MARIJUANA COCAINE
PRESCRIPTION DRUGS

The Consumption and Consequences of Alcohol, Tobacco, and Drugs in Indiana: A State Epidemiological Profile 2015

Indiana State Epidemiology and Outcomes Workgroup

RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH
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Center for Health Policy
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CHP CENTER FOR HEALTH POLICY

TOBACCO HEROIN
METHAMPHETAMINE
ALCOHOL

THE CONSUMPTION AND CONSEQUENCES OF ALCOHOL, TOBACCO, AND DRUGS IN INDIANA: A STATE EPIDEMIOLOGICAL PROFILE 2015

Developed by the Indiana State Epidemiology and Outcomes Workgroup, 2015

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.

This document, written for state policymakers and community leaders, presents data and analyses to support the development of a framework for advancing the mission of the Indiana Substance Abuse Prevention System.

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Improving Community Health Through Policy Research

About the SEOW Support Team and the Center for Health Policy

This report was developed by the SEOW Support Team headed by
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The other members of the SEOW Support Team are analysts at the Center for Health Policy, including:
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The mission of the Center for Health Policy (CHP) is to conduct research on critical health-related issues and translate data into evidence-based policy recommendations to improve community health. The CHP faculty and staff collaborate with public and private partners to conduct quality data-driven program evaluation and applied research analysis on relevant public health issues. The Center serves as a bridge between academic health researchers and federal, state, and local government as well as healthcare and community organizations.

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INTRODUCTION

In July 2005, Indiana's Office of the Governor received a grant from the U.S. Department of Health and Human Services' Center for Substance Abuse Prevention (CSAP) as part of CSAP's Strategic Prevention Framework State Incentive Grant (SPF SIG) program. The SPF SIG program represented a continuation of ongoing CSAP initiatives encouraging states to engage in data-based decision-making in the area of substance abuse prevention planning and grant making.

This grant was made on the heels of an earlier CSAP State Incentive Grant (SIG), which layed much of the groundwork for this new initiative. A great deal of work was completed under the first SIG to assess substance abuse prevention services and develop a strategic framework to guide policymaking in this area for the 21st century. The final report summarizing the outcomes of this work, entitled ***Imagine Indiana Together: The Framework to Advance the Indiana Substance Abuse Prevention System***, was prepared by the Governor's Advisory Panel within the Division of Mental Health and Addiction (DMHA), Indiana Family and Social Services Administration. This report is available from DMHA and the Indiana Prevention Resource Center at Indiana University Bloomington.

As a requirement of the SPF SIG initiative, the State established a State Epidemiology and Outcomes Workgroup (SEOW) to facilitate data-based decision-making regarding substance abuse prevention programming through the collection, analysis, and reporting of available epidemiological data. After the end of the Indiana SPF SIG in 2010, the State decided to continue supporting the work of the SEOW as part of its long-term efforts to improve substance abuse prevention policy.

This report represents the tenth official *State Epidemiological Profile* completed by the SEOW. As in past years, we have updated the core set of analyses to reflect the most recent data available. In order to make the report most useful for state and local policymakers and service providers, we present detailed information and descriptive analyses regarding the patterns and consequences of substance use both for the state and, whenever possible, each of Indiana's 92 counties. Prescription drug abuse remains a significant problem in Indiana, and we continue to work closely with the State Board of Pharmacy, reviewing data on dispensation of controlled substances to identify geographic patterns.

As with our prior reports, our primary aim in preparing this annual document is to provide a useful reference tool for policymakers, communities, and professionals involved in substance abuse prevention and mental health promotion. We realize not everyone has the time or energy to review the contents in detail. For this reason, we again are offering a chart pack of the graphs and figures and a series of fact sheets on each of the

major substances. This report, as well as earlier versions and these supplemental resources, are available on the Center for Health Policy website (www.healthpolicy.iupui.edu). The website also has links to a series of issue briefs on critical topics related to drug abuse that are developed each year as part of the SEOW's work.

We appreciate your interest and leadership in addressing the problem of substance abuse in Indiana, and, as always, we welcome your feedback on this report and our work.

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DATA HIGHLIGHTS

ALCOHOL

Alcohol is the most frequently used drug in both Indiana and the United States. Over half of the population 12 years and older reported current (past month) use (IN: 51.1%; U.S.: 52.4%) (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014).

An estimated 62.2% of Indiana college students currently drink alcohol (King & Jun, 2015).[1] Potentially dangerous uses of alcohol include binge, heavy, and underage drinking, combining alcohol with driving, and combining alcohol with other drug use.

Binge Drinking

Binge drinking is defined as consuming five or more drinks on the same occasion at least once in the past month. The 30-day prevalence for binge drinking in the population 12 years and older was similar between Indiana (21.8%) and the United States (22.9%). The highest rate was found among 18- to 25-year-olds (IN: 39.5%; U.S.: 37.8%) (SAMHSA, 2014).

Among Indiana college students, the past-month binge drinking prevalence was an estimated 45.8% (King & Jun, 2015).

Heavy Drinking

Heavy drinking is defined differently for men and women by the Centers for Disease Control and Prevention (CDC). For adult men, it is defined as having more than two drinks per day, and for adult women, having more than one drink per day. Overall rates for heavy use were significantly lower in Indiana (5.2%) and the United States (6.2%). No significant difference was found on prevalence of heavy use between Hoosier men (6.1%) and women (4.4%). Heavy use decreased with age, and adults 65 years and older reported the lowest prevalence (2.9%). Estimates for heavy drinking in Indiana based on race/ethnicity were only available for Whites (5.2%) and Hispanics (6.2%) (CDC, 2015a).

Youth Consumption—Underage Drinking

The rates for underage drinking in Indiana and the nation were statistically similar. In Indiana, 11.4% of 12- to 17-year-old youths reported that they had consumed alcohol in the past 30 days (U.S.: 11.5%).

In the age category of 12- to 20-year-olds, the numbers were even higher: 22.8% of young Hoosiers reported current use of alcohol (U.S.: 22.7%), and 14.1% stated that they engaged in binge drinking (U.S.: 14.0%) (SAMHSA, 2014).

An estimated one in three high school students (grades 9 through 12) reported current alcohol use (IN: 33.4%; U.S.: 38.7%), and one in five admitted to binge drinking in the past month (IN: 19.8%; U.S.: 21.9%). Indiana and the nation were similar on both measures (CDC, 2016b).

Alcohol Abuse and Dependence

The population-based rates for alcohol abuse and/or dependence were similar in Indiana (6.7%) and the nation (6.5%). The most affected age group encompassed 18- to 25-year-olds (IN: 13.3%; U.S.: 12.6%). The percentages of individuals ages 12 and older needing but not receiving treatment for alcohol use in the past year were also comparable (IN: 6.4%; U.S.: 6.2%) (SAMHSA, 2014).

According to treatment data, alcohol was responsible for the largest percentage of admissions to substance abuse treatment facilities in 2013. Indiana's treatment episodes in which alcohol dependence was reported at treatment admission (38.0%) was comparable to the nation's (37.5%) (SAMHSA, 2013a).

Morbidity and Mortality

Between 2000 and 2014, a total of 5,883 Hoosiers died from alcohol-induced causes. In 2014, Indiana's age-adjusted mortality rate for alcohol-attributable deaths was 8.1 per 100,000 population (U.S.: 8.5 per 100,000 population) (CDC, 2016a). Tables 1.1 and 1.2 list conditions that can be attributed to alcohol use.

Motor Vehicle Crashes

In Indiana, the number of alcohol-related collisions decreased from 13,911 in 2003 to 8,018 in 2014. Also, the number of fatalities in crashes attributable to alcohol

[1]Twelve Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

declined from 242 to 153 during those same years. The 2014 overall annual rate for alcohol-related collisions in Indiana was 1.2 per 1,000 population (Indiana State Police (ISP), 2014).

Legal Consequences

Indiana's 2012 arrest rates per 1,000 population were significantly higher than the nation's for public intoxication (IN: 2.3; U.S.: 1.3) and liquor law violations (IN: 2.0; U.S.: 1.2), but were similar for driving under the influence (IN: 3.6; U.S.: 3.5) (Federal Bureau of Investigation (FBI), 2012).

TOBACCO

Cigarette smoking remains the leading cause of preventable death in the United States, accounting for approximately one of every five deaths (U.S. Department of Health and Human Services (USDHHS), 2014). In Indiana, nearly one-third of the population ages 12 years and older (29.8%) said they used a tobacco product in the past month (U.S.: 25.4%). The age group with the highest rate of use was 18- to 25-year-olds (IN: 43.3%; U.S.: 36.0%). Most tobacco consumption involved cigarettes. Indiana's past-month cigarette smoking prevalence among individuals ages 12 years and older was 24.8% (U.S.:

21.0%). Again, the highest rate was found among 18- to 25-year-olds (IN: 34.7%; U.S.: 29.5%) (SAMHSA, 2014).

Adult (18 years and older) smoking prevalence in Indiana (21.9%) was the 12th highest in the nation and significantly greater than the U.S. rate (19.0%) in 2013. Smoking prevalence was inversely associated with education and income level: High rates of use were found among individuals with less than a high school education (IN: 37.6%; U.S.: 33.4%) and people whose household income was below $15,000 (IN: 38.3%; U.S.: 34.0%) (see Table 1.3) (CDC, 2015a).

In regard to smoking, 23.5% of Indiana college students reported past-year cigarette use and 11.2% reported current use (King & Jun, 2015).

Electronic cigarettes (e-cigarettes) and other electronic nicotine delivery devices have surged in popularity in recent years. In 2015, both current cigarette smokers (68.0%) and former smokers (14.8%) were significantly more likely to have used e-cigarettes in their lifetime than non-smokers (4.0%) (Brown, Raines, & Stedman, 2015).

Youth Consumption

The percentages of young people (12 to 17 years) currently using a tobacco product (IN: 9.0%; U.S.: 7.4%)

Table 1.1   Conditions that are Completely Attributable to Alcohol Use in Indiana (Alcohol-Related Disease Impact Database, Based on Averages from 2006–2010)

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%
Excessive blood alcohol level	100%
Suicide by and exposure to alcohol	100%

Source: Centers for Disease Control and Prevention, 2006-2010

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Table 1.2 Conditions that Are Partially Attributable to Alcohol Use in Indiana (Alcohol-Related Disease Impact Database, Based on Averages from 2006–2010)

Condition	Percentage Directly Attributable to Alcohol
Chronic pancreatitis	84%
Gastroesophageal hemorrhage	47%
Homicide	47%
Fire Injuries	42%
Hypothermia	42%
Esophageal varices	40%
Liver cirrhosis, unspecified	40%
Portal hypertension	40%
Drowning	34%
Fall injuries	32%
Poisoning (not alcohol)	29%
Acute pancreatitis	24%
Suicide	23%

Source: Centers for Disease Control and Prevention, 2006-2010

and currently smoking cigarettes (IN: 6.6%; U.S.: 5.2%) were similar between Indiana and the nation (SAMHSA, 2014).

Of all Indiana high school students surveyed, 24.5% reported past-month use of a tobacco product; 49.5% had tried smoking a cigarette during their lifetime; and 18.1% currently smoke cigarettes. National rates were statistically similar. Black high school students in Indiana have a significantly lower 30-day smoking prevalence than white students (black: 6.6%; white: 19.8%) (CDC, 2016b).

Past-month cigarette use decreased significantly from 2004 through 2014 among Indiana students: from 7.8% to 2.9% for middle school students, and from 21.3% to 12.0% for high school students (Indiana State Department of Health, Tobacco Prevention and Cessation Commission (ISDH/TPCC), 2015).

Lifetime use of e-cigarettes was 11.2% for middle school students and 29.0% for high school students in Indiana. Among current Indiana youth cigarette smokers, 63.7% of middle school students and 65.9% of high school students reported currently using e-cigarettes (ISDH/TPCC, 2015).

Morbidity and Mortality

Tobacco causes serious health consequences, including lung cancer, respiratory illness, and heart disease. An estimated 11,100 Hoosiers die annually from smoking-attributable causes (USDHHS, 2014). The age-adjusted

Table 1.3 Adult Smoking Prevalence in Indiana, by Education and Income Levels (Behavioral Risk Factor Surveillance System, 2013)

	Smoking Prevalence (95% CI)
Education	
Less than high school	37.6% (33.4-41.8)
High school or GED	24.3% (22.4-26.2)
Some post-high school	20.9% (18.9-22.9)
College graduate	9.0% (7.7-10.3)
Income	
Less than $15,000	38.3% (34.2-42.5)
$15,000–$24,999	31.9% (28.7-35.1)
$25,000–$34,999	26.5% (22.5-30.4)
$35,000–$49,999	25.0% (21.3-28.7)
$50,000 and above	13.2% (11.7-14.7)

Note: CI = confidence interval
Source: CDC, 2015a

annual tobacco-attributable mortality rate (per 100,000 population) was higher among Hoosiers (308.9) than the rest of the nation (263.3) (CDC, 2016a).

MARIJUANA

Marijuana is the most commonly used illicit substance. One-tenth of Indiana residents ages 12 and older (12.9%) reported past-year use (U.S.: 12.9%), and 7.5% reported past-month use (U.S.: 8.0%). Highest rates of use were found among 18- to 25-year-old Hoosiers (past-year use: 35.6%; past-month use: 20.3%); national rates were similar (SAMHSA, 2014).

Marijuana use was also prevalent among Indiana college students, as 12.8% of college students reported current use and 27.7% reported past-year use (King & Jun, 2015).

Youth Consumption

Among Indiana youth ages 12 to 17, an estimated 5.3% had used marijuana for the first time during the past year (U.S.: 5.8%). Patterns of current use among young people in that age group were similar in Indiana and the nation (IN: 6.0%; U.S.: 7.1%) (SAMHSA, 2014).

One in five Indiana high school students used marijuana in the past month (IN: 20.0%; U.S.: 23.1%). Marijuana use was significantly lower in 9th graders than in 11th and 12th grade students. Current use was significantly higher for male (23.4%) than female (16.4%) high school students. Black students reported significantly higher current use (32.1%) than white students (17.7%) (CDC, 2016b).

Table 1.4 depicts current marijuana use among Indiana and U.S. 8th, 10th, and 12th grade students throughout the past decade (Gassman, Jun, Samuel, Agley, King, & Lee, 2015; Inter-university Consortium for Political and Social Research (ICPSR), 2015).

Marijuana Abuse and Dependence

In 2013, nearly one-half (48.3%) of Indiana residents in substance abuse treatment reported marijuana use at admission; the percentage was significantly higher in Indiana than the rest of the nation (37.3%). In Indiana's treatment population, the highest percentages of marijuana use were found among males (52.4%), blacks (57.6%), and individuals under the age of 18 (85.8%). Over one-fifth of Hoosiers in treatment (21.5%) reported marijuana dependence,[2] a percentage significantly higher than the nation's (16.7%). Again, males (24.4%), blacks (36.4%), and individuals under the age of 18 (69.6%) had statistically higher percentages (SAMHSA, 2013a).

Legal Consequences

In 2012, the Indiana arrest rate for marijuana possession was 1.7 per 1,000 population (U.S.: 1.9) and for marijuana sale/manufacture was 0.3 per 1,000 population (U.S.: 0.2) (FBI, 2012).

COCAINE

Population-based estimates on past-year cocaine use were similar between Indiana and the nation (IN: 1.4%; U.S.: 1.7%). Young adults ages 18 to 25 displayed the

Table 1.4 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use, by Grade (Indiana Youth Survey and Monitoring the Future Survey, 2002–2015)

Grade	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indiana 8th Grade	11.1%	10.6%	9.8%	9.3%	8.2%	8.3%	7.1%	7.8%	8.9%	8.3%	8.0%	7.1%	6.8%	7.1%
U.S. 8th Grade	8.3%	7.5%	6.4%	6.6%	6.5%	5.7%	5.8%	6.5%	8.0%	7.2%	6.5%	7.0%	6.5%	6.5%
Indiana 10th Grade	19.2%	18.2%	17.2%	16.0%	14.6%	14.4%	13.5%	14.6%	16.8%	16.4%	15.4%	13.7%	13.6%	14.0%
U.S. 10th Grade	17.8%	17.0%	15.9%	15.2%	14.2%	14.2%	13.8%	15.9%	16.7%	17.6%	17.0%	18.0%	16.6%	14.8%
Indiana 12th Grade	20.5%	19.8%	18.3%	17.8%	17.2%	15.8%	16.2%	16.7%	19.2%	19.8%	17.8%	17.6%	17.6%	18.8%
U.S. 12th Grade	21.5%	21.2%	19.9%	19.8%	18.3%	18.8%	19.4%	20.6%	21.4%	22.6%	22.9%	22.7%	21.2%	21.3%

Source: Gassman, et al., 2015; ICPSR, 2015

[2]We defined marijuana dependence as "individuals in substance abuse treatment listing marijuana as their primary substance at admission."

