.8% (5.0–9.2) | 6.4% (5.6–7.3) |
| | Gay, Lesbian, or Bisexual | 34.2% (27.5–41.5) | 29.4% (25.7–33.3) |
| | Not Sure | 17.6% (7.5–35.9) | 13.7% (10.0–18.5) |
| Total | | 9.9% (7.7–12.7) | 8.6% (7.6–9.6) |

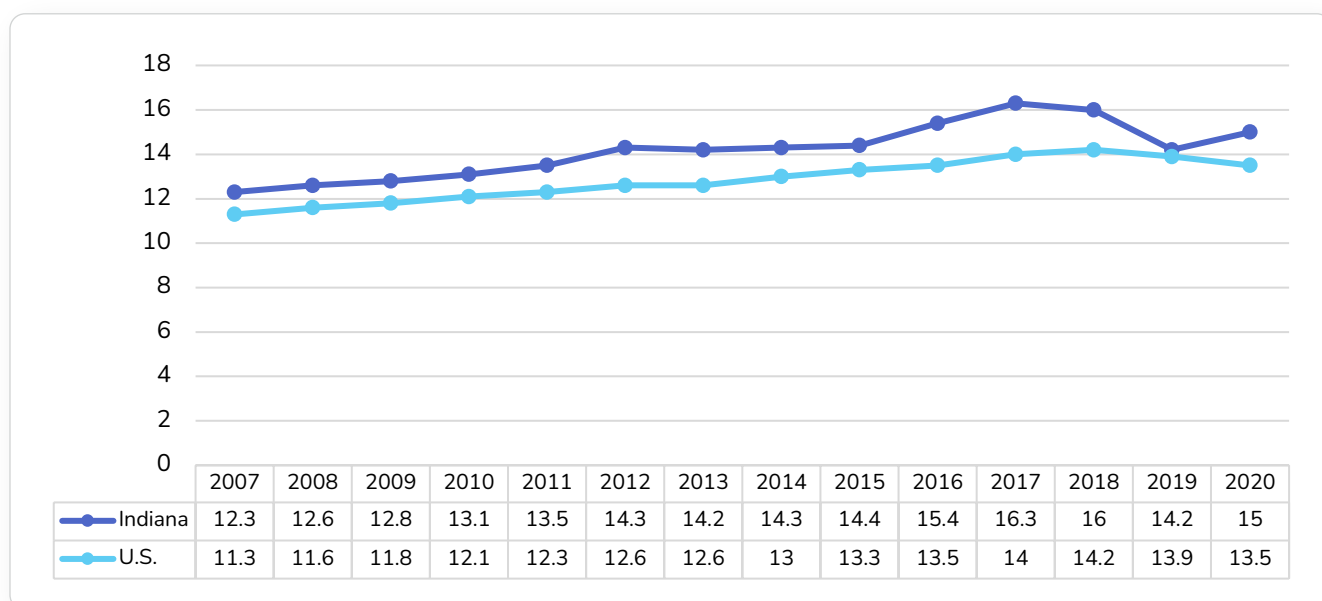
Source: CDC, 1991-2019

Suicide Mortality

The age-adjusted suicide mortality rates (per 100,000 population) have been rising over the past two decades in Indiana and the nation. The age-adjusted mortality rate in Indiana increased from 12.3 in 2007 to 16.3 in 2017, followed by a drop to 14.2 in 2019. The rate slightly increased to 15 (95% CI: 13.3–15.1) during the pandemic in

Indiana compared to 13.5 (95% CI: 13.4–13.6) in the United States (See Figure 7.6 for trends). The higher share of deaths by suicide occurred among males, whites, and non-Hispanics. See Table 7.5 for pooled age-adjusted rate by demographic characteristics. Map 7.1 shows the regional distribution of suicide mortality rates across 1999 to 2020 pooled data.

Figure 7.6 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 2007–2020)



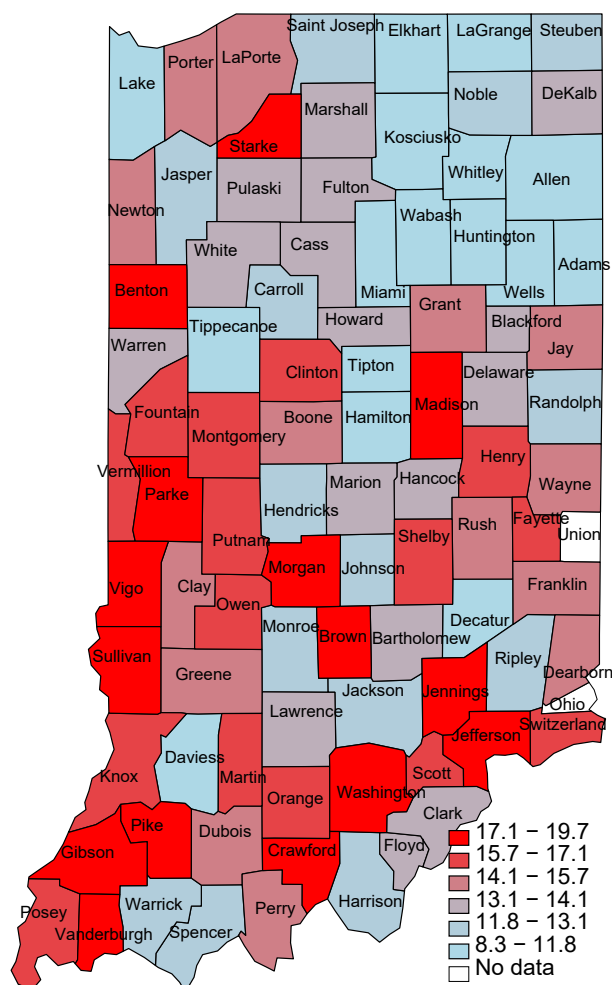
Source: CDC, 2007-2020

Table 7.5 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, combined data from 1999-2020)

| | | Indiana (95% CI) | U.S. (95% CI) |
|-----------|----------------------------------|------------------------|--------------------|
| Gender | Male | 22.2 (21.8 - 22.5) | 19.8 (19.8 - 19.9) |
| | Female | 5.1 (5.0 - 5.3) | 5.1 (5.0 - 5.1) |
| Race | White | 14.1 (13.9 - 14.4) | 13.6 (13.5 - 13.6) |
| | Black | 7.0 (6.5 - 7.4) | 5.7 (5.7 - 5.8) |
| | Asian or Pacific Islander | 5.7 (4.7 - 6.7) | 6.1 (6.0 - 6.1) |
| | American Indian or Alaska Native | Unreliable (1.8 - 4.7) | 11.5 (11.3 - 11.7) |
| Ethnicity | Hispanic | 6.0 (5.4 - 6.7) | 6.2 (6.1 - 6.2) |
| | Not Hispanic | 13.7 (13.5 - 13.9) | 13.1 (13.1 - 13.1) |
| Total | | 13.3 (13.1 - 13.5) | 12.2 (12.1 - 12.2) |

Source: CDC, 1999-2020

Map 7.1 Age-adjusted Annual Suicide Mortality Rates per 100,000 population in Indiana, by County (CDC Wonder, pooled data from 1999-2020)