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highest rates (IN: 3.8%; U.S.: 4.5%) (SAMHSA, 2014).

Additionally, 2.5% of Indiana college students used cocaine in the past year and 0.5% reported current use (King & Jun, 2015).

Youth Consumption

Past-year cocaine use prevalence among 12- to 17-year-olds was similar in Indiana (0.5%) and the United States (0.6%) (SAMHSA, 2014).

High school students' rates for lifetime use (IN: 5.6%; U.S.: 6.8%) and current use (IN: 2.3%; U.S.: 3.0%) in Indiana and the nation were statistically the same; no differences by gender, race, or grade were detected in Indiana (CDC, 2016b).

From 2000 through 2015, rates for current cocaine/crack use among 8th, 10th, and 12th grade students in Indiana declined over the years (see Figure 1.1). However, due to lack of detail in the publicly available data sets, statistical significance of the results could not be determined (Gassman, et al., 2015).

Cocaine Abuse and Dependence

In 2013, 12.2% of Indiana's treatment episodes involved cocaine use; this figure was significantly lower than the U.S. percentage (19.0%). Similarly, cocaine was reported as the primary drug of abuse in 4.5% of Indiana treatment episodes, which was significantly lower than the U.S. percentage of 6.1%. Significant differences within Indiana's treatment population were seen by gender, race, and age group (see Table 1.5) (SAMHSA, 2013a).

Legal Consequences

Indiana law enforcement made nearly 1,600 arrests for possession and over 1,500 arrests for sale/manufacture of opiates and cocaine in 2012, representing arrest rates of 0.2 per 1,000 population for both possession and sale/manufacture of opiates and cocaine. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.7 and 0.2 per 1,000 population, respectively) (FBI, 2012).[3]

Figure 1.1   Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Cocaine/Crack Use (Indiana Youth Survey, 2000–2015)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th Grade	1.1%	1.3%	1.2%	1.3%	1.2%	1.4%	1.1%	1.1%	0.9%	0.9%	1.1%	1.0%	0.8%	0.5%	0.5%	0.4%
10th Grade	1.7%	2.4%	2.4%	2.3%	2.4%	2.2%	2.1%	1.9%	1.7%	1.4%	1.6%	1.6%	1.3%	1.0%	0.9%	0.7%
12th Grade	2.7%	2.8%	2.9%	2.5%	2.9%	2.9%	3.1%	2.4%	2.0%	1.6%	1.9%	2.0%	1.6%	1.2%	1.3%	1.0%
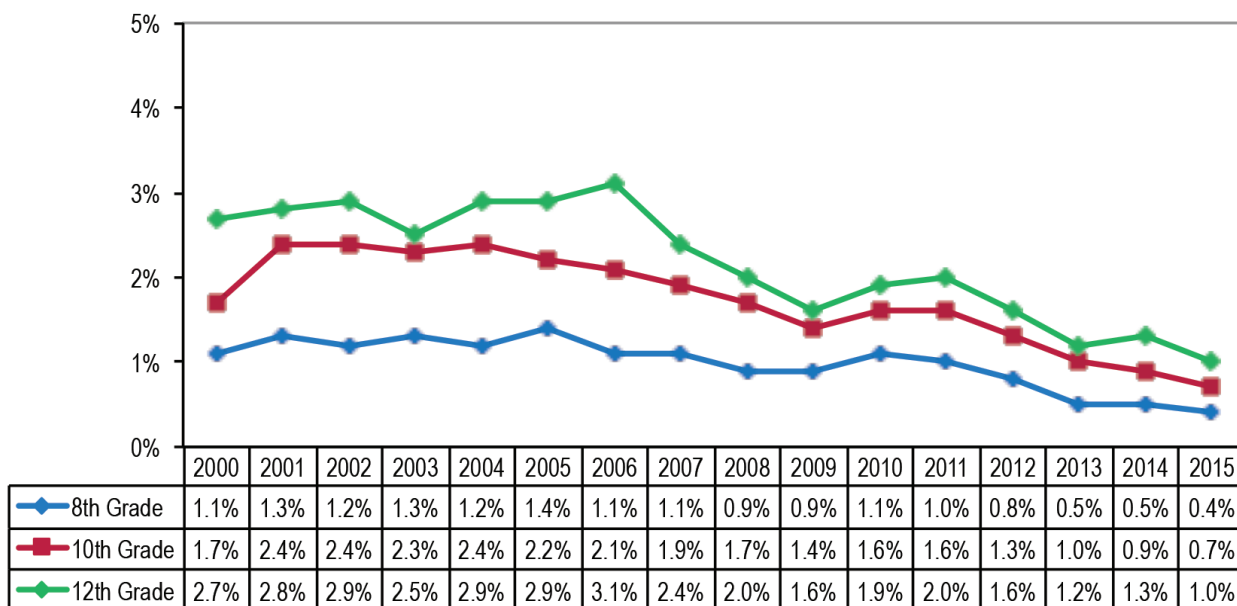
Source: Gassman, et al., 2015

[3]The Uniform Crime Reporting Program data set combines arrests for cocaine and opiates; arrest information is not available for cocaine or opiates alone.

HEROIN

The 2014 National Survey on Drug Use and Health (NSDUH) found that among U.S. residents ages 12 and older, 1.8% tried heroin at least once in their lifetime, 0.3% used it in the past year, and 0.2% were current (past-month) users (SAMHSA, 2014). (Indiana-level NSDUH estimates for heroin use are currently not available.)

Among Indiana college students, 0.4% reported past-year heroin use (U.S.: 0.3%) and 0.2% reported use in the past month (U.S.: 0.2%) (King & Jun, 2015).

Youth Consumption

Lifetime heroin use among high school students has been similar in Indiana and the nation (IN: 2.8%; U.S.: 2.9%). No significant differences were detected by gender, race, or grade level in Indiana (CDC, 2016b).

In 2015, past-month heroin use among Indiana 12th grade students was 0.4% (U.S.: 0.3%). Heroin use among Indiana and U.S. 12th graders has remained stable since 2000 (Gassman, et al., 2015; ICPSR, 2015).

Heroin Abuse and Dependence

In 2013, heroin use was reported in 12.0% of Indiana treatment episodes (U.S.: 22.4%) and heroin dependence[4] was reported in 9.2% of Indiana treatment episodes (U.S.: 19.0%). While Indiana's percentages were significantly lower than the nation's, it should be noted that both heroin use and dependence have increased significantly in Indiana's treatment population since 2001. Significant differences were seen by gender (more women reported use), race (whites had higher percentages), and age group (adults under 34 years of age were mostly affected) (SAMHSA, 2013a).

Morbidity and Mortality

A potential consequence of injected heroin use is contraction of HIV and/or hepatitis (B or C) from contaminated needles. In 2015, 543 new HIV infections and 78 new AIDS cases were reported in Indiana. As of December 31, 2015, a total of 11,698 individuals were living in Indiana with HIV disease[5] (Indiana State Department of Health (ISDH), 2016).

Table 1.5 Percentage of Treatment Episodes with Cocaine Use and Dependence Reported at Treatment Admission in Indiana (Treatment Episode Data Set, 2013)

		Cocaine Use	**Cocaine Dependence**
Gender	Male	10.8%	3.7%
	Female	14.5%	5.7%
Race	White	9.3%	2.6%
	Black	26.6%	13.9%
	Other	16.4%	6.9%
Age Group	Under 18	2.1%	0.6%
	18-24	5.0%	0.8%
	25-34	10.8%	3.4%
	35-44	18.3%	7.3%
	45-54	20.0%	9.1%
	55 and over	17.2%	8.0%
Total		**12.2%**	**4.5%**

Source: SAMHSA, 2013a

The estimated annual rate of AIDS diagnoses in Indiana adults and adolescents was 4.9 per 100,000 population in 2014 (U.S.: 7.8) (The Kaiser Family Foundation, 2015). Indiana's age-adjusted HIV/AIDS mortality rate for 2014 was 1.2 per 100,000 population (95% CI: 1.0-1.5), which was significantly lower than the U.S. rate of 2.0 per 100,000 population (95% CI: 1.9-2.0) (CDC, 2016a).[6]

The hepatitis B virus (HBV) and hepatitis C virus (HCV) are usually transmitted via unprotected sex and among injection drug users. The incidence rates per 100,000 population for acute hepatitis in Indiana were 1.5 for HBV (U.S.: 1.0) and 2.7 for HCV (U.S.: 0.6) in 2013. Indiana's HCV incidence rate was significantly greater than the national rate and has seen a steady increase since 2010 (CDC, 2015b). The age-adjusted mortality rate (per 100,000 population) attributable to hepatitis B and hepatitis C (acute and chronic) was 1.2 in Indiana, which was significantly lower than the national rate (U.S.: 2.0) (CDC, 2016a).

[4]We defined heroin dependence as "individuals in substance abuse treatment listing heroin as their primary substance at admission."
[5]HIV disease includes both HIV infections and AIDS cases.
[6]Mortality rates for HIV/AIDS are based on ICD-10 codes B20-B24 (Human immunodeficiency virus [HIV] disease).

Legal Consequences

Indiana law enforcement made nearly 1,600 arrests for possession and over 1,500 arrests for sale/manufacture of opiates and cocaine in 2012, representing arrest rates of 0.2 per 1,000 population for both possession and sale/manufacture of opiates and cocaine. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.7 and 0.2 per 1,000 population, respectively) (FBI, 2012).[7]

METHAMPHETAMINE (METH)

Of Americans 12 years and older, 4.9% have used methamphetamine at least once in their lifetime; 0.5% used it in the past year; and 0.2% reported past-month use. Americans ages 26 and older had the highest lifetime use (5.7%), and the 18- to 25-year-old age group had the highest past-year use (1.0%) (SAMHSA, 2014). There are currently no state-level NSDUH estimates for methamphetamine use available.

In 2015, an estimated 0.5% (U.S.: 0.1%) of Indiana college students had used meth in the past year and 0.2% (U.S.: 0.1%) had used it in the past month (King & Jun, 2015).

Youth Consumption Patterns

Lifetime prevalence of methamphetamine use among high school students was similar in Indiana and the nation (IN: 3.9%; U.S.: 3.8%). Rate differences by gender, race, or grade level were not significant in Indiana (CDC, 2016).

Monthly meth prevalence among 8th, 10th, and 12th grade students in Indiana is depicted in Figure 1.2 (Gassman, et al., 2015).

Methamphetamine Abuse and Dependence

Between 2000 and 2013, the percentage of treatment admissions in Indiana with reported meth use and dependence[8] increased significantly; rising from 4.0% to 13.4% for use and from 1.5% to 7.5% for dependence. Significant differences were observed by gender (more women reported using meth), race (whites had the highest rate of use), and age group (primarily 25- to 44-year-olds were affected).

In the early 2000's, meth use was lower in Indiana's treatment population compared to the rest of the nation. However, since 2011, Indiana's percentage surpassed the U.S. percentage (see Figure 1.3) (SAMHSA, 2013a).

Figure 1.2 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Monthly Methamphetamine Use (Indiana Youth Survey, 2005–2015)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th Grade	1.1%	0.9%	0.7%	0.7%	0.6%	0.8%	0.9%	0.5%	0.3%	0.4%	0.3%
10th Grade	1.6%	1.2%	1.0%	1.0%	0.9%	1.0%	0.9%	0.9%	0.7%	0.7%	0.5%
12th Grade	1.7%	1.5%	1.0%	0.9%	0.9%	1.0%	1.3%	1.1%	0.9%	0.7%	0.5%
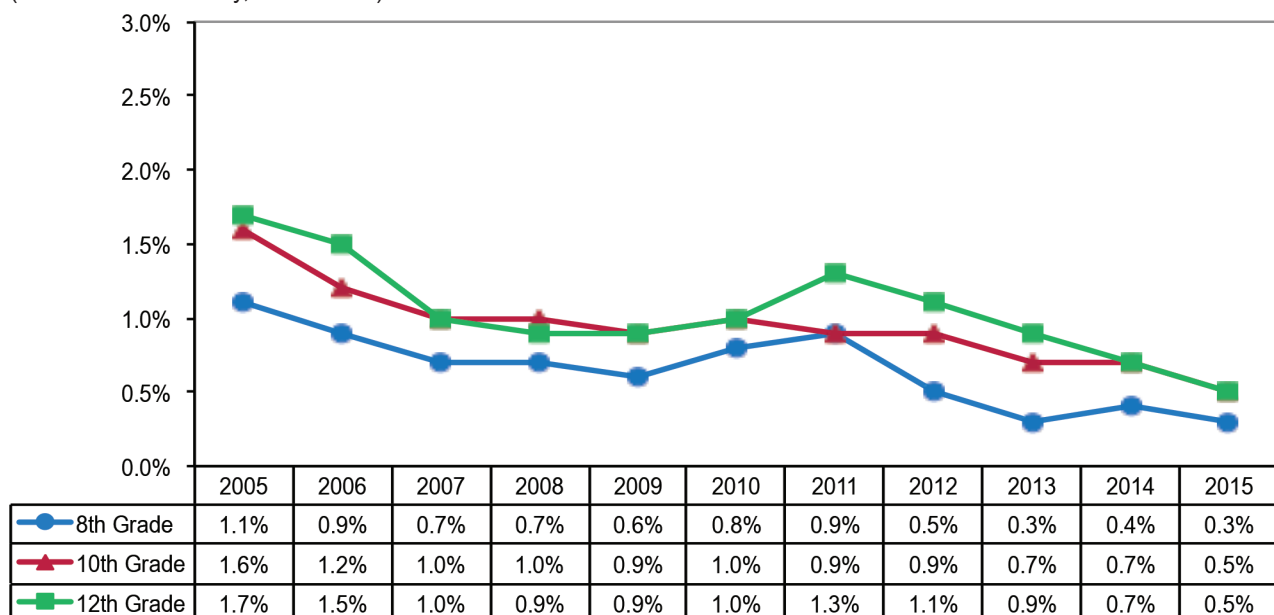
Source: Gassman, et al., 2015

[7]The Uniform Crime Reporting Program data set combines arrests for cocaine and opiates; arrest information is not available for cocaine or opiates alone.
[8]We defined methamphetamine dependence as "individuals in substance abuse treatment listing methamphetamine as their primary substance at admission."