Source: CDC, 1999-2020

APPENDIX 7A

Mental Health Indicators in Indiana, by County (Behavioral Risk Factor Surveillance System, 2019)

| County | Number of Poor Mental Health Days | % of Adults reporting Frequent Mental Distress |
|-------------|-----------------------------------|--|
| Adams | 5.4 | 18 |
| Allen | 4.8 | 15 |
| Bartholomew | 4.6 | 14 |
| Benton | 5.3 | 17 |
| Blackford | 5.5 | 18 |
| Boone | 4.2 | 13 |
| Brown | 4.9 | 15 |
| Carroll | 5.1 | 16 |
| Cass | 5.1 | 16 |
| Clark | 5 | 16 |
| Clay | 5.2 | 17 |
| Clinton | 5 | 16 |
| Crawford | 5.7 | 19 |
| Daviess | 5.5 | 18 |
| Dearborn | 5 | 16 |
| Decatur | 5.1 | 16 |
| DeKalb | 5.1 | 16 |
| Delaware | 5.3 | 17 |
| Dubois | 4.8 | 15 |
| Elkhart | 5 | 16 |
| Fayette | 5.6 | 18 |
| Floyd | 4.8 | 15 |
| Fountain | 5.2 | 16 |
| Franklin | 5.1 | 16 |
| Fulton | 5.1 | 16 |
| Gibson | 5.1 | 16 |
| Grant | 5.3 | 17 |
| Greene | 5.3 | 17 |
| Hamilton | 4 | 12 |
| Hancock | 4.7 | 14 |
| Harrison | 5.1 | 16 |
| Hendricks | 4.4 | 14 |

| County | Number of Poor Mental Health Days | % of Adults reporting Frequent Mental Distress |
|------------|-----------------------------------|--|
| Henry | 5.3 | 17 |
| Howard | 5.1 | 16 |
| Huntington | 5.1 | 16 |
| Jackson | 5.2 | 17 |
| Jasper | 5 | 16 |
| Jay | 5.4 | 18 |
| Jefferson | 5.2 | 17 |
| Jennings | 5.3 | 17 |
| Johnson | 4.6 | 14 |
| Knox | 5.3 | 17 |
| Kosciusko | 4.9 | 15 |
| LaGrange | 5.6 | 18 |
| Lake | 4.7 | 15 |
| LaPorte | 5.1 | 16 |
| Lawrence | 5.3 | 17 |
| Madison | 5.2 | 17 |
| Marion | 4.9 | 16 |
| Marshall | 5.1 | 16 |
| Martin | 5.2 | 17 |
| Miami | 5.3 | 17 |
| Monroe | 4.9 | 15 |
| Montgomery | 5.1 | 16 |
| Morgan | 5.1 | 16 |
| Newton | 5.2 | 16 |
| Noble | 5 | 16 |
| Ohio | 5.1 | 16 |
| Orange | 5.5 | 18 |
| Owen | 5.5 | 18 |
| Parke | 5.5 | 18 |
| Perry | 5.1 | 16 |
| Pike | 5.3 | 17 |
| Porter | 4.6 | 14 |

| County | Number of Poor Mental Health Days | % of Adults reporting Frequent Mental Distress |
|-------------|-----------------------------------|--|
| Posey | 4.9 | 15 |
| Pulaski | 5.3 | 17 |
| Putnam | 5 | 16 |
| Randolph | 5.3 | 17 |
| Ripley | 5.2 | 16 |
| Rush | 5.4 | 17 |
| St. Joseph | 4.9 | 15 |
| Scott | 5.5 | 18 |
| Shelby | 5.1 | 16 |
| Spencer | 5.1 | 16 |
| Starke | 5.4 | 18 |
| Steuben | 5 | 16 |
| Sullivan | 5.3 | 17 |
| Switzerland | 5.6 | 18 |
| Tippecanoe | 4.7 | 15 |
| Tipton | 4.9 | 16 |
| Union | 5.2 | 17 |
| Vanderburgh | 5.1 | 17 |
| Vermillion | 5.3 | 17 |
| Vigo | 5.2 | 17 |
| Wabash | 5.2 | 17 |
| Warren | 5 | 16 |
| Warrick | 4.7 | 14 |
| Washington | 5.4 | 17 |
| Wayne | 5.4 | 17 |
| Wells | 5 | 16 |
| White | 5 | 16 |
| Whitley | 5 | 16 |

Source: County Health Rankings & Roadmaps, 2022

Notes: The average age-adjusted number of mentally healthy days within the past 30 days was used to calculate number of poor mental health days. Percent of adults who reported within a month 14 or more poor mental health days was used to define the percent of adults who reported frequent mental distress.

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Yard E, Radhakrishnan L, Ballesteros MF, et al. Emergency Department Visits for Suspected Suicide Attempts Among Persons Aged 12–25 Years Before and During the COVID-19 Pandemic —

Methods

This report compiles behavioral and mental health data that are available publicly from various sources or upon request from the state agencies that conducted data collection. Specifically, the data on substance use and consequences, as well as data on mental health and suicide, were used to describe the epidemiological profile for the state of Indiana. All the graphics presented in this report can also be found on the Indiana State Epidemiological Profile Dashboard, accessed through <https://www.in.gov/fssa/dmha/substance-misuse-prevention-and-mental-health-promotion/prevention-partners/state-epidemiological-outcomes-workgroup/>.

The SEOW workgroup identified several indicators from various national and state data sources that were relevant to monitor substance use and mental health based on relevance, timeliness, validity, and representation. These measures allow us to identify emerging trends related to behavioral health. We analyzed patterns in type of drug choice, consumption and consequences of alcohol, tobacco, marijuana, opioids, and stimulants, in addition to the prevalence and consequences of mental illness. We prioritized data that allows for national comparisons and regional/sub-state comparisons were compiled if the data was available. We also examined trends over time and across demographic groups such as gender, race/ethnicity, and age. This report depicts substance use among Indiana youth as well as the adult population. We used the statistical software - STATA for analysis and data curation. The latest data available from all sources were obtained in each annual report. For missing data on intermittent years, we have indicated them as a note under the respective graphic.

Wherever possible, we use statistical significance to show if the estimates between two groups are statistically different from each other. In our report, the statistical

significance was determined either by a p-value of 0.05 or less, or by 95% confidence interval (CI).

While we do provide a comprehensive outlook on substance abuse and mental health in the state of Indiana, limitations in data collection and usage restrict us from providing precise estimates. First, different data sources use different collection methods and definitions. Therefore, we may not be able to compare data across sources. Second, some measures used in this report are not available for certain geographies, such as national or county level data. Even when the data is available for sub-state populations, such as those at a county level, the small sample sizes can lead to unreliable estimates. Third, most of the survey data included in this report is derived from self-reported information. Although self-reported data is usually reliable, respondents may provide the responses based on their physical/mental status at the time of survey or may alter their answers for questions related to illegal substance abuse. Finally, there may not be representation from priority and special populations in several data sources due to small sample size or lack of information.

DATA SOURCE LIST

Alcohol Related Disease Impact (ARDI)

Source: Center for Disease Control and Prevention

Description: ARDI is an online system used to estimate national and state alcohol-related health impacts. This may include deaths and years of potential life lost (YPLL). ARDI calculates these estimates by using alcohol-attributable fractions for various acute and chronic causes. These data are reported by age and sex for years 2015-2019.

Link: https://nccd.cdc.gov/DPH_ARDI/default/Default.aspx

Type: Annual, national, state level

Latest year of data available: 2015-2019

Automated Reporting Information Exchange System (ARIES)

Source: Indiana State Police (ISP)

Description: ARIES is a database that stores information pertaining to fatal automotive collisions. This data includes whether the collisions involved the influence of alcohol.

Link: <https://www.ariesportal.com/?icon=fa-home>

Type: Annual, state-level

Latest year of data available: 2020

Behavioral Risk Factor Surveillance System (BRFSS)

Source: Center for Disease Control and Prevention/County Health Rankings & Roadmaps 2021

Description: BRFSS is a state-based survey conducted annually to observe health-related risk behaviors such as alcohol consumption and tobacco use in relation to disease, serious injuries, and death as well as access to and utilization of preventative services. BRFSS surveys American citizens in all 50 states by telephone. This survey is currently the largest survey system in the world, surveying a little less than half a million participants annually.

Link: <https://www.cdc.gov/brfss/index.html>

Type of data: Annual, state level

Latest year of data available: 2020

CDC Wonder

Source: Center for Disease Control and Prevention

Description: CDC Wonder is an online database and communication system where public health information is easily accessible to state and local health departments, as well as academic public health communities. The purpose of CDC Wonder is to provide the public with access to detailed and specific information from the CDC.

Link: <https://wonder.cdc.gov/>

Type: National, state level

Latest year of data available: 2020

Child Removals

Source: Indiana Department of Child Services

Description: Data includes number of child removals due to parental alcohol/drug abuse by county.

Link: On-request data from the agency

Type: State level

Latest year of data available: SFY 2021

Indiana Adult Tobacco Survey (IATS)

Source: IDOH/TPC

Description: IATS is a survey used to identify and monitor the prevalence of tobacco use amongst Indiana resident adults.

Link: <https://www.in.gov/health/tpc/>

Type: Biennial, state level

Last year of data Available: 2019

Indiana College Substance Use Survey (ICSUS)

Source: Institute for Research on Addiction Behavior (IRAB)

Description: ICSUS is administered online to college students throughout the state of Indiana. The survey is used to determine the trends of substance use and associated behaviors on college campuses in Indiana. The goal of the survey is to provide college administrations with data to assist in understanding the occurrence of substance use on campuses and implement preventative programs for reducing prevalence use amongst students.

Link: <https://irab.indiana.edu/current-projects/college-survey/index.html>

Type: Annual, state level

Last year of data available: 2021

Indiana Meth Lab Statistics

Source: Indiana State Police (ISP)

Description: Indiana State Police collects data on meth lab seizures throughout the state of Indiana. Data collected includes arrests during lab seizures, number of seizures, and number of children who were present at meth labs during the time of seizure/arrest.

Link: <https://www.in.gov/meth/statistics/>

Type: Annual, state level

Last year of data available: 2021

Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT)

Source: IDOH/ Indiana Professional Licensing Agency (IPLA)

Description: INSPECT is a prescription monitoring program used to observe when prescription drugs or other controlled substances are administered. The goal of the online tracking system is to observe the trends of prescription drug abuse in Indiana. The online database is used for both medical professionals and law enforcement.

Link: Data available upon request at: <https://www.in.gov/pla/inspect/>

Type: Annual, state level

Last year of data available: 2020

Indiana Youth Survey (INYS)

Source: The Institute for Research on Addictive Behavior (IRAB), Indiana Prevention Resource Center (IPRC).

Description: The Indiana Youth Survey was created to access the prevalence of behavior health issues such as alcohol, tobacco, and illegal drug use, as well as mental

illness and problems gambling amongst youth throughout the state of Indiana. The survey is administered to students from grades 6 through 12. School administrators utilize these data to implement preventative services and school policies to help mitigate rising trends.

Link: <https://inys.indiana.edu/survey-results>

Type of Data: Annual, state level

Latest year of data available: 2020

Monitoring the Future Survey (MTF)

Source: National Institute on Drug Abuse (NIDA)

Description: The MTF survey is administered annually to assess drug and alcohol use amongst adolescent students across the country. The survey asks students to report their drug and alcohol use history throughout their lifetime, in the past month, and over the past year.

Link: <https://nida.nih.gov/research-topics/trends-statistics/monitoring-future>

Type of Data: Annual, national, state level

Latest year of data available: 2020

Indiana Youth Tobacco Survey (IYTS)

Source: Center for Disease Control and Prevention; Indiana Department of Health; Indiana Department of Health (IDOH) Tobacco Prevention and Cessation

Description: Indiana Youth Tobacco Survey (IYTS) is conducted to capture tobacco use amongst the youth enrolled in Indiana public schools. The data observed in the IYTS include tobacco use and cessation, exposure to secondhand smoke, along with social and environmental factors that contribute to tobacco use. Within the recent years, data has been included to observe marijuana and e-cigarette use.

Link: <http://www.in.gov/isdh/tpc/2343.htm>; http://www.cdc.gov/tobacco/data_statistics/surveys/NYTS/

Type of Data: Annual, state level

Latest year of data available: 2018

National Survey on Drug Use and Health (NSDUH)

Source: Substance Abuse and Mental Health Services Administration

Description: National Survey on Drug Use and Health is a survey administered to observe data on the misuse of prescription drugs and the prevalence of alcohol, tobacco, illegal drug use, and mental health disorders. NSDUH survey is conducted on state, substate, and national levels with the goal to identify and monitor trends of substance use and assess the need to implement preventative services to at risk populations.

Link: <https://www.samhsa.gov/data/data-we-collect/>

nsduh-national-survey-drug-use-and-health

Type of Data: Annual, national, state, and substate levels

Latest year of data available: 2019-2020

School Suspensions or Expulsions Related to Alcohol, Tobacco, and/or Drug Use

Source: Indiana Department of Education

Description: Data includes in-school suspensions/expulsions due to tobacco, alcohol or drugs.

Link: On-request data from the agency

Type: State level

Latest year of data available: 2020

Treatment Episode Data Set (TEDS)

Source: Substance Abuse and Mental Health Data Archive, Indiana Family and Social Services Administration

Description: TEDS provides information on drug history and demographic information for individuals who currently receive or have received treatment for substance abuse. Data provided for individuals who are 12+ can include hospital admissions and discharge records, substance abuse characteristics, and demographic information such as age, sex, and race/ethnicity. The data are collected from facilities and compiled into state agency data systems.

Link:

Type of Data: Annual, national, state, region level

Latest year of data available: 2019

Youth Risk Behavior Surveillance System (YRBSS)

Source: Center for Disease Control and Prevention

Description: YRBSS is a system of multiple surveys conducted to determine and monitor the prevalence of health-related behaviors amongst youth which can lead to serious and potentially fatal outcomes. The survey is administered on a national level as a school-based survey as well as on a local/state level through education and health agencies. This system of survey focuses on six different categories including behaviors leading to intentional injuries or self-inflicted violence, sexual behaviors leading to unintentional pregnancy and sexually transmitted disease, alcohol, tobacco and drug use, reduced physical activity, and poor dietary behaviors.

Link: <https://www.cdc.gov/healthyyouth/data/yrbs/overview.htm>

Type: Biennially, national, state level

Latest year of data available: 2015 for Indiana

| Data Set | Source | Most Recent Data | How to Obtain |
|---|--|------------------|---|
| Alcohol-Related Disease Impact (ARDI) Database | CDC | 2015-2019 | https://nccd.cdc.gov/DPH_ARDI/default/Default.aspx |
| Automated Reporting Information Exchange System (ARIES) | ISP | 2020 | https://www.ariesportal.com/?icon=fa-home |
| Behavioral Risk Factor Surveillance System (BRFSS) | CDC | 2020 | https://www.cdc.gov/brfss/index.html |
| Indiana Youth Tobacco Survey (IATS) | IDOH/TPC | 2019 | https://www.in.gov/health/tpc/ |
| Indiana College Substance Use Survey (ICSUS) | IRAB | 2021 | https://irab.indiana.edu/current-projects/college-survey/index.html |
| Indiana Youth Survey (INYS) | Indiana University Prevention Insights | 2020 | https://inys.indiana.edu/survey-results |
| Indiana Youth Tobacco Survey (IYTS) | IDOH/TPC | 2018 | http://www.in.gov/isdh/tpc/2343.htm |
| Monitoring the Future (MTF) Survey | NIDA | 2020 | https://nida.nih.gov/research-topics/trends-statistics/monitoring-future |
| Child Removals | IDCS | SFY2021 | On-request data |
| School Suspensions or Expulsions Related to Alcohol, Tobacco, and/or Drug Use | IDOE | 2020 | On-request data |
| National Survey on Drug Use and Health (NSDUH) | SAMHSA | 2019-2020 | https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health |
| Treatment Episode Data Set (TEDS) | SAMHSA | 2019 | https://www.samhsa.gov/data/data-we-collect/teds-treatment-episode-data-set |
| Treatment Episode Data Set (TEDS) | DMHA | SFY2021 | On-request data |
| Youth Risk Behavior Surveillance System (YRBSS) | CDC | 2019 | https://www.cdc.gov/healthyyouth/data/yrbs/overview.htm |