Figure 1.3 Percentage of Treatment Episodes with Methamphetamine Use Reported at Treatment Admission in Indiana and U.S. (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	4.0%	5.3%	7.1%	8.2%	9.2%	10.9%	10.5%	9.2%	9.2%	9.4%	9.3%	11.2%	12.1%	13.4%
U.S.	6.5%	7.4%	8.5%	9.3%	10.2%	11.8%	12.0%	11.1%	9.3%	8.5%	8.9%	8.8%	10.5%	12.2%
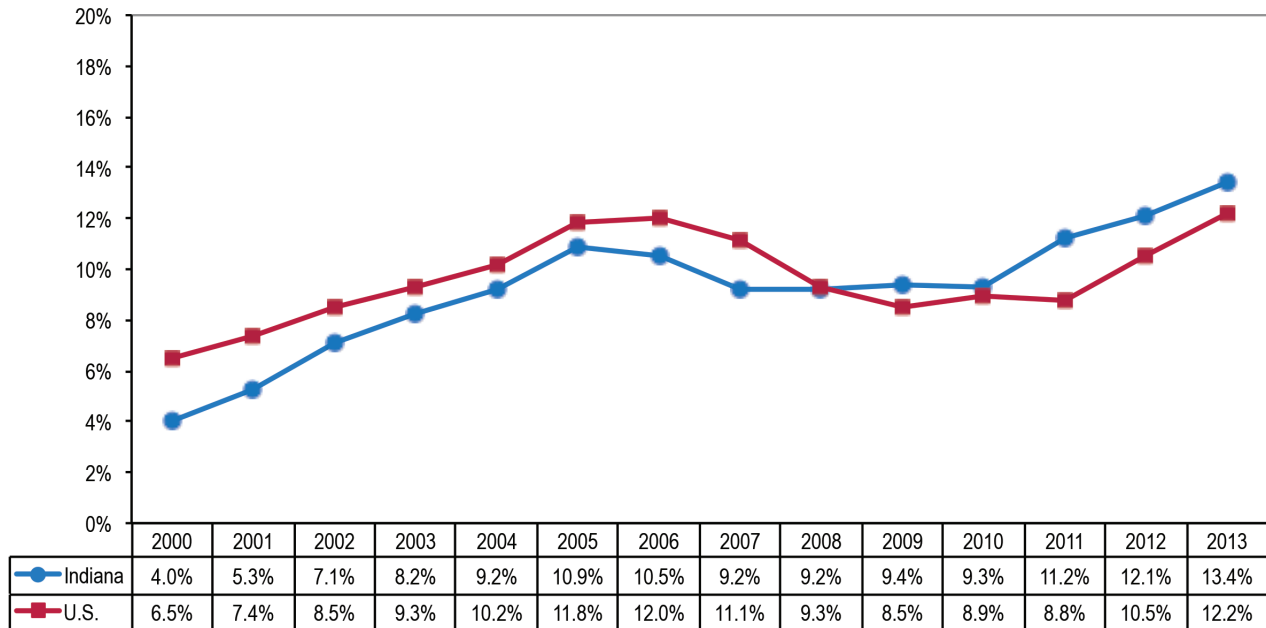
Source: SAMHSA, 2013a

Legal Consequences

The Indiana State Police (ISP) seized 1,452 clandestine methamphetamine labs and made 1,087 meth lab arrests in 2015; which represents a decrease in both lab seizures and arrests from 2013 (ISP, 2016).

In Indiana, over 2,100 arrests were made for possession and nearly 900 for the sale/manufacture of synthetic drugs[9] in 2012; this represents annual arrest rates of 0.3 (U.S.: 0.2) and 0.1 (U.S.: 0.1), per 1,000 population, respectively (FBI, 2012).

PRESCRIPTION DRUG ABUSE

In 2015, more than 13 million controlled prescription drugs were dispensed in Indiana. The most widely dispensed prescription drugs were opioids,[10] accounting for nearly half of the dispensed drug prescriptions in Indiana (Indiana Professional Licensing Agency (IPLA), 2016).

An estimated 4.4% of the Indiana population ages 12 and older reported nonmedical use of pain relievers in the past year; representing 240,244 Hoosiers. Indiana's prevalence rate was similar to the nation's, at 4.1%. Young adults ages 18-25 had the highest rate (9.5%) of prescription pain medication abuse which was not significantly different than the U.S. rate (8.3%) (SAMHSA, 2014).

The Indiana College Substance Use Survey includes questions on (a) use of prescription medications not prescribed to the student and (b) use of prescription medication prescribed to the student but misused. According to findings from the 2015 survey: (a) 9.8% of Indiana college students used prescription medications not prescribed to them in the past year and 3.9% are currently using; and (b) 2.6% of Indiana college students misused their prescription medication in the past year, with 1.1% of students reporting current misuse (King & Jun, 2015).

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[9]The Uniform Crime Reporting Program collects arrest information on synthetic drugs. The category includes methamphetamine, methadone, and Demerol.
[10]Opioids include pain relievers, such as oxycodone and hydrocodone.

Youth Consumption

Among Hoosiers ages 12 to 17, 4.9% used prescription pain medications for nonmedical purposes in the past year; Indiana's percentage was statistically similar to the nation's, 4.6% (SAMHSA, 2014).

For Indiana prevalence rates of current nonmedical use of prescription drugs[11] among 8th, 10th, and 12th grade students, see Figure 1.4.

Prescription Drug Abuse and Dependence

Prescription drug abuse has increased significantly in Indiana's substance abuse treatment population, rising from 11.6% in 2000 (U.S.: 7.7%) to 27.5% in 2013 (U.S.: 20.9%). Most of these were due to pain relievers, followed by sedatives and tranquilizers and stimulants. Compared to the nation, Indiana's percentages were

significantly higher for overall prescription drugs, as well as each individual prescription drug category other than stimulants. In Indiana, significant differences were seen by gender, race, and age group. For detailed information on prescription drug abuse and dependence[12] in Indiana's treatment population, see Table 1.6 (SAMHSA, 2013a).

Legal Consequences

In 2012, law enforcement made over 2,500 arrests for possession and over 1,000 arrests for sale/manufacture of "other drugs" in Indiana. This represents arrest rates of 0.4 and 0.2 per 1,000 population, respectively. U.S. rates were significantly higher for possession (0.8) but the same for sale/manufacture (0.2) (FBI, 2012).

Figure 1.4 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Indiana Youth Survey, 2003-2015)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th	1.4%	1.3%	1.5%	1.3%	1.9%	1.7%	1.8%	3.0%	2.7%	2.6%	2.2%	2.0%	2.3%
10th	2.1%	2.0%	2.1%	2.2%	3.7%	3.5%	3.3%	5.9%	5.2%	5.0%	4.3%	3.9%	4.4%
12th	1.5%	1.4%	1.7%	1.8%	2.9%	3.3%	3.1%	5.9%	5.9%	5.8%	5.7%	5.0%	6.0%
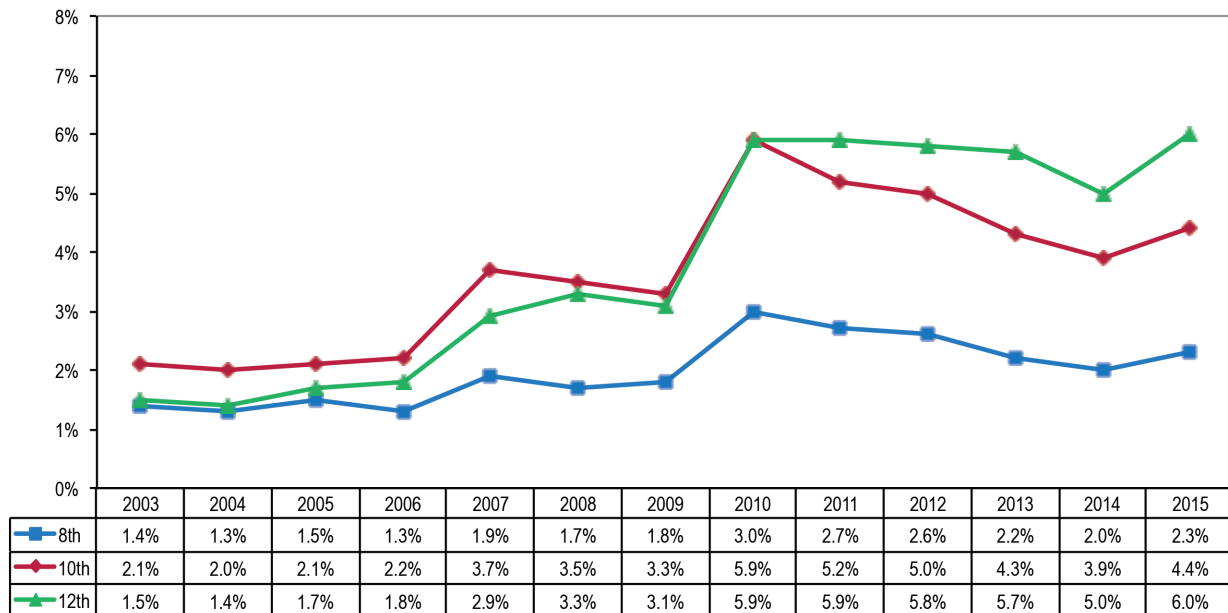
Source: Gassman, et al., 2015

[11]Includes Ritalin, Oxycontin, and Xanax
[12]We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

Table 1.6 Percentage of Treatment Episodes with Prescription Drug Dependence Reported at Treatment Admission in Indiana, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2012)

		All Rx		Pain Relievers		Sedatives/ Tranquilizers		Stimulants	
		Abuse	Dependence	Abuse	Dependence	Abuse	Dependence	Abuse	Dependence
Gender	Male	22.4%	11.3%	18.0%	9.6%	6.4%	1.3%	1.3%	0.4%
	Female	35.8%	21.3%	29.7%	17.9%	10.8%	2.9%	1.7%	0.5%
Race	White	31.7%	18.2%	26.0%	14.6%	9.3%	2.5%	1.7%	1.0%
	Black	6.1%	2.7%	4.6%	2.0%	1.9%	0.5%	0.2%	0.1%
	Other	20.3%	9.1%	15.6%	7.5%	6.3%	1.4%	1.0%	0.2%
Age Group	18 to 24	16.0%	13.8%	10.0%	11.0%	5.7%	2.1%	1.8%	0.7%
	25 to 34	35.4%	20.2%	29.7%	17.6%	9.9%	2.1%	1.7%	0.5%
	35 to 44	25.2%	15.3%	21.1%	13.1%	7.1%	1.9%	1.3%	0.3%
	45 to 54	16.1%	10.0%	13.2%	8.0%	5.0%	1.7%	0.7%	0.3%
	55 and over	13.5%	7.4%	11.0%	6.1%	3.9%	1.0%	1.4%	0.1%
Total		**27.5%**	**15.0%**	**22.4%**	**12.7%**	**8.1%**	**1.9%**	**1.4%**	**0.5%**

Source: SAMHSA, 2013a

POLYSUBSTANCE ABUSE

Polysubstance abuse is a particularly serious pattern of drug use that involves consumption of two or more substances. A review of data from 2000 through 2013 revealed that over half of the individuals seeking substance abuse treatment reported using at least two drugs at the time of admission, and Indiana's rates were significantly higher than the nation's. The percentage of treatment episodes involving two or more substances increased significantly in Indiana, from 55.5% in 2000 to 62.3% in 2013 (see Figure 1.5). Furthermore, in nearly one-third of Indiana treatment episodes, use of three or more substances was reported; again, Indiana's percentage increased significantly from 23.0% in 2000 to 33.2% in 2013 (see Figure 1.5). The percentages of polysubstance abuse were slightly higher for females, whites, and adults under 35 (SAMHSA, 2013a).

Cluster Analysis

We conducted a cluster analysis of 2013 Indiana TEDS data to determine the combinations of drugs currently used by polysubstance abusers within the state. Alcohol and marijuana were most widely indicated in polysubstance abuse. The drug clusters most frequently reported at substance abuse treatment admission in Indiana were (a) alcohol and marijuana, (b) alcohol and a drug in the "other drug" category, and (c) alcohol,

marijuana, and methamphetamine (SAMHSA, 2013a).

MENTAL HEALTH

Mental illness is associated with a number of other chronic diseases, tobacco use and substance abuse, and higher rates of suicide. It has also been demonstrated to be a significant barrier to health care.

There was no significant difference in current prevalence of mental illness (MI) between Indiana (20.3%) and the United States (18.3%) (SAMHSA, 2014). However, Hoosiers were more likely to report lifetime incidence of depression (IN: 20.7%; U.S.: 18.7%) (CDC, 2015a).

Within Indiana, having a history of depression was greatest among females and individuals who identified as multiracial (CDC, 2015a). Among Hoosier high school students, females were more likely to report feeling sad or hopeless and being the recipient of electronic bullying, while males were more likely to report being in a physical fight (CDC, 2016b).

Treatment rates were also similar between Indiana and the United States; however, Indiana mental health facilities received significantly less dollars per capita than the national average (SAMHSA, 2013b).

Based on information from the Data Assessment Registry Mental Health and Addiction (DARMHA), we find that in the treatment population, there was a

Figure 1.5 Percentage of Indiana and U.S. Treatment Episodes with Polysubstance Abuse (Using at Least Two Substances; Using at Least Three Substances) Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana 2+	55.5%	56.8%	58.3%	58.1%	59.8%	62.4%	60.4%	58.8%	59.8%	57.8%	56.2%	61.1%	63.5%	62.3%
U.S. 2+	53.4%	54.1%	54.1%	54.3%	55.2%	55.7%	55.9%	55.2%	54.4%	54.4%	55.1%	55.5%	55.9%	54.7%
Indiana 3+	23.0%	21.4%	22.1%	22.2%	23.8%	27.7%	26.6%	25.3%	26.3%	26.0%	27.8%	32.6%	34.8%	33.2%
U.S. 3+	20.7%	20.9%	20.9%	20.8%	21.3%	21.7%	20.2%	20.6%	20.5%	20.1%	20.4%	21.6%	21.7%	20.4%
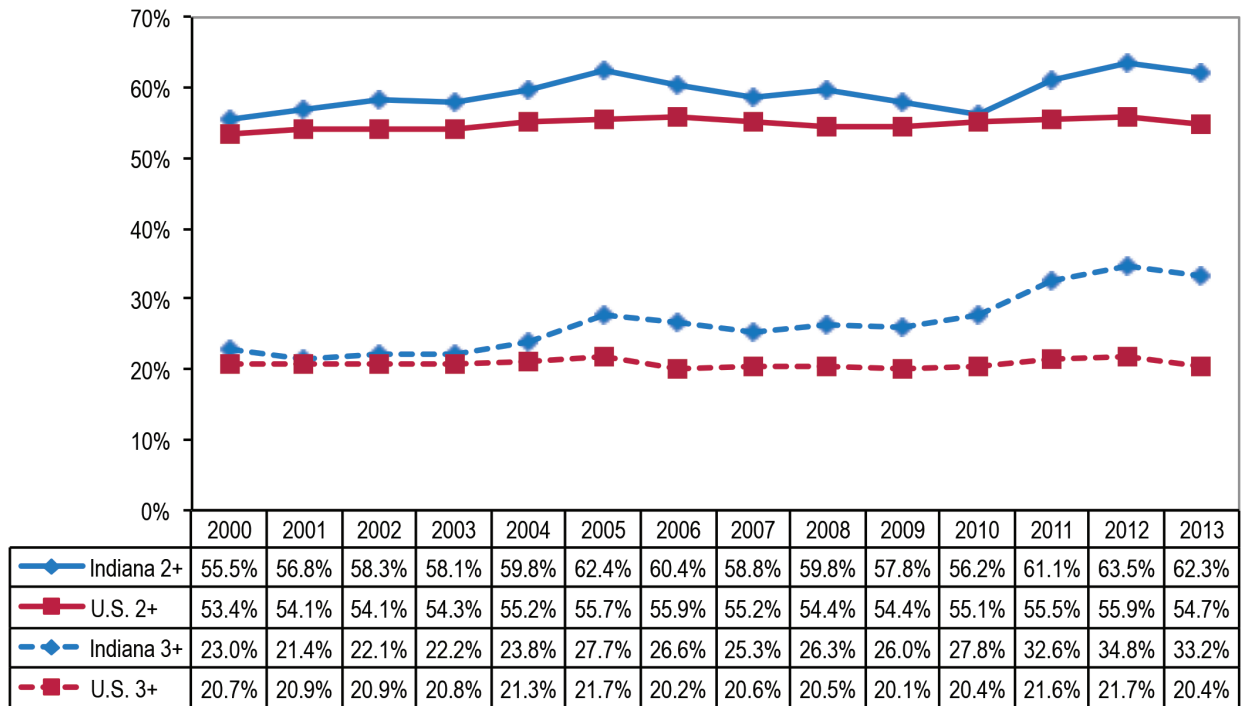
Notes: The percentage of treatment episodes with three or more substances is a subgroup of (i.e., included in) the percentage of treatment episodes with two or more substances.
Source: SAMHSA, 2013a

significantly higher percentage of SMI (64.1%) than Substance Use Disorder (SUD) (34.9%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (22.0%). Males had a lower percentage of SMI (55.9%), but a higher percentage of SUD (38.7%), compared to females (SMI: 72.2%; SUD: 31.2%). The percent of those in DARMHA with SMI increased significantly with age, while SUD rates were greatest at ages 35-44, and COD rates peaked at ages 25-34 and again at 45-54 (see Table 1.7) (Indiana Division of Mental Health and Addiction, 2015).

Finally, the percentage of attempted suicides among high school students were significantly higher in Indiana (11.0%) than the broader United States (7.8%), and suicide deaths in Indiana have increased significantly between 1999 and 2014 (CDC, 2016b).

INDICATORS OF SUBSTANCE ABUSE

To measure and compare the severity of substance abuse among Indiana counties, we identified county-level consumption and consequence data for individual drug categories, including alcohol, marijuana, cocaine and heroin, methamphetamine, and prescription drugs. We then ranked Indiana counties on the selected indicators, using a highest-need/highest-contributor model; i.e., counties received a priority score based on their need for

intervention (measured by the rate[13] at which an indicator occurred) and their overall *contribution* to the problem (measured by the frequency with which an indicator occurred).

We then calculated an *overall substance abuse priority score* to assess severity of consumption and consequences of alcohol and other drugs within each county. This score was computed by averaging the priority scores from each drug category. The top 10 percent of counties, i.e., those with the highest overall scores and most severe problems, are listed in Table 1.8.

Table 1.7   Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2015)

		SMI	SUD	COD
Gender	Male	55.90% (55.6-56.2)	38.70% (38.3-39.0)	22.50% (22.2-22.8)
	Female	77.20% (71.9-72.6)	31.20% (30.8-31.5)	21.40% (21.1-21.7)
Race	White	65.20% (64.9-65.4)	35.70% (35.4-36.0)	22.30% (22.1-22.6)
	Black	62.40% (61.8-63.1)	34.50% (33.8-35.1)	23.40% (22.8-23.9)
	Other	58.70% (58.0-59.5)	29.70% (29.0-30.3)	17.10% (16.5-17.7)
Ethnicity	Hispanic	61.70% (61.0-62.5)	29.90% (29.2-30.7)	19.70% (19.0-20.3)
	Non-Hispanic	64.40% (64.1-64.6)	35.40% (35.2-35.7)	22.20% (22.0-22.4)
Age Group	Under 18	44.90% (44.5-45.4)	14.50% (14.2-14.8)	12.20% (11.9-12.4)
	18-24	63.80% (63.1-64.6)	49.40% (48.7-50.2)	24.60% (23.9-25.2)
	25-34	65.60% (65.0-66.2)	55.70% (55.1-56.3)	29.00% (28.5-29.6)
	35-44	74.40% (73.9-75.0)	47.40% (46.8-48.1)	25.70% (28.2-29.3)
	45-54	82.50% (81.9-82.9)	41.20% (40.6-41.9)	29.00% (28.3-29.6)
	55-64	87.20% (86.6-87.8)	32.50% (31.7-33.3)	24.50% (23.7-25.2)
	65+	91.10% (90.1-91.9)	18.00% (16.8-19.2)	14.80% (13.7-16.0)

Source: Indiana Division of Mental Health and Addiction, 2015

Table 1.8   Counties with Total Priority Scores in the Top 10 Percent

Top 10 Percent	Overall Priority Score
Vanderburgh	206
Monroe	192
Lake	180
Madison	176
Howard	175
Marion	169
Tippecanoe	166
Allen	156
LaPorte	149
Montgomery	149

Note: Overall substance abuse priority scores ranged from 14 to 206, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2015; FBI, 2012; Indiana State Police, 2014, 2015; Indiana Professional Licensing Agency, 2015

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[13]The rate was calculated by taking the frequency of an event (e.g., number of arrests), dividing it by the specified population (e.g., county population), and multiplying the result by 1,000. This represents the rate per 1,000 population.

REFERENCES, CHAPTER 1

Brown, A., Raines, J., & Stedman, K. (2015). *2015 Indiana Adult Tobacco Survey. Final summary report: March 2015.* Report received on November 26, 2015, from the Indiana State Department of Health, Tobacco Prevention and Cessation Commission.

Centers for Disease Control and Prevention. (2006-2010). *Alcohol-related disease impact (ARDI).* Retrieved from http://nccd.cdc.gov/DPH_ARDI

Centers for Disease Control and Prevention. (2015a). *Behavioral Risk Factor Surveillance System (BRFSS) prevalence & trends data.* Retrieved from http://www.cdc.gov/brfss/brfssprevalence/index.html

Centers for Disease Control and Prevention. (2015b). *Surveillance for Viral Hepatitis – United States, 2012.* Retrieved from http://www.cdc.gov/hepatitis/statistics/2013surveillance/index.htm

Centers for Disease Control and Prevention. (2016a). *CDC WONDER underlying cause of death (compressed mortality).* Retrieved from http://wonder.cdc.gov/

Centers for Disease Control and Prevention. (2016b). *High School Youth Risk Behavior Survey Data.* Retrieved from http://nccd.cdc.gov/youthonline

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana Division of Mental Health and Addiction. (2015). *Data Assessment Registry Mental Health and Addiction (DARMHA), 2015.* De-identified data received February 12, 2016, from the Indiana Family & Social Services Administration.

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Indiana Professional Licensing Agency. (2015). *INSPECT, 2015 data.* Information received February 11, 2016, from Amanda Garrett, Indiana Professional Licensing Agency.

Indiana State Department of Health. (2016). *Spotlight on HIV/STD/viral hepatitis – December 2015.* Retrieved from http://www.in.gov/isdh/files/At_a_Glance%288%29.pdf

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015). *Indiana Youth Tobacco Survey, 2000-2014.* Data received on October 23, 2015, from the Indiana State Department of Health.

Indiana State Police. (2014). *Automated Reporting Information Exchange System (ARIES), Vehicle Crash Records System, 2014.* Data received December 8, 2015, from the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis.

Indiana State Police, Methamphetamine Suppression Section. (2016). *Indiana meth lab statistics, 2015.* Data received on January 14, 2016, from Sergeant Katrina Smith.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future.* Retrieved from http://www.monitoringthefuture.org/data/data.html

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013a). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

Substance Abuse and Mental Health Services Administration. (2013b). *Behavioral Health, United States, 2012.* HHS Publication No. (SMA) 13-4797. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). N*ational Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/population-data-nsduh/reports

The Kaiser Family Foundation. (2015). *Indiana: HIV/AIDS.* Data Source: Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention-Surveillance and Epidemiology. Retrieved from http://kff.org/state-category/hivaids/

U.S. Department of Health and Human Services. (2014). *The Health Consequences of Smoking -- 50 years of progress: A Report of the Surgeon General.* Atlanta, GA.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health.

METHODS

This report describes the consumption and consequences of alcohol, tobacco, and other drugs in Indiana residents. We analyzed patterns among Indiana's overall adult, and youth population, and compared them to patterns found among the U.S. population. Based on discussions with the State Epidemiology and Outcomes Workgroup (SEOW), we have reviewed consumption and consequences data for the following drugs: alcohol, tobacco, marijuana, cocaine, heroin, methamphetamine, and prescription medications. Additionally, we examined the occurrence of polysubstance abuse (i.e., the use of two or more drugs) as well as indicators of mental health in Indiana. Furthermore, we rank-ordered Indiana counties on the severity of their substance abuse problems, based on data sources available to us.

Our research team completed statistical analyses on publicly available local and national data sets using Statistical Package for the Social Sciences (SPSS) and Statistical Analysis System (SAS) software. For surveys that do not have publicly available data sets, we conducted statistical analyses using online analysis software and/or analysis tables provided by the agencies that conducted the data collection. Whenever possible, we made statistical comparisons across gender, racial/ethnic, and age groups for both drug-consumption behaviors and drug-use consequences. For all comparisons, a *P* value of .05 or less, or the 95 percent Confidence Interval (CI) was used to determine statistical significance.[1]

Prevalence rates and other statistics may be presented somewhat differently across all chapters, depending on the data sources that provided the information.

We used two guidelines to determine potential priorities. The first guideline was statistical significance. Statistical significance is a mathematical concept used to determine whether differences between groups are true or due to chance. Significance in this context does not necessarily mean "meaningful" and does not convey practical or clinical importance. Specific drug consumption and consequence patterns that place Indiana statistically significantly higher than the United States were used

as markers for areas that could potentially benefit from intervention.

The second guideline was clinical or substantive significance; i.e., consumption behaviors or drug-use consequences that are trending toward a higher frequency within a particular group of Hoosiers, such as gender, race/ethnicity, or age.

DATA SOURCES

The data for these analyses were gathered from various publicly available federal, state, and local-level surveys and data sets. In order to compare Indiana with the nation as a whole and to determine trends in drug use and drug-related consequences over time, we selected, whenever possible, surveys and data sources that had at least two years' worth of data available. In all cases, the most recent findings were included.

All of the data sources have important strengths and weaknesses, which were factored into the interpretations of the findings. In general, trends evident in multiple sources based on probability samples (rather than on nonrandom samples) were given more weight in the interpretation process. The following sections briefly describe the surveys and data sources used to complete these reports. An overview of these sources is also provided in the SEOW data sources list, beginning on page 22 at the end of this chapter.

Alcohol-Related Disease Impact (ARDI) Database

The Centers for Disease Control and Prevention's (CDC) ARDI software generates estimates of alcohol-related deaths and years of potential life lost (YPLL) due to alcohol consumption. To do this, ARDI either calculates estimates or uses predetermined estimates of alcohol-attributable fractions (AAFs)—that is, the proportion of deaths from various causes that are due to alcohol. These AAFs are then multiplied by the number of deaths caused by a specific condition (e.g., liver cancer) to obtain the number of alcohol-attributable deaths. Reports can be generated based on national or state-level data.

[1]Throughout the chapters, we use the terms "significant," "significantly different," or "statistically different" to report on a statistically significant difference between groups.

Automated Reporting Information Exchange System (ARIES) and Fatality Analysis Reporting System (FARS)

TThe Indiana State Police's ARIES is a central repository for all vehicle collisions reported in the state of Indiana, with and without alcohol involvement. Information on fatal accidents contained in the system is submitted to FARS. FARS is a national database of fatal motor vehicle accidents, which was developed by the National Highway Traffic Safety Administration's National Center for Statistics and Analysis in 1975. Comparisons between Indiana and the nation should be interpreted with caution as data submissions to the FARS database are done on a voluntary basis and may not include all fatal motor vehicle accidents within a state or the nation.

Behavioral Risk Factor Surveillance System (BRFSS) Survey

The CDC conducts the BRFSS annually with the assistance of health departments in all 50 states and the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. BRFSS asks respondents ages 18 and older questions about health-related behaviors, including alcohol consumption and tobacco use. BRFSS results are available at the national and state levels as well as for selected metropolitan/micropolitan areas. BRFSS data allow for statistical comparisons across gender, age, race/ethnicity, educational attainment, and income level.

The BRFSS has traditionally used random-digit-dial telephone sampling of households with landline telephones. However, the increasing percentage of households abandoning their landline telephones for cell phones has significantly eroded the population coverage provided by landline-based surveys to 70% of the U.S. household population. To meet challenges for increasing non-coverage and decreasing response rates due to cell-phone-only households, BRFSS has expanded its traditional methodology to a dual frame survey of landline and cell phone numbers and has introduced a new weighting method called iterative proportional fitting, or raking.

Even though the State Epidemiological Profile continues to provide information on present and past BRFSS prevalence rates for alcohol and tobacco use, it would not be appropriate to directly compare estimates prior to 2011 with later estimates, due to different data adjustment methods and different sampling frames.

Data Assessment Registry for Mental Health and Addiction (DARMHA)

TThe Data Assessment Registry for Mental Health and Addiction (DARMHA) is an administrative database operated by Indiana's Division of Mental Health and Addiction (DMHA). The registry collects information on the entire Hoosier Assurance Plan (HAP) consumer population served by DMHA-contracted substance abuse and mental health providers. The system was developed to support the use of information about the strengths and needs of individuals to help make decisions, to monitor progress, and to improve quality.

Hospital Discharge Data

The Indiana State Department of Health (ISDH) collects information on inpatients discharged from hospitals in Indiana. The data are publicly available in aggregate format and include information on hospitals, principal diagnoses and procedures, length of stay, total charges, etc. Additionally, ISDH provides reports (on request) on statewide outpatient visits, i.e., information contained in the State Emergency Department Dataset. Both datasets can be queried on diagnoses related to alcohol or drug use.

Indiana Adult Tobacco Survey (IN ATS)

The Indiana Adult Tobacco Survey (IN ATS), a survey by the Indiana Tobacco Prevention and Cessation Agency (ITPC), collects information on tobacco use among Hoosiers ages 18 and older. The survey uses a random-sampling design; African-American and Hispanic adults as well as residents in more rural regions of the state are oversampled. Data are available by gender, race/ethnicity, age group, income level, educational attainment, Indiana region, health insurance type, and number of children in household.

Indiana College Substance Use Survey

The Indiana College Substance Use Survey was developed in 2009 by the Indiana Collegiate Action Network (ICAN) and the Indiana Prevention Resource Center (IPRC), with input from Indiana institutions of higher education and the Indiana State Epidemiology and Outcomes Workgroup. The instrument was designed to assess prevalence of alcohol, tobacco and other drug use; consequences of use; alcohol availability; and student

perceptions of peer behaviors among Indiana college students. Information is available by gender, age category (under 21 vs. 21 or over), and type of institution (private vs. public). All two- and four-year colleges in Indiana are invited to participate in the survey. Results are based on nonrandom sampling and are not representative of all college students in Indiana. In 2015, eight colleges participated in the survey, including three public and five private schools, resulting in 1,850 usable responses.

Indiana Meth Lab Statistics and National Clandestine Laboratory Seizure System (NCLSS)

The Indiana State Police (ISP), Meth Suppression Section, collects data on clandestine meth lab seizures in the state, including number of meth labs seized, number of arrests made during lab seizures, and the number of children located at/rescued from meth labs. The information is then submitted to NCLSS, a database maintained by the U.S. Drug Enforcement Administration and the El Paso Intelligence Center. State and county-level information can be requested from the Indiana State Police.

Indiana Mortality Data and National Vital Statistics System (NVSS)

NVSS is a CDC-maintained data system that provides information on mortality rates by cause of death as coded in the World Health Organization's International Classification of Diseases, 10th Edition (ICD-10). Health departments in the 50 states, the District of Columbia, and U.S. territories provide CDC with data on deaths throughout the country. Using the query system on CDC's website (CDC WONDER), researchers can compute mortality rates for deaths due to diseases and events associated with alcohol, tobacco, and other drug use (e.g., cirrhosis, lung cancer, heart disease, suicide, homicide, etc.) at the national, state, and county level. The system also allows for comparisons across gender, age, and racial groups. Indiana mortality data can also be requested directly from the Indiana State Department of Health.

Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT)

INSPECT is the state's prescription drug monitoring program. The secure database collects basic demographic information on the patient, the type of controlled substance prescribed, the prescribing

practitioner, and the dispensing pharmacy. Each time a controlled substance is dispensed, the dispenser (e.g., pharmacy, physician, etc.) is required to submit the information to INSPECT. The program was designed to help address problems of prescription drug abuse and diversion in Indiana. By compiling controlled substance information into an online database, INSPECT performs two critical functions: (1) maintaining a warehouse of patient information to assist healthcare professionals in making treatment decisions; and (2) providing an important investigative tool for law enforcement to help prevent the possible diversion of controlled substances.

Indiana Youth Survey (INYS)

The Indiana Youth Survey is an annual school-based assessment conducted by the Indiana Prevention Resource Center (IPRC) and funded through the Indiana Family and Social Services Administration/Division of Mental Health and Addiction. The survey is designed to monitor patterns of alcohol, tobacco, and other drug use; gambling behaviors; as well as risk and protective factors among Indiana middle and high school students, grades 6 through 12. Young people who complete the questionnaire are asked to report on their monthly use (use of drug at least once in the 30 days prior to the survey) of a wide range of substances.