CDC - Centers for Disease Control and Prevention

DMHA - Indiana Division of Mental Health and Addiction

IDCS - Indiana Department of Child Services

IDOE - Indiana Department of Education

IDOH - Indiana Department of Health

IDOH/TPC - Indiana Department of Health - Indiana Tobacco Prevention &

Cessation IRAB - Institute for Research on Addictive Behavior

ISP - Indiana State Police

NIDA - National Institute on Drug Abuse

SAMHSA - Substance Abuse and Mental Health Services Administration

SAMHDA - Substance Abuse and Mental Health Data Archive

Indicators

| Category | Youth or Young Adults Indicators | Adult and Overall Indicators |
|------------|--|--|
| Alcohol | <ul style="list-style-type: none"> - Middle and High School Current Alcohol Use (IYS and Monitoring the Future Survey) - Middle and High School Monthly and Binge Alcohol Use (IYS) - Child Removals Due to Parental Alcohol Abuse (Indiana DCS) - School Suspensions Related to Alcohol Use (Indiana DOE) | <ul style="list-style-type: none"> - Current Alcohol Use (NSDUH) - Alcohol Use Disorder (NSDUH) - Age-adjusted Alcohol-attributable Mortality Rates (CDC Wonder) - Treatment Episodes with Alcohol Use and Dependence at Treatment Admission (TEDS) - Conditions Directly Attributable to Alcohol (ARDI) - Alcohol Use in Past 30 Days (CDC BRFSS) - Alcohol-related collisions - Binge Drinking in Past 30 Days (CDC BRFSS) |
| Tobacco | <ul style="list-style-type: none"> - Middle and High School Tobacco Use (IYTS) - High School Current Use of Cigarettes and Electronic Vapor Products (YBRSS) - Middle and High School Monthly Cigarette and Vaping (IYS and Monitoring the Future Survey) - Past Month Use of Nicotine College Students (ICSUS) - School Suspensions Related to Tobacco Use (Indiana DOE) | <ul style="list-style-type: none"> - Past Month Tobacco Use (NSDUH) - Past Month Cigarette Use (NSDUH) - Adult Smoking Prevalence (BRFSS) - Current Cigarette Use (BRFSS) - High School Current Tobacco Use - Adult Smoking Prevalence and Chronic Disease Outcomes (ATS) |
| Marijuana | <ul style="list-style-type: none"> - High School Current Marijuana Use (YRBSS) - Middle and High School Current Marijuana Use (IYS) | <ul style="list-style-type: none"> - Current Marijuana Use (NSDUH) - Treatment Episodes Marijuana Use and Dependence at Treatment Admission (TEDS) |
| Opioids | <ul style="list-style-type: none"> - High School Used Heroin at Least Once in Lifetime (YRBSS) - Middle and High School Monthly Heroin Use (IYS) | <ul style="list-style-type: none"> - Opioids Dispensed (INSPECT) - Treatment Episodes Prescription Opioid and Dependence at Treatment Admissions (TEDS) - Drug Overdose Deaths (IDOH) - Pain Reliever Use Past Year (NSDUH) - Heroin Use Past Year (NSDUH) |
| Stimulants | <ul style="list-style-type: none"> - Middle and High School Lifetime Use of Cocaine, Meth (YRBSS) - Middle and High School Current Meth and Cocaine Use (IYS and Monitoring the Future Survey) - Children Taken from Meth Lab Homes (Indiana Meth Lab Statistics) | <ul style="list-style-type: none"> - Cocaine Use Past Year (NSDUH) - Clandestine Meth Labs Seized and Arrests Made (Indiana Meth Lab Statistics) - Treatment Episodes Cocain, Meth, and Prescription Stimulant Use and Dependence at Treatment Admissions (TEDS) - Methamphetamine Use Past Year (NSDUH). |

| Category | Youth or Young Adults Indicators | Adult and Overall Indicators |
|---------------|--|---|
| Mental Health | <ul style="list-style-type: none"> - High School Sad or Hopeless (YRBSS) - Middle and High School Sad or Hopeless, Considered Suicide, or Made Suicide Plan in Past 12 Months (IYS) - High School Attempted Suicide in Past Year (YRBSS)" | <ul style="list-style-type: none"> - Demographics of SMI Adults and SED Children Served by Indiana DMHA (SAMHSA) - Age-adjusted Suicide Mortality Rate (CDC Wonder) - Mental Illness or Serious Mental Illness in Past Year (NSDUH) - At Least One Major Depressive Episode in the Past Year (NSDUH) - History of Depression (BRFSS) - Mental Health Indicators (BRFSS) |

Details of Indicators

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------|------------------|--|---|-------------------------|-----------------------|
| 2 | Alcohol | Alcohol | Figure 2.1 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Current Alcohol Use (National Survey on Drug Use and Health, 2009–2020) | SAMHSA, 2021 | 2020 | 10 |
| 2 | | Alcohol | Figure 2.2 | Percentage of Indiana Population Reporting Current Alcohol Use by Age Group (National Survey on Drug Use and Health, 2009–2020) | SAMHSA, 2021 | 2020 | 10 |
| 2 | | Alcohol | Figure 2.3 | Current Binge Drinking in Indiana and the U.S. by Age Group (National Survey on Drug Use and Health, 2020) | SAMHSA, 2021 | 2020 | 11 |
| 2 | | Alcohol | Table 2.1 | Percentage of Indiana Adults Having Used Alcohol in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2020) | CDC, 2021 | 2020 | 11 |
| 2 | | Alcohol | Figure 2.4 | Percentage of Indiana and U.S. Adults Reporting Binge Drinking in the Past 30 Days (Behavioral Risk Factor Surveillance System, 2012–2020) | CDC, 2021 | 2020 | 12 |
| 2 | | Alcohol | Table 2.2 | Percentage of Indiana Residents Who Engaged in Binge Drinking in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2020) | CDC, 2021 | 2020 | 12 |
| 2 | | Alcohol | Figure 2.5 | Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2020) | Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020 | 2020 | 13 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------|------------------|---|---|-------------------------|-----------------------|
| 2 | | Alcohol | Figure 2.6 | Percentage of Indiana and U.S. High School Seniors (12th Grade) Reporting Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2011–2020) | Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020 | 2020 | 14 |
| 2 | | Alcohol | Figure 2.7 | Percentage of Indiana and U.S. Population Ages 12 and Older with Alcohol Use Disorder (National Survey on Drug Use and Health, 2009–2020) | SAMHSA, 2021 | 2020 | 15 |
| 2 | | Alcohol | Figure 2.8 | Percentage of Treatment Episodes in Indiana and the United States with Alcohol Use and Alcohol Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2008–2019) | SAMHDA, 2021 | 2019 | 15 |
| 2 | | Alcohol | Table 2.3 | Percentage of Treatment Episodes in Indiana with Alcohol Use and Alcohol Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019) | SAMHDA, 2021 | 2019 | 16 |
| 2 | | Alcohol | Figure 2.9 | Age-Adjusted Alcohol-attributable Mortality Rates per 100,000 Population in Indiana and the United States (CDC WONDER, 2009–2020) | CDC, 1999-2020 | 2020 | 17 |
| 2 | | Alcohol | APPENDIX 2A | Percentage of Indiana Students Reporting Monthly and Binge Alcohol Use, by Region and Grade (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 19 |
| 2 | | Alcohol | APPENDIX 2B | Number of Treatment Episodes with Alcohol Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2021) | Indiana Family and Social Services Administration, 2022 | 2021 | 20 |
| 2 | | Alcohol | APPENDIX 2C | Conditions that are Directly Attributable to Alcohol in Indiana (Alcohol-Related Disease Impact, Based on Averages from 2011-2015) | Centers for Disease Control and Prevention, 2011-2015 | 2019 | 23 |
| 2 | | Alcohol | APPENDIX 2D | Number and Rate (per 1,000) of All and Fatal Alcohol-Related Collisions in Indiana, by County (Automated Reporting Information Exchange System, 2020) | Indiana State Police, 2022 | 2020 | 24 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------|------------------|--|--|-------------------------|-----------------------|
| 2 | | Alcohol | APPENDIX 2E | Child Removals, Total and Due to Parental Alcohol Abuse, SFY 2021 | Indiana Department of Child Services, 2022 | 2021 | 27 |
| 2 | | Alcohol | APPENDIX 2F | School Suspensions or Expulsions Related to Alcohol, Tobacco, and/or Drug Use (2020) | Indiana Department of Education, 2021 | 2020 | 28 |
| 3 | Tobacco | Tobacco | Figure 3.1 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Any Tobacco Use in the Past Month (National Survey on Drug Use and Health, 2010–2020) | SAMHSA, 2021 | 2020 | 34 |
| 3 | | Tobacco | Figure 3.2 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cigarette Use in the Past Month (National Survey on Drug Use and Health, 2010–2020) | SAMHSA, 2021 | 2020 | 34 |
| 3 | | Tobacco | Figure 3.3 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cigarette Use in the Past Month (National Survey on Drug Use and Health, 2020) | SAMHSA, 2021 | 2020 | 35 |
| 3 | | Tobacco | Figure 3.4 | Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Current Cigarette Use (Behavioral Risk Factor Surveillance System, 2012–2020) | CDC, 2021 | 2020 | 35 |
| 3 | | Tobacco | Table 3.1 | Adult Smoking Prevalence in Indiana, by Gender, Race/Ethnicity, Age Group, Educational Attainment, and Income Level (Behavioral Risk Factor Surveillance System, 2020) | CDC, 2021 | 2020 | 36 |
| 3 | | Tobacco | Table 3.2 | Intentions to Quit Smoking among Current Smokers (Indiana Adult Tobacco Survey, 2019) | IDOH/TPC, 2020 | 2019 | 37 |
| 3 | | Tobacco | Figure 3.5 | Tobacco Use among Indiana High School Students (9th–12th Grade) (Indiana Youth Tobacco Survey, 2004–2018) | IDOH/TPC, 2020 | 2018 | 38 |
| 3 | | Tobacco | Figure 3.6 | Percentage of Indiana Middle School and High School Students Reporting Current Tobacco and Cigarette Use (Indiana Youth Tobacco Survey, 2004–2018) | IDOH/TPC, 2020 | 2018 | 38 |
| 3 | | Tobacco | Table 3.3 | Current Use of Tobacco Products in Indiana and U.S. High School Students (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991–2019 | 2015 | 39 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------|----------------------|--|---|-------------------------|-----------------------|
| 3 | | Tobacco | Figure 3.7 | Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th–12th Grade), by Gender (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 39 |
| 3 | | Tobacco | Figure 3.8 | Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th–12th Grade), by Race/Ethnicity (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 40 |
| 3 | | Tobacco | Figure 3.9 | Rates of Current Use of Cigarettes and Electronic Vapor Products in Indiana High School Students (9th– 12th Grade), by Grade (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 40 |
| 3 | | Tobacco | Figure 3.10 | Monthly Cigarette Use and Vaping among 8th, 10th, and 12th Grade Students, Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2020) | Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020 | 2020 | 41 |
| 3 | | Tobacco | Figure 3.11 | Monthly Cigarette Use and Vaping among 12th Grade Students in Indiana and the United States (Indiana Youth Survey: 2010–2020; and Monitoring the Future Survey, 2010–2020) | Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020 | 2020 | 42 |
| 3 | | Tobacco | Table 3.4 | Rates of Past-Month Use of Nicotine Products among Indiana College Students (Indiana College Substance Use Survey, 2021) | King & Jun, 2021 | 2021 | 42 |
| 3 | | Tobacco | Figure 3.12 | Percentage of Smoke-free Homes and Workplaces in Indiana (Adult Tobacco Survey, 2002–2019) | ISDH/TPC, 2020 | 2019 | 44 |
| 3 | | Tobacco | APPENDIX 3A | Percentage of Indiana Middle School and High School Students Who Currently Use Cigarettes, E-Cigarettes, or Smokeless Tobacco by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2020) | IDOH/TPC, 2020 | 2020 | 45 |
| 3 | | Tobacco | APPENDIX 3B - Part 1 | Percentage of Indiana Students Reporting Monthly Cigarette Use, by Region and Grade (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 46 |

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|---------|-----------|-----------|----------------------|--|---------------------------------------|-------------------------|-----------------------|
| 3 | | Tobacco | APPENDIX 3B - Part 2 | Percentage of Indiana Students Reporting Monthly E-Cigarette Use, by Region and Grade (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 46 |
| 3 | | Tobacco | APPENDIX 3C | Number of Incidents and Unique Students Involved in Suspensions/Expulsions due to Tobacco Use in Indiana, Academic Year 2019-20 | Indiana Department of Education, 2019 | 2020 | 47 |
| 3 | | Tobacco | APPENDIX 3D - Part 1 | Adult Smoking Prevalence and Chronic Disease Outcomes, by County | IDOH/TPC, 2021 | 2020 | 49 |
| 3 | | Tobacco | APPENDIX 3D - Part 2 | | IDOH/TPC, 2021 | 2020 | 52 |
| 4 | Marijuana | Marijuana | Figure 4.1 | Percentage of Indiana and U.S. Population (Ages 12 and Older) Reporting Current Marijuana Use (National Survey on Drug Use and Health, 2020) | SAMHSA, 2021 | 2020 | 58 |
| 4 | | Marijuana | Figure 4.2 | Percentage of Indiana Residents Reporting Current Marijuana Use, by Age Group (National Survey on Drug Use and Health, 2008–2020) | SAMHSA, 2021 | 2020 | 58 |
| 4 | | Marijuana | Figure 4.3 | Percentage of Indiana and U.S. High School Students Currently Using Marijuana (Youth Risk Behavior Surveillance System, 2003–2019) | CDC, 1991-2019 | 2019 | 59 |
| 4 | | Marijuana | Table 4.1 | Percentage of Indiana and U.S. High School Students Reporting Current (Past Month) Marijuana Use, by Grade, Gender, and Race/Ethnicity (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 60 |
| 4 | | Marijuana | Figure 4.4 | Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use (Indiana Youth Survey and Monitoring the Future Survey, 2009–2020) | Gassman et al., 2020; ICPSR, 2020 | 2020 | 60 |
| 4 | | Marijuana | Figure 4.5 | Percentage of Indiana and U.S. Treatment Episodes with Marijuana Use and Marijuana Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2007–2019) | SAMHDA, 2021 | 2019 | 61 |
| 4 | | Marijuana | Table 4.2 | Percentage of Indiana Treatment Admissions with Reported Marijuana Use and Dependence, by Gender, Race, and Age Group (Treatment Episode Data Set, 2019) | SAMHDA, 2021 | 2019 | 62 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|--------------------|------------------|---|---|-------------------------|-----------------------|
| 4 | | Marijuana | APPENDIX 4A | Percentage of Indiana Students Reporting Monthly Marijuana Use, by Region and Grade (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 64 |
| 4 | | Marijuana | APPENDIX 4B | Number of Treatment Admissions with Marijuana Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/ Treatment Episode Data Set, SFY 2021) | Indiana Family and Social Services Administration, 2022 | 2021 | 65 |
| 5 | Opioids | Prescription Drugs | Figure 5.1 | Number and Rate (per 1,000 Population) of Opioids Dispensed in Indiana per Quarter (INSPECT, 2017-2021) | IDOH, 2021a | 2021 | 72 |
| 5 | | Prescription Drugs | Figure 5.2 | Prevalence of Past-Year Pain Reliever Use in Indiana and the United States, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 72 |
| 5 | | Heroin | Figure 5.3 | Percentage of Indiana and U.S. Population (12 years and older) Reporting Past-Year Heroin Use, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 73 |
| 5 | | Heroin | Figure 5.4 | Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Who Have Used Heroin at Least Once During their Lifetime (Youth Risk Behavior Surveillance System, 2003-2019) | CDC, 1991-2019 | 2019 | 74 |
| 5 | | Heroin | Figure 5.5 | Percentage of Indiana 7th through 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 74 |
| 5 | | Heroin | Figure 5.6 | Percentage of Indiana and U.S. 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey and Monitoring the Future Survey, 2009-2020) | Gassman et al., 2020; Inter-university Consortium for Political and Social Research, University of Michigan, 2020 | 2020 | 75 |
| 5 | | Prescription Drugs | Table 5.1 | Percentage of Indiana Treatment Episodes with Prescription Opioid Misuse and Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019) | SAMHDA, 2021 | 2019 | 76 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|------------|--------------------|------------------|---|---|-------------------------|-----------------------|
| 5 | | Prescription Drugs | Figure 5.7 | Percentage of Indiana and U.S. Treatment Episodes with Prescription Opioid Misuse and Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2009–2019) | SAMHDA, 2021 | 2019 | 77 |
| 5 | | Heroin | Figure 5.8 | Percentage of Indiana and U.S. Treatment Episodes with Heroin Use and Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2009–2019) | SAMHDA, 2021 | 2019 | 77 |
| 5 | | Heroin | Table 5.2 | Percentage of Indiana Treatment Episodes with Heroin Use and Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019) | SAMHDA, 2021 | 2019 | 78 |
| 5 | | All Opioids | Figure 5.9 | Drug Overdose Deaths Involving Opioids, Rate per 100,000 Population (Indiana, 2011–2020) | IDOH, 2022b | 2020 | 79 |
| 5 | | Prescription Drugs | APPENDIX 5A | Number and Rate (per 1,000 Population) of Opioid Dispensations in Indiana, by County of Patient's Residence (INSPECT, 2021) | INSPECT, 2021 | 2021 | 81 |
| 5 | | Heroin | APPENDIX 5B | Percentage of Indiana Students Reporting Monthly Heroin Use, by Region and Grade (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 83 |
| 5 | | All Opioids | APPENDIX 5C | Number of Treatment Episodes with Prescription (Rx) Opioid Misuse and Dependence and Heroin Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2020) | Indiana Family and Social Services Administration, 2020 | 2020 | 84 |
| 6 | Stimulants | Cocaine | Figure 6.1 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cocaine Use in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 90 |
| 6 | | Cocaine | Figure 6.2 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cocaine Use in the Past Year (National Survey on Drug Use and Health, 2009-2020) | SAMHSA, 2021 | 2020 | 90 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------------------------|------------------|---|-----------------------------------|-------------------------|-----------------------|
| 6 | | Methamphetamine | Figure 6.3 | Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Methamphetamine Use in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 91 |
| 6 | | Cocaine and Methamphetamine | Table 6.1 | Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Lifetime Cocaine or Methamphetamine Use, by Gender, Race/Ethnicity, and Grade (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 92 |
| 6 | | Cocaine and Methamphetamine | Figure 6.4 | Percentage of Indiana and U.S. High School Students (9th-12th Grade) Reporting Lifetime Methamphetamine Use (Youth Risk Behavior Surveillance System, 2003-2019) | CDC, 1991-2019 | 2019 | 92 |
| 6 | | Cocaine | Figure 6.5 | Percentage of 8th, 10th, and 12th Grade Students Reporting Current Cocaine/Crack Use (Indiana Youth Survey and Monitoring the Future Survey, 2009-2020) | Gassman et al., 2020; ICPSR, 2020 | 2020 | 93 |
| 6 | | Methamphetamine | Figure 6.6 | Percentage of 8th, 10th, and 12th Grade Students Reporting Current Meth Use (Indiana Youth Survey and Monitoring the Future Survey, 2009-2020) | Gassman et al., 2020; ICPSR, 2020 | 2020 | 94 |
| 6 | | All Stimulants | Table 6.2 | Stimulant Misuse and Dependence (Primary Use) Reported at Substance Use Treatment Admission in Indiana, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2019) | SAMHSA, 2021 | 2019 | 95 |
| 6 | | Methamphetamine | Figure 6.7 | Percentage of Treatment Episodes with Reported Meth Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019) | SAMHDA, 2021 | 2019 | 95 |
| 6 | | Cocaine | Figure 6.8 | Percentage of Treatment Episodes with Reported Cocaine Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019) | SAMHDA, 2021 | 2019 | 96 |
| 6 | | Prescription Drugs | Figure 6.9 | Percentage of Treatment Episodes with Reported Prescription Stimulant Use and Dependence, Indiana and the United States (Treatment Episode Data Set, 2008-2019) | SAMHDA, 2021 | 2019 | 96 |