Caution is needed when comparing this year's findings to previous years due to changes made to the survey. There were two versions of the 2015 survey given this year -- one to 6th grade students and one to 7th through 12th grade students. INYS no longer asked 6th-grade students specifically about methamphetamine; instead the students responded to the prompt for "Other illegal drugs." Also the previously-used lifetime substance use prevalence questions were removed from the survey. As a result, a proxy for lifetime substance use prevalence could be computed by subtracting the percentage that "Never used" from the total percentage (100). These changes, in addition to the cleaning methodology, in the 2015 Indiana Youth Survey make it difficult to draw accurate comparisons to the prevalence data from previous years

The Indiana Youth Survey is open to all Indiana school corporations and collects a large number of usable responses. However, the rate of participation varies widely across regions. Also, results are based on nonrandom sampling and, therefore, are not representative of Indiana's entire student population. Results can be compared to findings from the Monitoring

the Future survey (see page 20) conducted by the National Institute on Drug Abuse.

Indiana Youth Tobacco Survey (IYTS)

The CDC developed the National Youth Tobacco Survey as a way to estimate the current use of tobacco products among middle school and high school students in the United States. Student respondents are asked to describe their lifetime, annual, and current use of cigarettes and other tobacco products. The Indiana State Department of Health's Tobacco Prevention and Cessation Commission oversees Indiana's version of the survey, which includes CDC core and recommended questions, as well as state-specific items. IYTS is conducted every other year (even years); findings allow comparisons across gender, race/ethnicity, and grade levels.

Monitoring the Future (MTF) Survey

MTF is a national survey conducted annually by the National Institute on Drug Abuse in order to track changes in the drug consumption patterns of 8th, 10th, and 12th grade students throughout the United States. Respondents report on their lifetime, annual, and monthly use of a wide variety of substances, including alcohol, tobacco, heroin, cocaine, marijuana, methamphetamine, etc. Results from MTF are released annually and data sets are publicly available. Respondents are sampled randomly from schools throughout the country; data are not available at the state level.

National Survey on Drug Use and Health (NSDUH)

NSDUH is a national survey funded by SAMHSA and designed to monitor patterns and track changes in substance use for U.S. residents 12 years of age and older. The survey asks respondents to report on consumption patterns of substances including alcohol, tobacco, marijuana, cocaine, and other illicit drugs, as well as on the nonmedical (recreational) use of prescription medication. Additionally, NSDUH asks respondents whether they received treatment for drug abuse or drug dependence during the past (prior) year. The survey also includes several modules of questions that focus on mental health issues.

Prevalence rates for substance use and specific mental health indicators are provided for the nation and each state. Raw data files from NSDUH surveys are publicly available; however, they do not allow for comparisons among states because NSDUH eliminates state identifiers in the process of preparing public-use data files. Tables with prevalence numbers and rates are prepared by SAMHSA's Center for Behavioral Health Statistics and Quality and can be accessed online. Data reports are available since 1994. There is usually a two-year delay from the time of data collection to its availability.

Treatment Episode Data Set (TEDS)

TEDS is a national database maintained by SAMHSA that records information about individuals entering treatment for substance abuse and/or dependence. State mental health departments submit data to TEDS on an annual basis. The information reported in TEDS includes age, race, ethnicity, gender, and other demographic characteristics, as well as information on the use of various substances. The data represent admissions rather than individuals, thus individuals may be admitted to treatment more than once in a given year. TEDS data become publicly available approximately two years after the information is gathered. The format of the TEDS data allows for comparisons between Indiana and the United States by gender, race, and age groups.

County-level TEDS data for Indiana are available from the Indiana Family and Social Services Administration. While TEDS data can provide some information on drug use and abuse patterns both nationally and at the state level, the population on which the data are based may not be representative of all individuals in drug and alcohol treatment. For Indiana, TEDS data are limited to information on individuals entering substance abuse treatment who are 200% below the federal poverty level and receive state-funded treatment.

Uniform Crime Reporting Program (UCR)

UCR is a national database maintained by the FBI that records the number of arrests for various offenses, including property crimes, violent crimes, and drug-related crimes throughout the United States. Law enforcement agencies in the 50 states and the District of Columbia submit UCR data annually. Data are reported for each state and each county. UCR data sets are publicly available; however, there is a two-year lag from the time data are collected until they are published. The format of the UCR data sets allows for comparisons of arrests between Indiana and the entire United States,

and for comparisons between juveniles and adults. Since the data are presented in an aggregate format, demographic variables such as gender, age, or race/ethnicity are not available.

While UCR data include information about drug possession and drug manufacturing arrests, the involvement of drugs or alcohol in the commission of other crimes such as rape, burglary, robbery, etc., is not recorded. Additionally, since states are not required to submit crime information to the FBI, the level of reporting varies considerably. Because of these variations, the FBI uses statistical algorithms to estimate arrests for counties in which reporting is less than 100 percent. In Indiana, typically about 60% of counties, on average, submit information to the FBI. Indiana has a rather low reporting rate, so UCR results should be interpreted with caution; however, completeness of reporting has been improving over the past years (see Table 2.1, page 26, for coverage indicator by county).

Youth Risk Behavior Surveillance System (YRBSS)

The YRBSS is a national survey of health-related behaviors among students in grades 9 through 12. The CDC conducts the survey biannually with the cooperation of state health departments throughout the nation. Student respondents are asked to describe whether they have engaged in numerous behaviors that could pose a danger to their health, including the use of alcohol, tobacco, and other drugs. CDC's online database allows comparisons between Indiana and the United States on gender, race/ethnicity, and grade level. Data for the YRBSS are available every other year (odd years), with a one-year lag between the end of data collection and the publication of results. Though YRBSS

data for some states are available from 1991, Indiana started participating in data collection in 2003. Availability of state-level results are dependent upon sufficient participation to achieve an adequate response rate to weight the data.

CONSIDERATIONS

This report relies primarily on the data sources just discussed. These are either 1) publicly available sources that our researchers could access and analyze for this year's state epidemiological report or 2) agency data sources that were provided specifically to the SEOW. Because of the nature of the available data, there are significant limitations to the interpretations presented:

- Consistent comparisons across data sources are not always possible due to the nature of the survey questions asked and information gathered.
- Inconsistencies may occur within classifications of demographic characteristics (e.g., age ranges, racial categories, grade levels).
- Timeframes may be inconsistent for comparisons across substances and data sources (e.g., some data have longer gaps than others before they are made publicly available).
- State-level prevalence rates presented in national surveys are often estimated using statistical algorithms.
- Due to the reporting requirements for national databases, the data may not be representative of the actual population of either the state or the nation.

In future editions of this report, we will expand the data analysis as additional data sources are made available to the SEOW data analysis team.

SEOW DATA SOURCES LIST

Following is a list of the data sources used in this report, presented in a format for comparison.

Alcohol-Related Disease Impact (ARDI) Database

Description: ARDI provides state and national estimates on alcohol-related deaths and years of potential life lost (YPLL) based on alcohol-attributable fractions.
Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC)
Geographic Level: National and state levels
Availability: The database can be accessed at http://nccd.cdc.gov/DPH_ARDI/default/default.aspx
Trend: 2006-2010 (all estimates are based on data averages from 2006 through 2010)
Strengths/Weaknesses: ARDI may underestimate the actual number of alcohol-related deaths and years of potential life lost.

Automated Reporting Information Exchange System (ARIES) and Fatality Analysis Reporting System (FARS)

Description: ARIES contains data on vehicle crashes with and without alcohol involvement; data on fatal crashes are submitted to FARS.
Sponsoring Organization/Source: Indiana State Police (ISP); U.S. Department of Transportation/ National Highway Traffic Safety Administration (NHTSA)
Geographic Level: National, state, and county levels
Availability: Data are available from the NHTSA at http://www-fars.nhtsa.dot.gov/ and upon request from the Indiana State Police.
Trend: 1994–2013
Strengths/Weaknesses: The data are in aggregate format; comparisons by demographic variables such as age, gender, and race/ethnicity are not possible.

Data Assessment Registry for Mental Health and Addiction (DARMHA)

Description: DARMHA is an administrative database that collects information on the entire Hoosier Assurance Plan (HAP) consumer population served by DMHA-contracted substance abuse and mental health providers.
Sponsoring Organization/Source: Indiana Division of Mental Health and Addiction (DMHA)
Geographic Level: State and county levels

Trend: 2015
Availability: Memorandum of Understanding (MOU) between SEOW and DMHA.
Strengths/Weaknesses: Administrative data collected are only reflective of a single treatment population. Diagnostic decisions of individual clinicians may not be reliable. However, the primary tools used to collect data on strengths and needs of clients have been validated.

Behavioral Risk Factor Surveillance System (BRFSS) Survey

Description: BRFSS is an annual state health survey that monitors risk behaviors, including alcohol and tobacco consumption, related to chronic diseases, injuries, and death.
Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC); Indiana State Department of Health (ISDH)
Geographic Level: National and state
Availability: National and state data are available from the CDC at http://www.cdc.gov/brfss/brfssprevalence.
Trend: 1995–2013
Strengths/Weaknesses: CDC consistently works to test and improve BRFSS methodology in an effort to make findings result in more valid and reliable data for public health surveillance. Due to substantial changes in methodology starting with the 2011 survey, comparison of current estimates with estimates from previous years would not be appropriate.

Hospital Discharge Data

Description: Hospital discharge data are publicly available in aggregate format. Dataset can be queried by primary diagnosis (ICD-9 codes), e.g., alcohol- and drug-induced diseases.
Sponsoring Organization/Source: Indiana State Department of Health (ISDH)
Geographic Level: Indiana
Availability: Annual data are available at http://www.in.gov/isdh/20624.htm.
Trend: 1999–2014
Strengths/Weaknesses: The data are in aggregate format; comparisons by demographic variables such as age, gender, and race/ethnicity are not possible.

Indiana College Substance Use Survey

Description: The survey measures the prevalence of alcohol, tobacco and other drug use; consequences of

use; alcohol availability; and student perceptions of peer behaviors among Indiana college students.
Sponsoring Organization/Source: Indiana Collegiate Action Network (ICAN); Indiana Prevention Resource Center (IPRC)
Geographic Level: Indiana
Availability: Annual data are available at http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey.
Trend: 2009–2015
Strengths/Weaknesses: The survey utilizes a nonrandom sampling design; results, therefore, are not representative of all college students in Indiana.

Indiana Adult Tobacco Survey (IN ATS)

Description: This survey measures tobacco use among Indiana adults, and includes items on tobacco use, cessation, secondhand smoke, and awareness.
Sponsoring Organization/Source: Indiana State Department of Health's Tobacco Prevention and Cessation Committee
Geographic Level: Indiana
Availability: Datasets can be requested from ITPC; reports are available at http://www.in.gov/isdh/tpc/2343.htm.
Trend: 2002, 2006–2015
Strengths/Weaknesses: IN ATS uses a random-sample design, making findings representative of all Hoosier adults. Oversampling of African-American and Hispanic adults, as well as residents in more rural regions, provides more robust estimates for these population groups.

Indiana Meth Lab Statistics and National Clandestine Laboratory Seizure System (NCLSS)

Description: The Indiana State Police (ISP), Meth Suppression Section, collects meth lab incidence data and submits the information to NCLSS, a national database. Data include: Number of meth labs seized, number of arrests made during lab seizures, and the number of children located at/rescued from meth labs.
Sponsoring Organization/Source: Indiana State Police (ISP), Meth Suppression Section; Drug Enforcement Administration (DEA), El Paso Intelligence Center (EPIC)
Geographic Level: National, state, and county
Availability: Indiana data from ISP are available on request; national data can be accessed at

http://www.dea.gov/resource-center/meth-lab-maps shtml.
Trend: 1995–2015
Strengths/Weaknesses: The data include all meth incidents, including labs, "dumpsites" or "chemical and glassware" seizures.

Indiana Mortality Data and National Vital Statistics System (NVSS)

Description: NVSS contains mortality data from all U.S. states; the online database can be queried on number of deaths and death rates from alcohol- and drug-related causes. Indiana data can also be directly requested from the Indiana State Department of Health (ISDH).
Sponsoring Organization/Source: Indiana State Department of Health (ISDH); CDC's National Center for Health Statistics
Geographic Level: National, state, and county levels
Availability: National mortality data can be accessed by underlying cause of death (ICD-10 codes) from CDC at http://wonder.cdc.gov/mortSQL.html; state data are available on request from the Indiana State Department of Health.
Trend: 1999–2014 (online from CDC); Indiana data for other years are available on request from ISDH
Strengths/Weaknesses: The strengths of the NVSS include availability of multiple years of data and the relatively large number of American Indian, Alaska Native, and other Native American respondents. However, a primary weakness of the data are the quality of the race/ethnicity information, particularly for the American Indian/Alaska Native category, as data quality checks of the racial/ethnic distribution of the deceased in this category are lower than the distribution represented in Census estimates.

Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT)

Description: INSPECT is Indiana's prescription drug monitoring program; the online database collects information each time a controlled substance is dispensed.
Sponsoring Organization/Source: Indiana Professional Licensing Agency (IPLA)
Geographic Level: Indiana and counties (zip codes)
Availability: Eligible users (such as health care providers) may register for a secured account at www.in.gov/INSPECT.

Trend: 2010-2015

Strengths/Weaknesses: Data collection is statewide, and licensed dispensers (e.g., pharmacies, physicians) are required to submit information each time a controlled substance is dispensed.

Indiana Youth Survey (INYS)

Description: The Indiana Prevention Resource Center (IPRC) manages the Indiana Youth Survey. The survey is administered to students (6th through 12th graders) annually in a number of schools throughout the state.

Sponsoring Organization/Source: Indiana Prevention Resource Center (IPRC); Indiana Family and Social Services Administration (FSSA)/Indiana Division of Mental Health and Addiction (DMHA)

Geographic Level: State and regions

Availability: Reports with data tables are available at http://www.drugs.indiana.edu/indiana-youth-survey indianasurvey.

Trend: 1993–2015

Strengths/Weaknesses: School-specific survey results are valuable to participating schools and provide statewide prevalence estimates. However, findings may not be representative of all Hoosier students based on non-random sampling design. Due to changes made to the survey, this year's data cannot be compared to findings from previous years.

Indiana Youth Tobacco Survey (IYTS) and National Youth Tobacco Survey (NYTS)

Description: IYTS is Indiana's adapted version of CDC's NYTS. The surveys collect data from students in grades 6 through 12 on all types of tobacco use, exposure to secondhand smoke, and access to tobacco.

Sponsoring Organization/Source: Indiana Tobacco Prevention and Cessation Agency (ITPC); Centers for Disease Control and Prevention (CDC)

Geographic Level: National and state

Availability: Data are available on request from ITPC, and annual reports can be accessed at http://www.in.gov/isdh/tpc/2343.htm. National data are available at http://www.cdc.gov/tobacco/data_statistics/surveys/NYTS/.

Trend: 2000 through 2013 (NYTS) / 2000 through 2014 (IYTS)

Strengths/Weaknesses: The IYTS provides detailed statewide information regarding youth knowledge, attitudes, and behaviors. However, county-level data are not available.

Monitoring the Future (MTF) Survey

Description: MTF is an ongoing study of youth behaviors, attitudes, and values about substance use. Approximately 50,000 students in 8th, 10th, and 12th grades are surveyed annually. Follow-up surveys are distributed to a sample of each graduating class for a number of years after initial participation.

Sponsoring Organization/Source: National Institute on Drug Abuse (NIDA)

Geographic Level: National

Availability: Data tables are available at http://www.monitoringthefuture.org/data/data.html.

Trend: 1991–2015

Strengths/Weaknesses: A limitation of the survey design is that the target population does not include students who drop out of high school before graduation.

National Survey on Drug Use and Health (NSDUH)

Description: NSDUH provides national and state-level estimates on the use of alcohol, tobacco, and illicit drugs (including nonmedical prescription drug use), as well as mental health indicators in the general population ages 12 and older.

Sponsoring Organization/Source: Substance Abuse and Mental Health Services Administration (SAMHSA)

Geographic Level: National and state; some sub-state data are available using small-area estimation techniques

Availability: National and state data tables are available at the NSDUH website at http://www.samhsa.gov/data/population-data-nsduh/reports?tab=33.

Trend: State estimates are available for 1999–2014

Strengths/Weaknesses: State-level data do not allow for comparisons by gender or race/ethnicity.

Treatment Episodes Data Set (TEDS)

Description: TEDS provides information on demographic and substance abuse characteristics of individuals in alcohol and drug abuse treatment. Data are collected by treatment episode. A treatment episode is defined as the period from the beginning of treatment services (admission) to termination of services.

Sponsoring Organization/Source: Substance Abuse and Mental Health Services Administration (SAMHSA); Indiana Family and Social Services Administration (FSSA)/Division of Mental Health and Addiction (DMHA)

Geographic Level: National and state; county-level data available from FSSA upon special request
Availability: National and state TEDS data were acquired from SAMHSA's Drug & Alcohol Services Information System at http://wwwdasis.samhsa.gov/dasis2/teds.htm.
Trend: 1999–2013 national and state TEDS data; county-level data reported for 2015
Strengths/Weaknesses: In Indiana, these data are not representative of the state as a whole, as only individuals who are at or below the 200% poverty level are eligible for treatment at state-registered facilities.

Uniform Crime Reporting Program (UCR): County-Level Detailed Arrest and Offense Data

Description: The UCR program provides a nationwide view of crime based on the submission of statistics by local law enforcement agencies throughout the country.
Sponsoring Organization/Source: United States Department of Justice/Federal Bureau of Investigation (FBI)
Geographic Level: National, state, and county
Availability: Data can be downloaded from the National Archive of Criminal Justice Data website (http://www.icpsr.umich.edu/icpsrweb/content/NACJD/guides/ucr.html).
Trend: 1994–2012

Strengths/Weaknesses: Reporting of UCR data by jurisdictions across the state is often less than 100%, in which case statistical algorithms are employed to estimate arrest numbers. See Table 2.1 on page 26 for coverage indicator by Indiana county.

Youth Risk Behavior Surveillance System (YRBSS)

Description: This biannual national survey monitors health risks and behaviors among youth in grades 9 through 12.
Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC); Indiana State Department of Health (ISDH)
Geographic Level: National, state
Availability: National and state-level data are downloadable from selected published tables on the CDC website at http://nccd.cdc.gov/YouthOnline/App/Default.aspx.
Trend: For the nation, the survey tracks every other year from 1991 through 2013; Indiana data are available for 2003 through 2011
Strengths/Weaknesses: At the state level, data by ethnicity (Hispanic) might not be available for some variables.

Table 2.1 Coverage Indicator for the 2012 Uniform Crime Reporting Data, by County (in Percent)

County	Coverage Indicator	County	Coverage Indicator
Adams	37.0	Marion	94.9
Allen	100.0	Marshall	64.3
Bartholomew	100.0	Martin	73.4
Benton	24.0	Miami	97.4
Blackford	100.0	Monroe	100.0
Boone	55.8	Montgomery	41.7
Brown	100.0	Morgan	29.3
Carroll	56.0	Newton	100.0
Cass	100.0	Noble	13.4
Clark	97.7	Ohio	0.0
Clay	30.0	Orange	58.3
Clinton	100.0	Owen	0.0
Crawford	100.0	Parke	100.0
Daviess	93.9	Perry	37.6
Dearborn	92.0	Pike	0.0
Decatur	44.6	Porter	85.4
DeKalb	50.4	Posey	25.8
Delaware	80.1	Pulaski	100.0
Dubois	50.3	Putnam	72.8
Elkhart	93.3	Randolph	82.1
Fayette	0.0	Ripley	21.4
Floyd	96.1	Rush	68.2
Fountain	18.8	Saint Joseph	96.7
Franklin	100.0	Scott	82.2
Fulton	70.2	Shelby	100.0
Gibson	82.8	Spencer	0.0
Grant	100.0	Starke	100.0
Greene	91.9	Steuben	100.0
Hamilton	85.1	Sullivan	80.2
Hancock	7.1	Switzerland	0.0
Harrison	100.0	Tippecanoe	96.3
Hendricks	47.1	Tipton	83.0
Henry	100.0	Union	0.0
Howard	99.9	Vanderburgh	65.3
Huntington	100.0	Vermillion	100.0
Jackson	100.0	Vigo	98.8
Jasper	14.7	Wabash	18.6
Jay	89.0	Warren	0.0
Jefferson	0.0	Warrick	100.0
Jennings	55.4	Washington	11.2
Johnson	95.9	Wayne	75.0
Knox	72.4	Wells	100.0
Kosciusko	24.0	White	98.2
LaGrange	91.7	Whitley	31.5
Lake	79.0		
LaPorte	78.7		
Lawrence	90.6		
Madison	71.6		

Note: The Coverage Indicator represents the proportion of county data that is not imputed for a given year. The indicator ranges from 0.0% (indicating that all data in the county are based on estimates) to 100.0% (indicating complete reporting; no computation).
Source: Federal Bureau of Investigation (FBI), 2012

Indiana University Center for Health Policy

3

Alcohol Use in Indiana: Consumption Patterns and Consequences

ALCOHOL CONSUMPTION

General Consumption Patterns

Alcohol is the most frequently used substance in both Indiana and the United States. In 2011, 11.2 million gallons of ethanol (the intoxicating agent in alcoholic beverages) were consumed in Indiana; this included, by volume, 119 million gallons of beer, 11.4 million gallons of wine, and 10.2 million gallons of spirits. The annual per capita consumption of ethanol for the population 14 years and older was 2.1 gallons in Indiana and 2.3 gallons in the nation (National Institute on Alcohol Abuse and Alcoholism (NIAAA), 2015).

In 2015, a total of 11,289 permits for public access for sale of alcoholic beverages were on file in Indiana, representing a rate of 1.7 licenses per 1,000 Hoosiers.

Most licenses were in Marion (1,610) and Lake (874) Counties (Alcohol and Tobacco Commission, 2015).

Based on 2013–2014 averages calculated from the National Survey on Drug Use and Health (NSDUH), the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 51.5% (95% Confidence Interval [CI]: 48.0–54.2) of Indiana residents 12 years of age or older had used alcohol during the past month; Indiana's prevalence rate for current alcohol use[1] was similar to the U.S. rate of 52.4% (95% CI: 51.9–52.9) (see Figure 3.1) (SAMHSA, 2014).

Figure 3.1 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Current Alcohol Use (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	39.7%	41.6%	38.9%	46.6%	47.4%	49.9%	49.4%	50.1%	49.3%	48.0%	49.4%	51.0%	51.2%	51.6%	51.5%
U.S.	46.3%	47.6%	51.0%	50.5%	50.2%	51.1%	51.4%	51.0%	51.4%	51.8%	51.8%	51.8%	51.9%	52.1%	52.4%
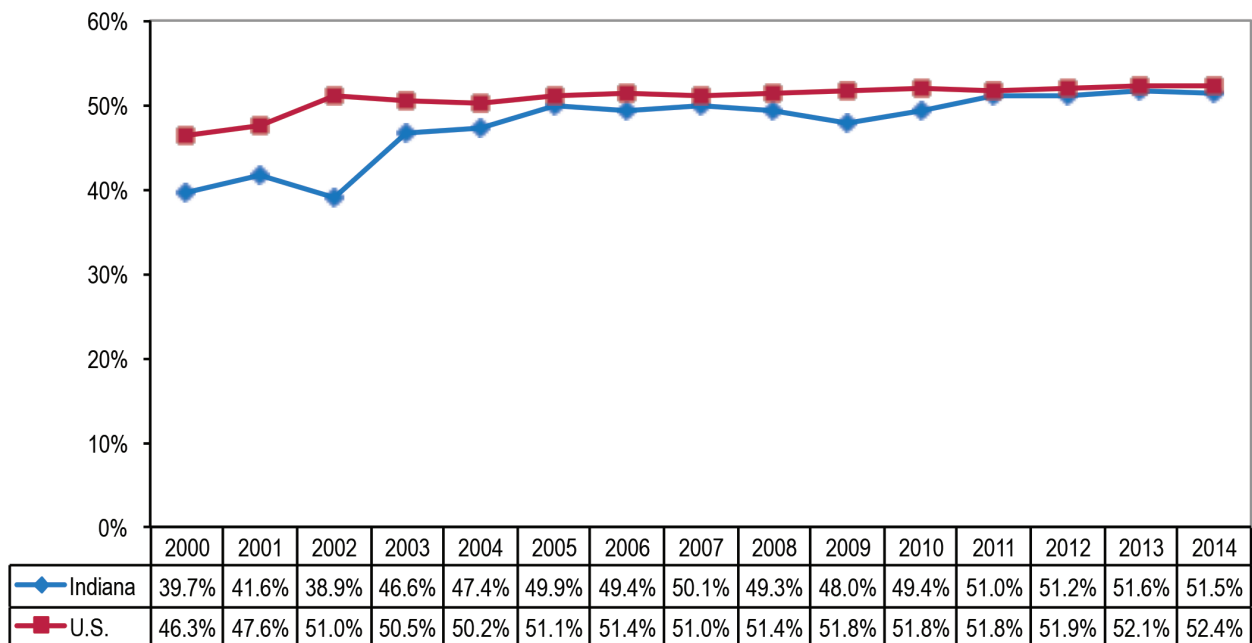
Source: SAMHSA, 2014

[1] Current alcohol use is defined as having used alcohol in the past 30 days or past month.

One risky alcohol consumption pattern assessed by the NSDUH is binge drinking. The NSDUH defines binge drinking as consumption of five or more alcoholic beverages on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least one day in the past month. In 2014, 21.8% of the Indiana population 12 years of age or older reported binge drinking (95% CI: 19.6–24.0), similar to that of the national average of 22.9% (95% CI: 22.5–23.3) (see Figure 3.2) (SAMHSA, 2014).

Figure 3.2 Percentage of Indiana and U.S. Population (12 years and older) Reporting Current Binge Drinking (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	18.6%	19.0%	24.2%	22.3%	21.7%	22.0%	21.1%	22.3%	23.0%	23.0%	22.6%	22.7%	24.0%	22.3%	21.8%
U.S.	20.0%	20.6%	22.9%	22.8%	22.7%	22.7%	22.8%	23.2%	23.3%	23.5%	23.4%	22.9%	22.8%	22.9%	22.9%
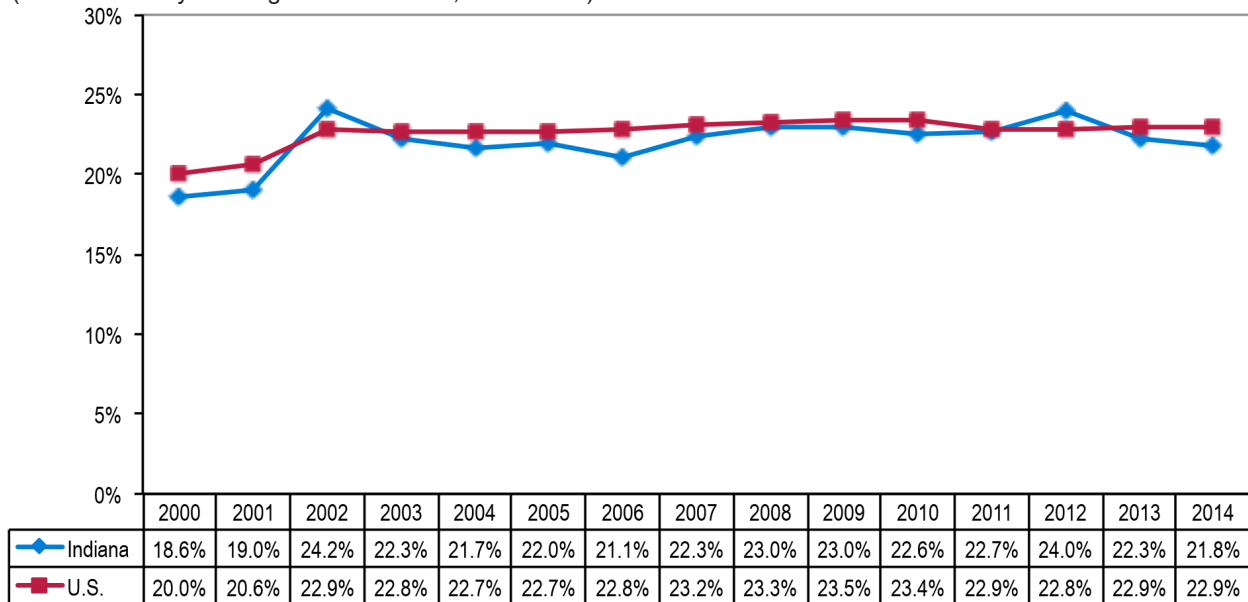
Source: SAMHSA, 2014

Adult Alcohol Consumption Patterns

According to 2013–2014 NSDUH results, 61.8% of Hoosiers (95% CI: 58.0–65.3) between the ages of 18 and 25 reported current alcohol use; the U.S. rate was similar at 59.6% (95% CI: 58.8–60.4). Past-month alcohol consumption was also similar among Indiana and U.S. adults 26 years and older with rates of 54.3% (95% CI: 50.5–58.1) and 56.2%, respectively (95% CI: 55.6-56.8) (SAMHSA, 2014).

Binge drinking was particularly widespread among young adults. The highest prevalence rate was found among 18- to 25year-olds, with the Indiana rate (39.5%; 95% CI: 35.7–43.3) and U.S. rate (37.8%; 95% CI: 37.1–38.6) being statistically similar (see Figure 3.3). Among adults, binge drinking rates decreased with age; 21.0% (95% CI: 18.2–24.1) of Hoosiers ages 26 years and older reported having consumed five or more drinks on the same occasion during the last 30 days (U.S.: 22.2%, 95% CI: 21.7–22.7) (SAMHSA, 2014).

Figure 3.3 Percentage of Indiana and U.S. 18- to 25-Year-Olds Reporting Binge Drinking in the Past 30 Days (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	37.8%	33.7%	46.8%	45.1%	43.5%	42.0%	41.1%	41.5%	40.3%	40.8%	40.8%	41.8%	43.1%	40.9%	39.5%
U.S.	35.9%	38.1%	40.9%	41.3%	41.4%	41.5%	42.0%	42.0%	41.4%	41.4%	41.2%	40.2%	39.6%	38.7%	37.8%
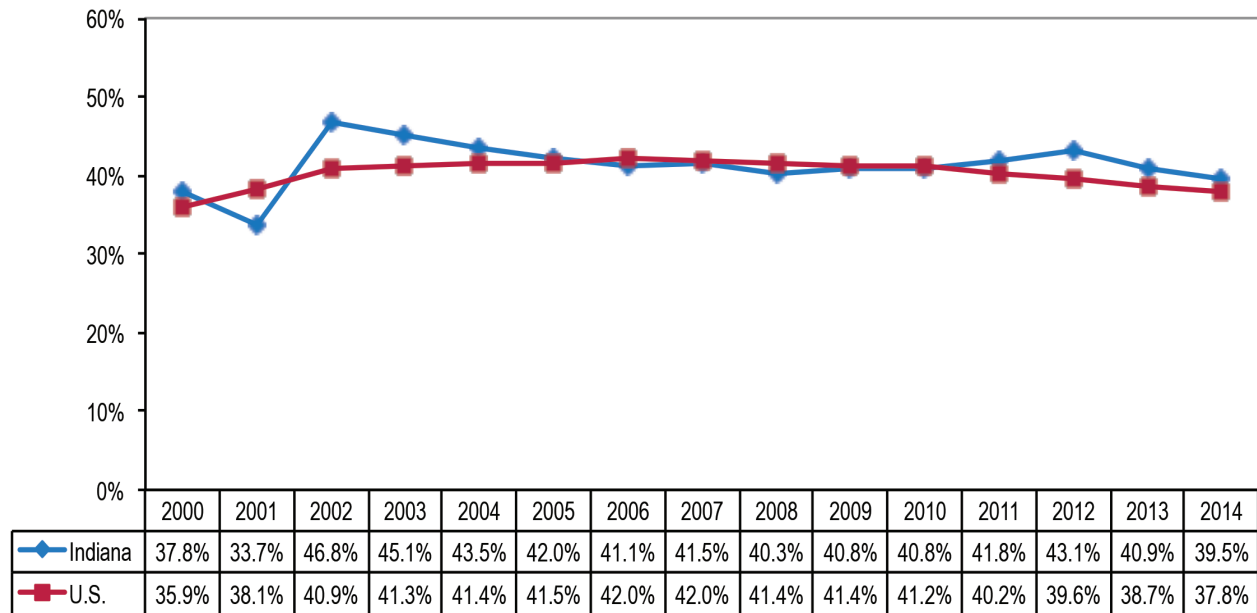
Source: SAMHSA, 2014

Table 3.1 Percentage of Indiana and U.S. Adults Having Used Alcohol in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2013)

		Indiana % (95% CI)	U.S. %
Gender	Male	55.2% (53.3-57.2)	61.2%
	Female	42.2% (40.5-44.0)	48.3%
Race/Ethnicity	White	49.6% (48.2-51.0)	58.8%
	Black	43.4% (37.9-48.9)	44.7%
	Hispanic	46.1% (39.5-52.6)	46.2%
Age Group	18-24	46.4% (41.5-51.2)	52.8%
	25-34	60.3% (56.6-64.1)	62.4%
	35-44	57.2% (53.9-60.6)	59.9%
	45-54	51.0% (48.2-53.9)	55.6%
	55-64	45.0% (42.5-47.5)	53.2%
	65+	32.8% (30.9-34.6)	42.0%
Total		48.5% (47.2-49.8)	54.5%

Source: Centers for Disease Control and Prevention, 2013

The 2013 Behavioral Risk Factor Surveillance System (BRFSS) reported that Indiana's adult prevalence rate for current alcohol use (48.5%; 95% CI: 47.2-49.8) was significantly lower than the nation's (54.5%). In Indiana, rates were significantly higher among males and among younger age groups (see Table 3.1) (Centers for Disease Control and Prevention (CDC), 2015).