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|---------|---------------|-----------------------------|------------------|--|---|-------------------------|-----------------------|
| 6 | | Methamphetamine | Figure 6.10 | Number of Clandestine Methamphetamine Labs Seized and Number of Arrests Made at Methamphetamine Labs by the Indiana Law Enforcement Agencies (Indiana Meth Lab Statistics, 2010-2021) | ISP, 2021 | 2021 | 97 |
| 6 | | Methamphetamine | Figure 6.11 | Number of Indiana Children Taken by the Indiana State Police from Methamphetamine Lab Homes (Indiana Meth Lab Statistics, 2010-2021) | ISP, 2021 | 2021 | 98 |
| 6 | | Cocaine and Methamphetamine | APPENDIX 6A | Percentage of Indiana Students Reporting Monthly Cocaine and Methamphetamine Use, by Region and Grade (Indiana Youth Survey, 2018) | Gassman et al., 2020 | 2018 | 99 |
| 6 | | All Stimulants | APPENDIX 6B | Number of Treatment Episodes with Cocaine, Meth, and Prescription Stimulant Use and Dependence Reported at Treatment Admission in Indiana, by County (Treatment Episode Data Set, SFY 2021) | Indiana Family and Social Services Administration, 2022 | 2021 | 100 |
| 7 | Mental Health | | Figure 7.1 | Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 105 |
| 7 | | | Figure 7.2 | Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year (National Survey on Drug Use and Health, 2010-2020) | SAMHSA, 2021 | 2020 | 105 |
| 7 | | | Figure 7.3 | Percentage of Indiana and U.S. Population Reporting at Least One Major Depressive Episode in the Past Year, by Age Group (National Survey on Drug Use and Health, 2019-2020) | SAMHSA, 2021 | 2020 | 106 |
| 7 | | | Figure 7.4 | Percentage of Indiana and U.S. Population (18 Years and Older) Reporting at Least One Major Depressive Episode in the Past Year (National Survey on Drug Use and Health, 2009-2020) | SAMHSA, 2021 | 2020 | 107 |
| 7 | | | Table 7.1 | Percentage of Indiana Population (18 Years and Older) Reporting a History of Depression (Behavioral Risk Factor Surveillance System, 2020) | CDC, 2021 | 2020 | 107 |

| Chapter | Category | Substance | Report Reference | Reference Name | Source | 2021 Report Latest Year | Page number of report |
|---------|----------|-----------|------------------|--|---|-------------------------|-----------------------|
| 7 | | | Table 7.2 | Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Feeling Sad or Hopeless (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 108 |
| 7 | | | Figure 7.5 | Percentage of Students who Experienced Feeling Sad or Hopeless, Considered Suicide, or Made a Suicide Plan in the Past 12 Months, Grades 6 through 12 (Indiana Youth Survey, 2020) | Gassman et al., 2020 | 2020 | 109 |
| 7 | | | Table 7.3 | Demographic Characteristics of Adults with SMI and Children with SED Served by the Indiana Division of Mental Health and Addiction, FY 2020 | SAMHSA/CMHS, 2020 | 2020 | 110 |
| 7 | | | Table 7.4 | Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Attempting Suicide in the Past Year (Youth Risk Behavior Surveillance System, 2015) | CDC, 1991-2019 | 2015 | 111 |
| 7 | | | Figure 7.6 | Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 2009–2020) | CDC, 1999-2020 | 2020 | 111 |
| 7 | | | Table 7.5 | Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, combined data from 1999-2019) | CDC, 1999-2019 | 1999-2020 | 112 |
| 7 | | | Map 7.1 | Age-Adjusted Annual Suicide Mortality Rates per 100,000 Population in Indiana, by County (CDC Wonder, pooled data from 1999–2019) | CDC, 1999-2019 | 1999-2020 | 112 |
| 7 | | | APPENDIX 7A | Mental Health Indicators in Indiana, by County (Behavioral Risk Factor Surveillance System, 2019) | County Health Rankings & Roadmaps, 2022 | 2019 | 113 |