The BRFSS examines binge drinking as well, but its definition varies slightly from NSDUH's description and takes gender into account. The BRFSS defines binge drinking as "males having five or more drinks on one occasion and females having four or more drinks on one occasion." The overall prevalence rate for adult binge drinking based on this definition was statistically lower in Indiana (15.0%; 95% CI: 14.0-16.0) than the United States (16.8%). Binge alcohol use was significantly higher in males than females and more prevalent in younger individuals; no statistical differences were observed by race/ethnicity (see Table 3.2). Binge drinking has remained stable from 2002 through 2010 (see Figure 3.4) (Centers for Disease Control and Prevention, 2013). However, due to changes the Centers for Disease Control and Prevention made to

the BRFSS, survey data, starting with 2011, should not be compared to results from previous years, though the data are provided as a reference point. For more detailed information, see Chapter 2 "Methods".

Additionally, the BRFSS collects information on a measure called heavy drinking. The BRFSS defines heavy drinking as "adult men having more than two drinks per day and adult women having more than one drink per day." Overall rates for heavy drinking were statistically lower in Indiana (5.2%; 95% CI: 4.6–5.8) than in the United States (6.2%) in 2013. In Indiana, 6.1% of men (95% CI: 5.1–7.1) and 4.4% of women (95% CI: 3.7–5.1) reported heavy drinking (CDC, 2015).

Figure 3.4   Percentage of Indiana and U.S. Adults Reporting Binge Drinking in the Past 30 Days (Behavioral Risk Factor Surveillance System, 2002–2013)
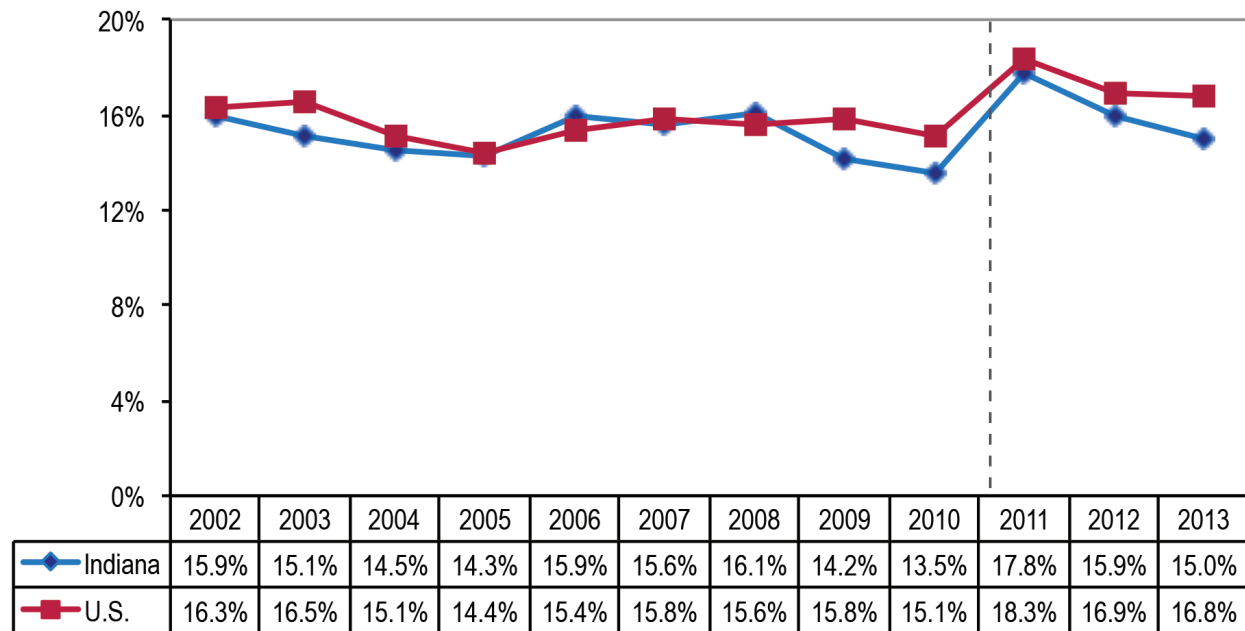
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	15.9%	15.1%	14.5%	14.3%	15.9%	15.6%	16.1%	14.2%	13.5%	17.8%	15.9%	15.0%
U.S.	16.3%	16.5%	15.1%	14.4%	15.4%	15.8%	15.6%	15.8%	15.1%	18.3%	16.9%	16.8%

Note: Prevalence rates, starting with 2011, should not be compared to previous years due to changes in methodology.
Source: CDC, 2015

Table 3.2 Percentage of Indiana and U.S. Residents Who Engaged in Binge Drinking in the Past 30 Days, by Gender, Race/Ethnicity, and Age Group (Behavioral Risk Factor Surveillance System, 2013)

		Indiana % (95% CI)	U.S. %
Gender	Male	20.2% (18.5-21.9)	22.2%
	Female	10.3% (9.1-11.5)	11.3%
Race/Ethnicity	White	15.0% (13.9-16.1)	17.1%
	Black	12.6% (8.9-16.3)	12.5%
	Hispanic	21.1% (15.4-26.9)	18.7%
Age Group	18-24	23.4% (19.3-27.4)	26.1%
	25-34	23.8% (20.6-27.0)	26.5%
	35-44	21.1% (18.2-23.9)	19.7%
	45-54	13.5% (11.6-15.4)	15.7%
	55-64	8.9% (7.4-10.4)	10.4%
	65+	3.1% (2.4-3.9)	4.4%
Total		**15.0% (14.0-16.0)**	**16.8%**

Source: CDC, 2015

Youth Alcohol Consumption Patterns/ Underage Drinking

According to the YRBSS, 33.4% (95% CI: 30.2–36.9) of high school students in Indiana had consumed at least one alcoholic drink in the past 30 days in 2011; no significant differences were observed by gender or race/ethnicity. However, rates varied by grade level, with 9th grade students reporting the lowest rate. Past-month alcohol prevalence among high school students was lower for Indiana than the nation (38.7%: 95% CI: 37.2–40.3). Indiana's rate decreased from 2003 to 2011.

In 2011, 19.8% (95% CI: 17.0–22.9) of high school students in Indiana said they had had five or more alcoholic drinks within a couple of hours at least once in the past month. This was statistically similar to the U.S. rate (21.9%; 95% CI: 21.0–22.8). Rates did not differ significantly by gender, but by race. Whites (21.8%; 95% CI: 18.4–25.5) had significantly higher rates than blacks (7.6%; 95% CI: 4.3–13.1), but did not differ statistically from Hispanics (27.3%; 95% CI: 19.8–36.4). In addition, prevalence increased with grade level; more high school seniors (28.5%; 95% CI: 21.8–36.4) engaged in binge drinking than freshmen (12.3%; 95% CI: 9.7–15.5). Indiana's rate decreased from 2003 to 2011 (CDC, 2016).

According to 2013–2014 NSDUH estimates, 11.4% (95% CI: 9.5–13.7) of young people ages 12 to 17 consumed alcohol in the past 30 days in Indiana; the rate was similar on the national level (11.5%; 95% CI: 11.1–12.0). Additionally, 6.3% (95% CI: 5.0–7.9) of Indiana youths in this age group engaged in binge drinking in the past month; the state's prevalence among 12- to 17-year-olds was similar to the nation's (6.2%; 95% CI: 5.9–6.5) (SAMHSA, 2014).

NSDUH also provides underage drinking prevalence estimates among 12- to 20-year-olds. Indiana's rates for current use (22.8%; 95% CI: 20.4–25.3) and binge drinking (14.1%; 95% CI: 12.1–16.3) were similar to U.S. rates of 22.7% (95% CI: 22.2–23.4) and 14.0% (95% CI: 13.5–14.5), respectively (SAMHSA, 2014).

In 2015, almost 50.4% of Indiana 12th grade students reported using alcohol at least once during their lifetime (Gassman, Jun, Samuel, Agley, King, & Lee, 2015). Overall, alcohol consumption patterns seemed to progress with age; i.e., 8th grade students showed lower prevalence rates than 10th and 12th grade students. For more detailed data on lifetime and monthly alcohol use among Indiana and U.S. 8th, 10th, and 12th grade students, see Figure 3.5; for trend information (from 2000 through 2015) on lifetime and monthly alcohol use among high school seniors, see Figure 3.6. For monthly and binge use by Indiana region and grade for 2015, see Appendix 3A, page 42.

Figure 3.5   Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Lifetime and Monthly Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2015)
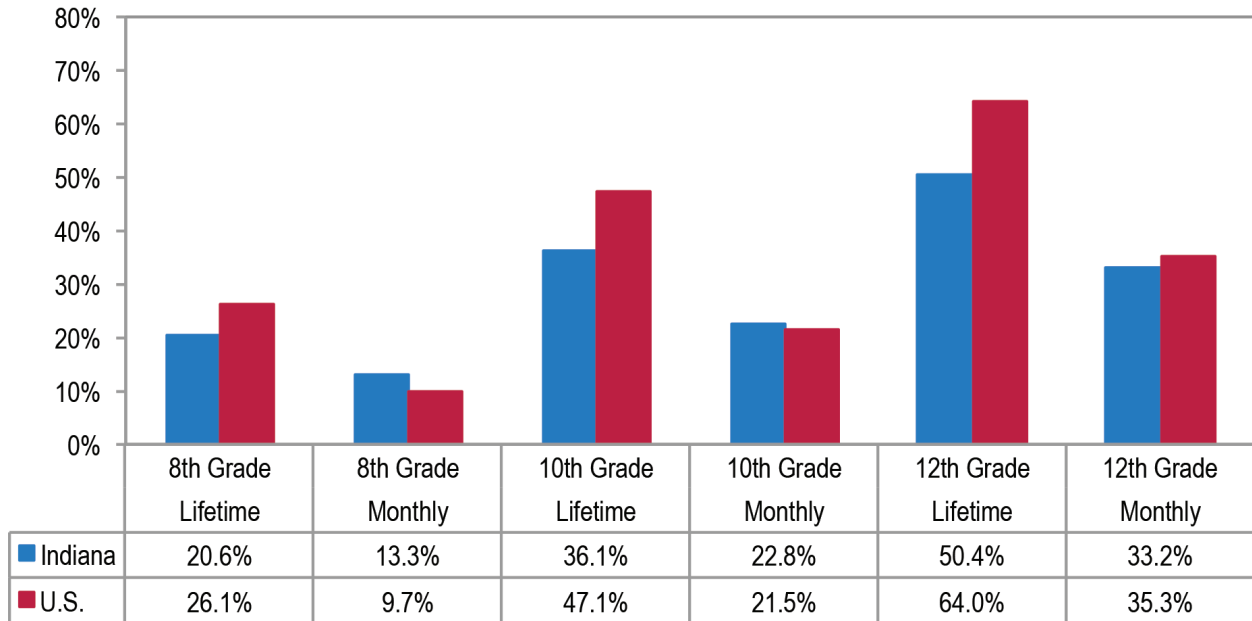
	8th Grade Lifetime	8th Grade Monthly	10th Grade Lifetime	10th Grade Monthly	12th Grade Lifetime	12th Grade Monthly
Indiana	20.6%	13.3%	36.1%	22.8%	50.4%	33.2%
U.S.	26.1%	9.7%	47.1%	21.5%	64.0%	35.3%

Source: Gassman, et al., 2015; Inter-university Consortium for Political and Social Research, University of Michigan, 2015

Figure 3.6   Percentage of Indiana and U.S. High School Seniors (12th Grade) Reporting Monthly and Lifetime Alcohol Use (Indiana Youth Survey and Monitoring the Future Survey, 2001–2015)
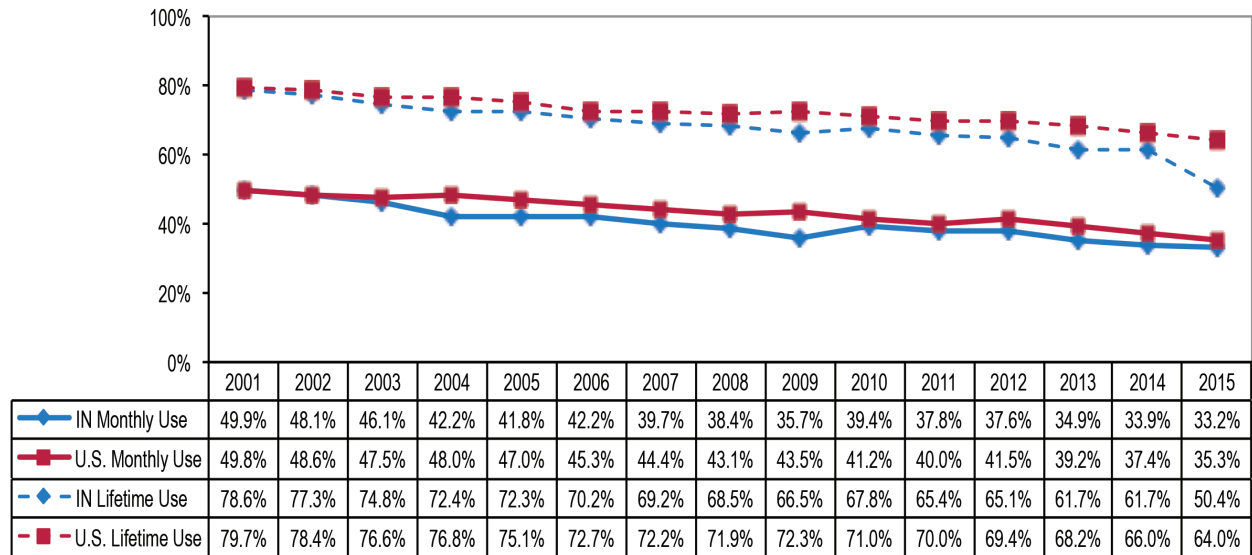
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
IN Monthly Use	49.9%	48.1%	46.1%	42.2%	41.8%	42.2%	39.7%	38.4%	35.7%	39.4%	37.8%	37.6%	34.9%	33.9%	33.2%
U.S. Monthly Use	49.8%	48.6%	47.5%	48.0%	47.0%	45.3%	44.4%	43.1%	43.5%	41.2%	40.0%	41.5%	39.2%	37.4%	35.3%
IN Lifetime Use	78.6%	77.3%	74.8%	72.4%	72.3%	70.2%	69.2%	68.5%	66.5%	67.8%	65.4%	65.1%	61.7%	61.7%	50.4%
U.S. Lifetime Use	79.7%	78.4%	76.6%	76.8%	75.1%	72.7%	72.2%	71.9%	72.3%	71.0%	70.0%	69.4%	68.2%	66.0%	64.0%

Source: Gassman, et al., 2015; Inter-university Consortium for Political and Social Research, University of Michigan, 2015

The Indiana College Substance Use Survey was developed to measure alcohol and other drug usage, attitudes, and perceptions among college students at two- and four-year institutions. According to 2015 results, which was based on eight participating colleges, 80.0% of students who responded to the survey reported past-year alcohol use and 62.2% reported past-month use; consumption rates were significantly lower for underage students (past-year use: 71.3%; past-month use: 53.1%) than those ages 21 and older (past-year use: 88.2%; past-month use: 70.8%). Similarly, past-month binge drinking prevalence (overall 45.8%) was significantly lower for underage students (42.9%) than those ages 21 and older (48.6%) (King & Jun, 2015).[2]

CONSEQUENCES

Alcohol use is a major factor in homicides, suicides, violent crimes, and motor vehicle crashes. Heavy alcohol use can lead to serious patterns of abuse and/or dependence and is associated with other health compromising behaviors, such as cigarette smoking, illicit drug use, and risky sex. Chronic alcohol use can lead to the development of cirrhosis and other serious liver diseases.