APPENDIX III

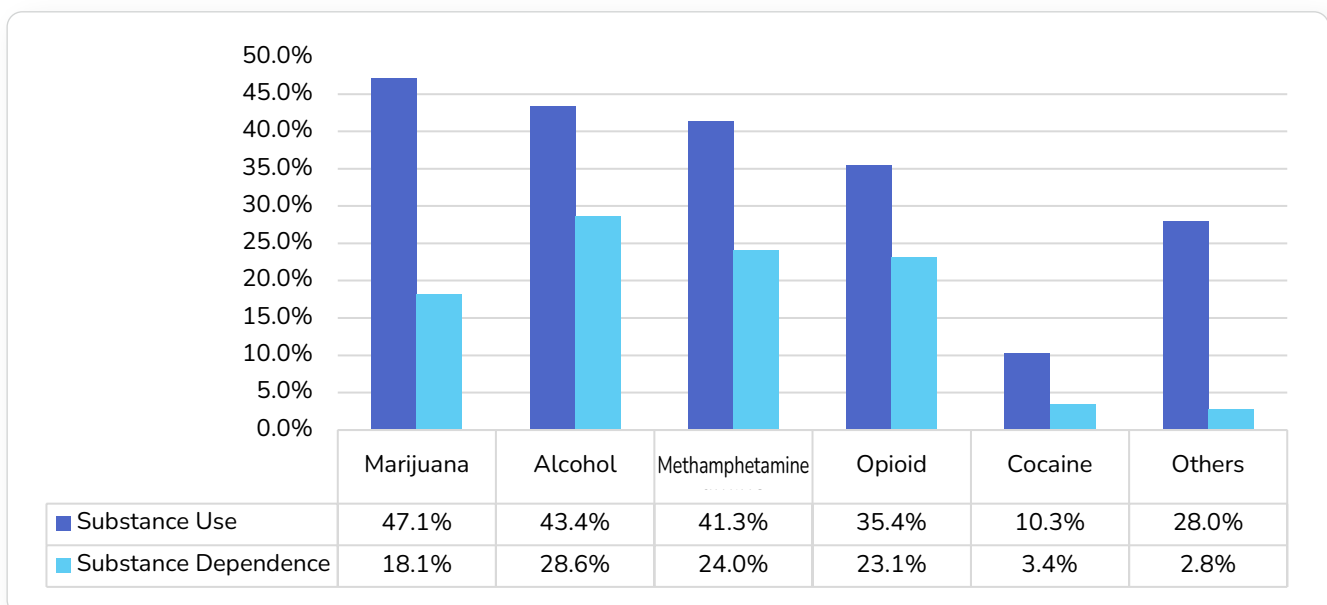
Polysubstance Use

Using the treatment episode dataset on admissions, we first estimate the usage of 11 categories of drugs/substances such as alcohol, marijuana, cocaine, methamphetamine, opioid (consists of heroin, nonprescription methadone, other opiates, and synthetics including fentanyl), prescription stimulants (other amphetamines and other stimulants), hallucinogens (consists of Phencyclidine and hallucinogens), sedatives (contains benzodiazepines, barbiturates, other sedatives or hypnotics), and other drugs (other tranquilizers, inhalants, over-the-counter medications).¹

We then identify the top 5 substances that the patients used in the Indiana treatment episodes admission dataset in SFY 2021 either as a primary, secondary, or tertiary drug. Figure IIIA shows the top 5 substances used (primary, secondary or tertiary use) and their corresponding drug dependence (primary use). We find that from the 23,573-treatment episode admissions dataset, marijuana, alcohol, methamphetamine, opioid, and cocaine were among the top 5 substances reportedly used by the patients in terms of dependence (primary use) or any use (primary or secondary or tertiary).¹

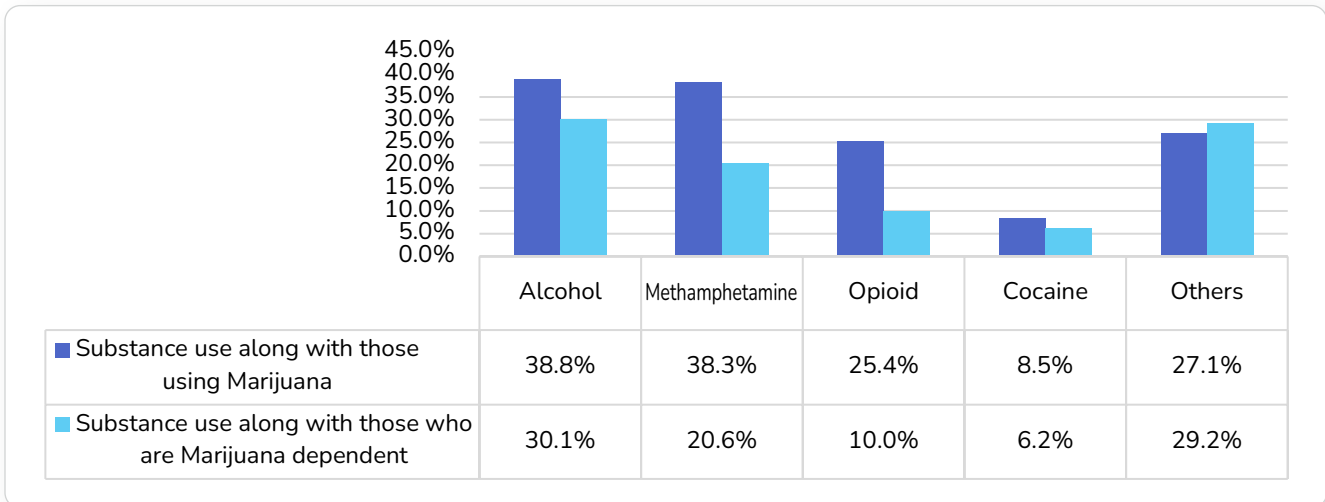
Next, for each of these top 5 substances, we estimate the polysubstance use across other drugs. Figures IIIB to IIIF show the substance use along with those reportedly using a particular substance as a primary/secondary/tertiary use. The figures also show the substance use among those who used a primary substance in the treatment episode data. We find that among those using marijuana, 38.8% of admissions reported consuming alcohol, followed by methamphetamine (38.3%) and opioids (25.4%). Among users of alcohol, about 42.2% of admissions reported marijuana use, 21.6% methamphetamine use and 14.9% opioid use. With methamphetamine users, the incidence of marijuana and opioid use was high with about 43.6% of admissions reporting their use, followed by 22.6% using alcohol. Among opioid users, 50.8% of admissions reported using methamphetamine, followed by marijuana (33.8%) and alcohol (18.3%). Finally, among cocaine users, 43% reported using alcohol, 39.1% used marijuana, and 32.5% used opioids.¹

Figure IIIA. Top 5 substance use and dependence reported at Indiana treatment episode data (Treatment Episode Dataset, SFY 2021)



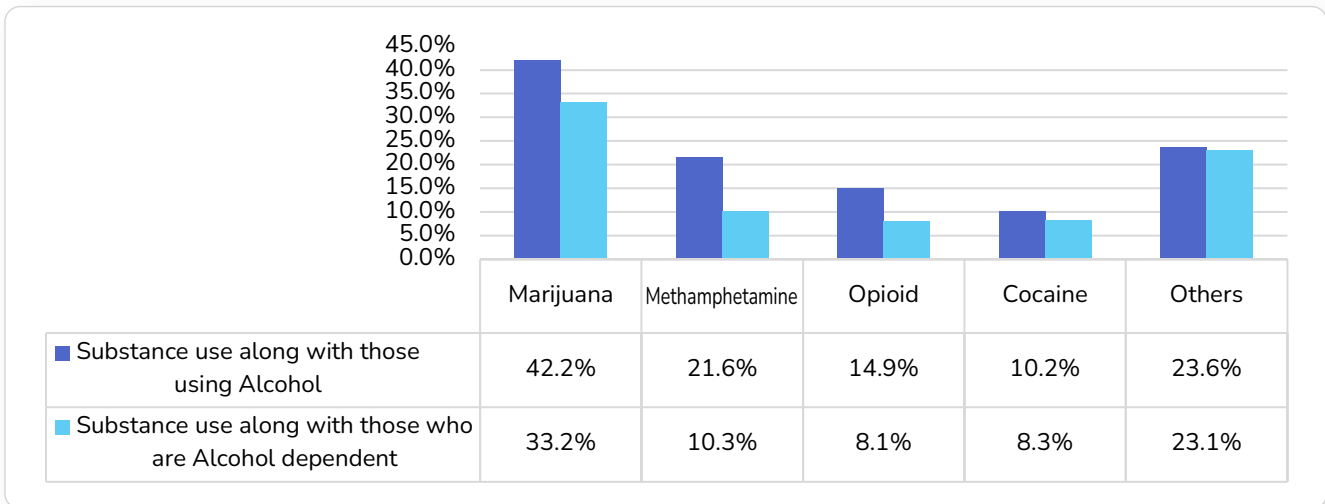
Source: Indiana Family and Social Service Administration, 2021¹

Figure IIIB. Substances involving marijuana-related polysubstance use (Treatment Episode Dataset, SFY 2021)



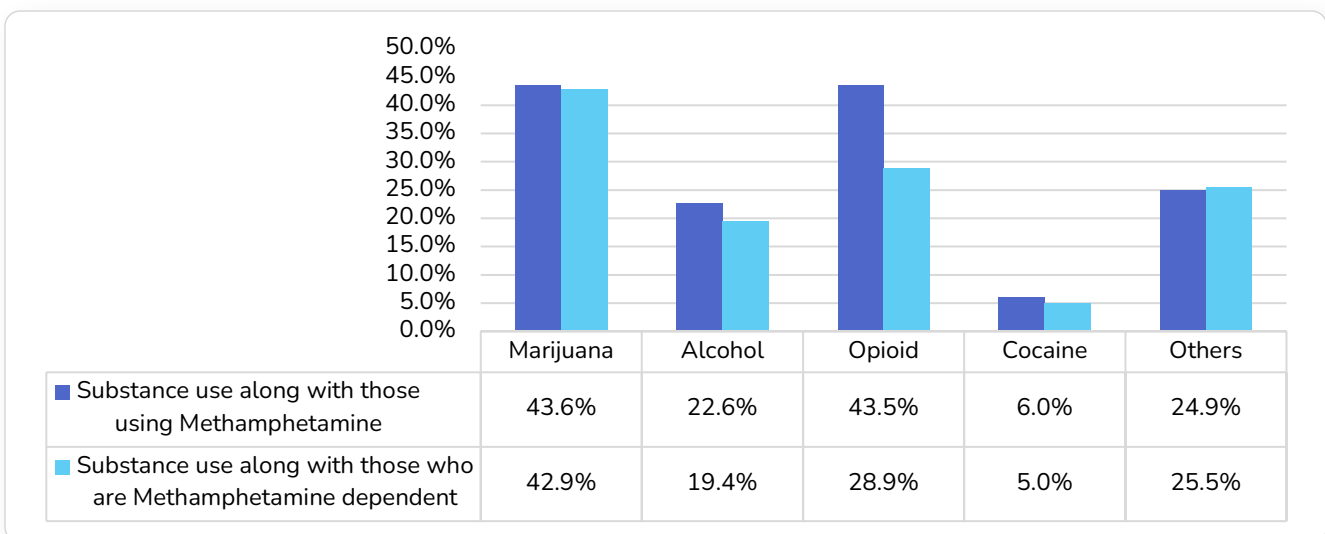
Source: Indiana Family and Social Service Administration, 2021¹

Figure IIIC. Substances involving alcohol-related polysubstance use (Treatment Episode Dataset, SFY 2021)



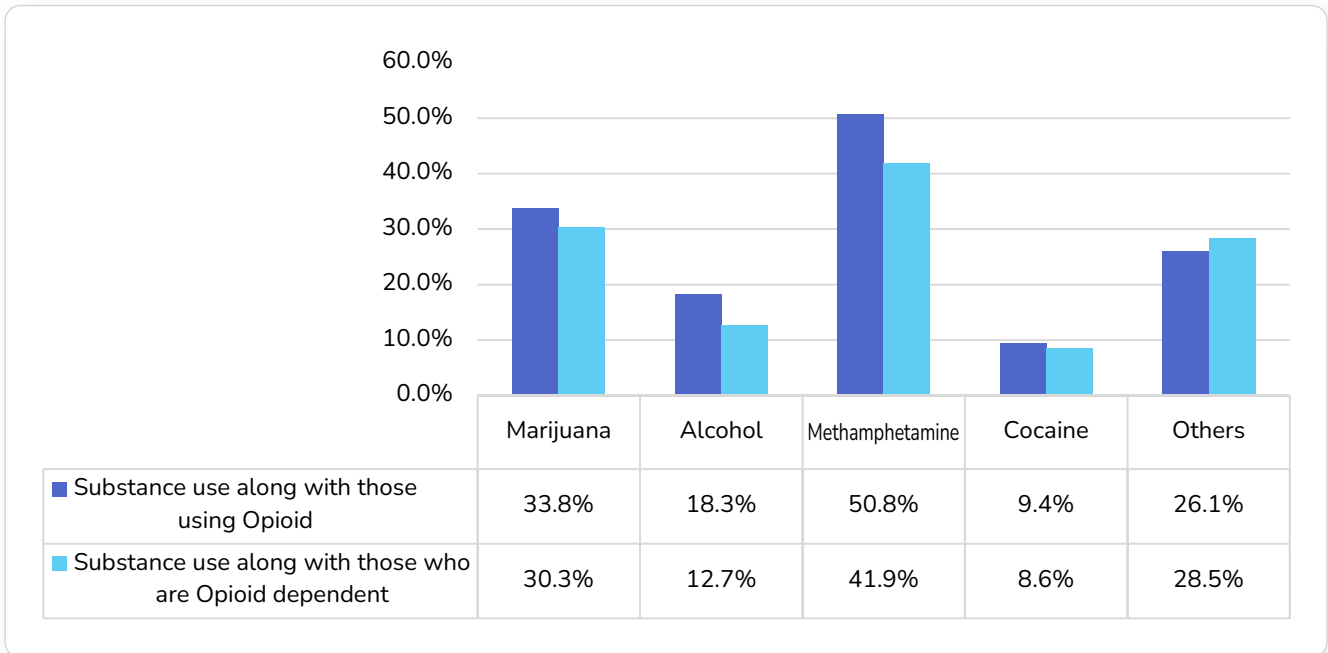
Source: Indiana Family and Social Service Administration, 2021¹

Figure IIID. Substances involving methamphetamine-related polysubstance use (Treatment Episode Dataset, SFY 2021)



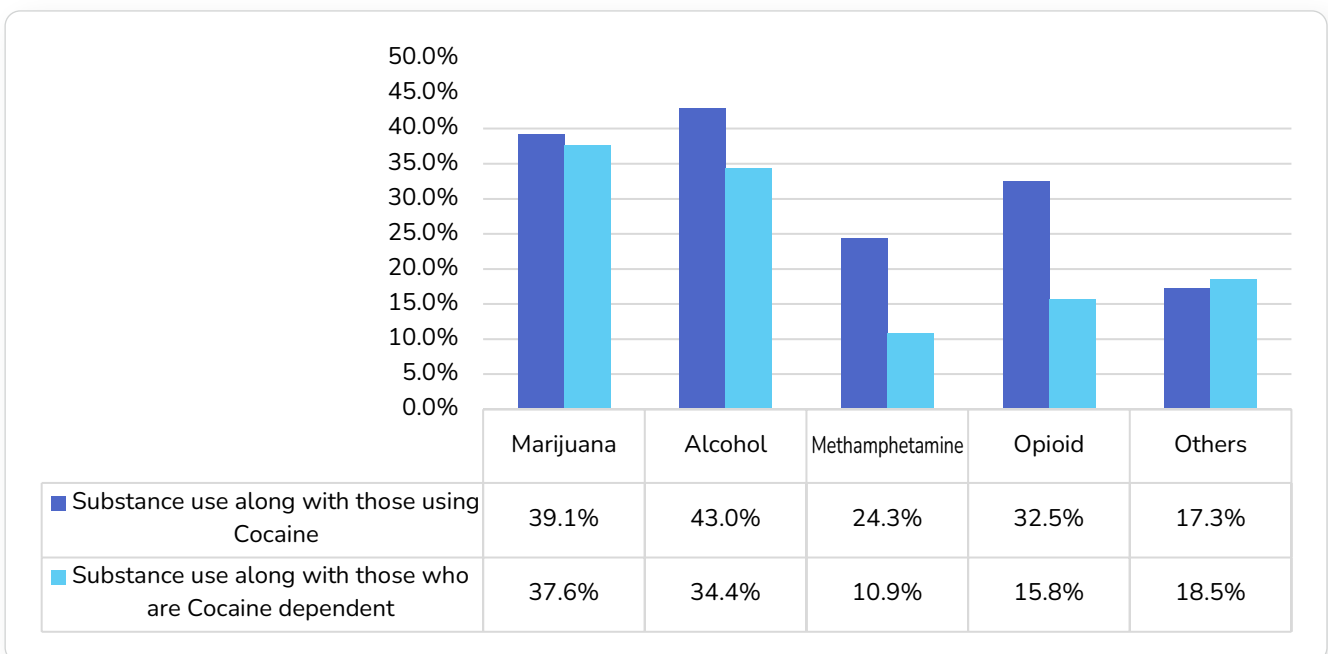
Source: Indiana Family and Social Service Administration, 2021¹

Figure IIIE. Substances involving opioid-related polysubstance use (Treatment Episode Dataset, SFY 2021)



Source: Indiana Family and Social Service Administration, 2021

Figure IIIF. Substances involving cocaine-related polysubstance use (Treatment Episode Dataset, SFY 2021)¹



Source: Indiana Family and Social Service Administration, 2021

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Indiana Family and Social Services Administration. (2021). Treatment Episode Data Set SFY 2021, Indiana Division of Mental Health and Addiction, Family and Social Services Administration. DMHA. Retrieved June 9, 2022, from <https://www.in.gov/fssa/dmha/>



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