Alcohol Abuse and Dependence

Based on 2013–2014 NSDUH averages, the estimated prevalence for alcohol abuse and/or dependence[3] in the past year among those ages 12 and older was 6.7% (95% CI: 5.7–7.8) in Indiana, which was similar to the national estimate (6.5%; 95% CI: 6.3–6.7). Since at least 2000, Indiana's alcohol abuse/dependence prevalence rates have been similar to U.S. rates (see Figure 3.7). Of all age groups, adults ages 18 to 25 reported the highest prevalence rates both in Indiana and nationally across all years reviewed. Additionally, an estimated 6.4% (95% CI: 5.4–7.5) of those ages 12 and older were in need of but did not receive treatment for alcohol use in Indiana (U.S.: 6.2%; 95% CI: 6.0–6.4) (SAMHSA, 2014).

Figure 3.7   Percentage of Indiana and U.S. Population Ages 12 and Older with Alcohol Abuse and/or Dependence (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	5.2%	5.0%	8.8%	7.9%	7.6%	7.9%	7.7%	6.7%	6.9%	7.0%	7.2%	6.9%	6.8%	7.0%	6.7%
U.S.	5.5%	5.7%	7.7%	7.6%	7.5%	7.7%	7.7%	7.2%	7.4%	7.4%	7.3%	6.8%	6.6%	6.7%	6.5%
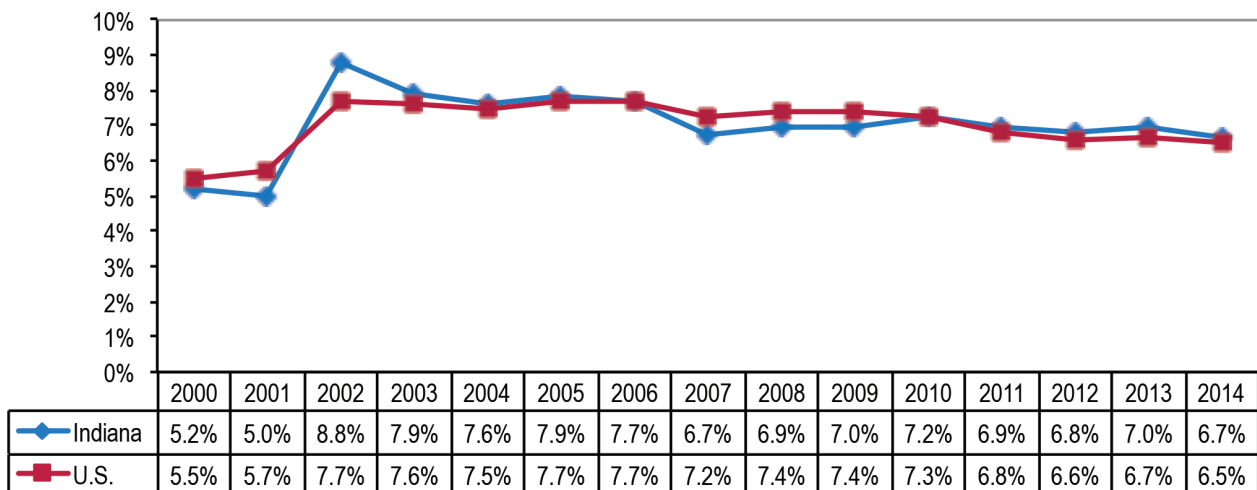
Source: SAMHSA, 2014

[2]Eight Indiana colleges participated in the 2015 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.
[3]The NSDUH uses the terms "dependence" and "abuse" based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

Based on findings from the Treatment Episode Data Set (TEDS), alcohol plays a major role in admissions to substance abuse treatment. In over half (57.3%) of Indiana treatment episodes in 2013, alcohol use was reported (U.S.: 54.1%, *P* < 0.001), and in more than one-third (38.0%), alcohol dependence[4] was indicated (U.S.: 37.5%) (see Figure 3.8) (SAMHSA, 2013).

Factors significantly associated with alcohol abuse and dependence in Indiana included gender, race/ethnicity, and age (findings from the 2013 TEDS dataset):

Gender—A high percentage of males (42.3%) in substance abuse treatment listed alcohol as their primary substance, compared to 30.9% of females (*P* < 0.001).

Race/ethnicity—Over one-third of whites (37.5%) reported alcohol as their primary substance; this percentage was below that for blacks (40.1%) and other races (39.9%) (*P* < 0.01). With regard to ethnicity, a significantly higher percentage of Hispanics (51.9%) reported alcohol dependence than non-Hispanics (37.4%) (*P* < 0.001).

Age—In the treatment population, the percentage of Hoosiers with alcohol dependence increased with age; clients under the age of 18 had the lowest percentage (18.6%) and those ages 55 and older had the highest percentage (66.1%) (*P* < 0.001).

Table 3.3 depicts the percentage of Indiana residents, categorized by gender, race, ethnicity, and age group, in treatment for alcohol abuse and dependence. See Appendix 3B, page 43, for county-level treatment data.

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Figure 3.8 Percentage of Treatment Episodes in Indiana and the United States with Alcohol Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	54.3%	54.4%	52.0%	51.1%	48.9%	47.0%	46.4%	48.1%	47.3%	44.2%	37.6%	38.5%	40.1%	38.0%
U.S.	46.1%	45.6%	42.7%	41.3%	40.0%	39.0%	39.5%	40.2%	41.3%	41.7%	40.9%	39.3%	38.9%	37.5%
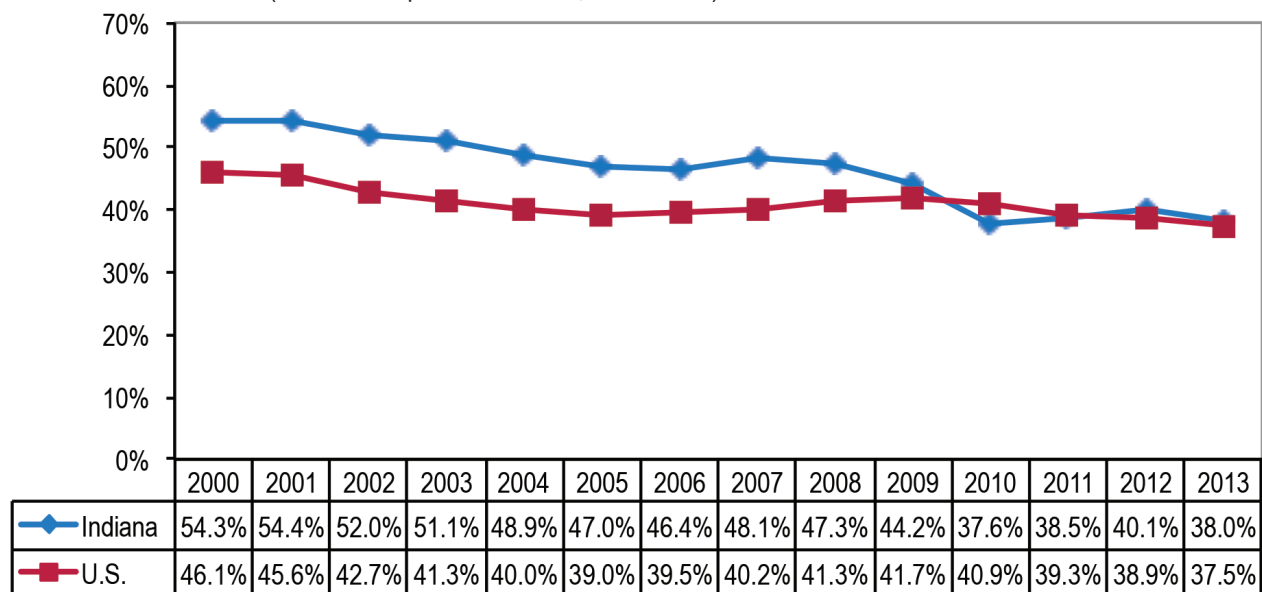
Source: SAMHSA, 2013

[4]We defined alcohol dependence as "individuals in substance abuse treatment listing alcohol as their primary substance at admission."

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Table 3.3 Percentage of Treatment Episodes in Indiana with Alcohol Dependence Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group (Treatment Episode Data Set, 2013)

		Alcohol Dependence
Gender	Male	42.3%
	Female	30.9%
Race	White	37.5%
	Black	40.1%
	Other	39.9%
Ethnicity	Hispanic	51.9%
	Non-Hispanic	37.4%
Age Group	Under 18	18.6%
	18-24	28.6%
	25-34	30.8%
	35-44	44.5%
	45-54	58.3%
	55+	66.1%
Total		**38.0%**

Source: SAMHSA, 2013

Alcohol-Related Morbidity and Mortality

Hospital discharge records show that in 2014, a total of 1,627 hospitalized patients were treated in Indiana for an alcohol-attributable primary diagnosis, representing one percent (1.0%) of all hospital discharges in the state (Indiana State Department of Health (ISDH), 2014).[5]

From 2000 through 2014, a total of 5,883 Hoosiers died from alcohol-induced causes (see Map 3.1) (ISDH, 2016).[6] The age-adjusted mortality rate for alcohol-attributable deaths has remained stable throughout this time period in Indiana and the United States. Indiana's age-adjusted rate was 8.1 per 100,000 (95% CI: 7.4–8.7) in 2014, which was similar to the U.S. rate of 8.5 per 100,000 population (95% CI: 8.4–8.6) (see Figure 3.9) (CDC, 2015).

Figure 3.9 Age-Adjusted Alcohol-attributable Mortality Rates per 100,000 Population in Indiana and the United States (CDC WONDER, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	5.8	5.1	5.3	5.3	5.2	4.9	5.0	4.6	5.4	5.4	6.2	6.9	7.0	7.3	8.1
U.S.	7.0	7.0	6.9	7.0	7.0	7.0	6.9	7.1	7.3	7.3	7.5	7.7	7.9	8.2	8.5
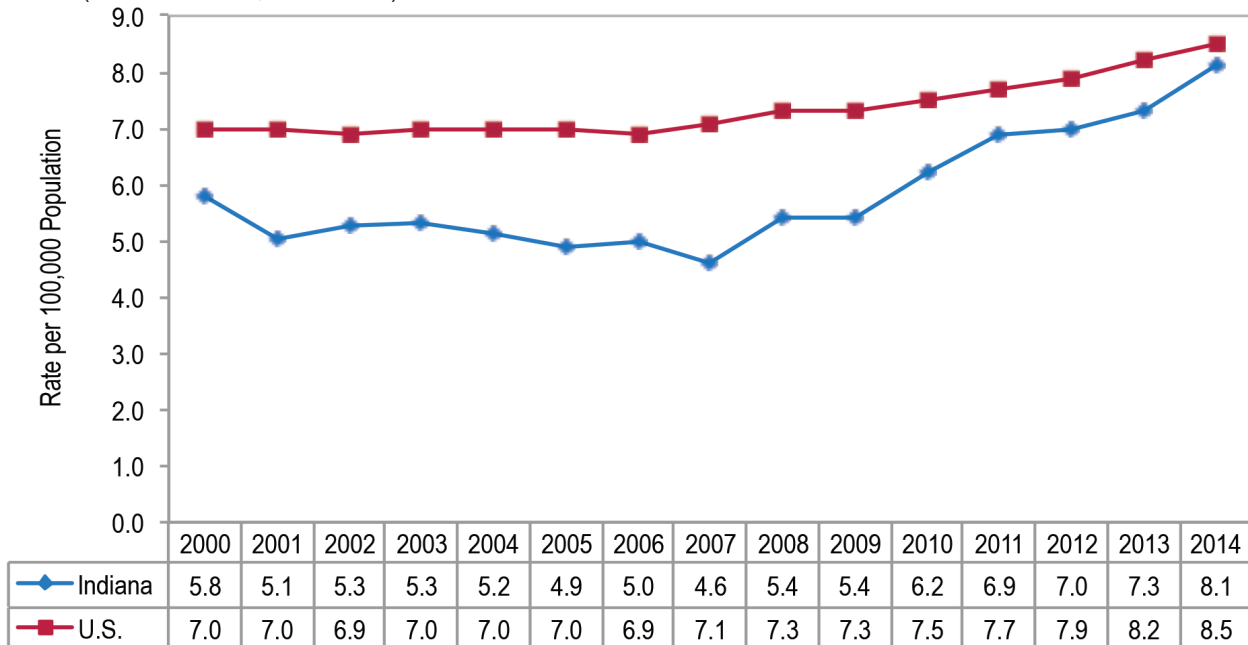
Source: CDC, 2015

[5]For our analysis, we only included primary diagnoses that were 100% attributable to alcohol, as listed in CDC's Alcohol-Related Disease Impact (ARDI) database. These included ICD-10 codes E24.4 (Alcohol-induced pseudo-Cushing's syndrome), F10 (Mental and behavioral disorders due to use of alcohol), G31.2 (Degeneration of nervous system due to alcohol), G62.1 (Alcoholic polyneuropathy), G72.1 (Alcoholic myopathy), I42.6 (Alcoholic cardiomyopathy), K29.2 (Alcoholic gastritis), K70 (Alcoholic liver disease), K86.0 (Alcohol-induced chronic pancreatitis), R78.0 (Finding of alcohol in blood), X45 (Accidental poisoning by and exposure to alcohol), X65 (Intentional self-poisoning by and exposure to alcohol), Y15 (Poisoning by and exposure to alcohol, undetermined cause) (Centers for Disease Control and Prevention, 2006-2010).
[6]Alcohol-induced causes of death include the following ICD-10 codes: E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K86.0, R78.0, X45, X65, Y15.

Though alcohol use is not associated with every suicide and homicide, these violent acts often involve individuals who have been drinking. According to the Alcohol-Related Disease Impact (ARDI) database, the direct alcohol-attributable fraction for suicides and homicides, both in Indiana and in the nation, is 23% and 47%, respectively. In other words, 23% of suicides and 47% of homicides can be attributed to alcohol consumption (CDC, 2006-2010). (Appendix 3C, page 44, lists conditions that can be attributed to alcohol, along with their alcohol-attributable fractions.) For this reason, intentional self-harm (suicide)[7] and assault (homicide)[8] rates may provide additional information on alcohol's impact in a community.

From 2000 through 2014, a total of 12,154 Hoosiers died by suicide. Applying ARDI's alcohol-attributable fraction of 23%, this means that during these 14 years, a total of 2,795 suicide deaths were attributable to alcohol. Indiana's age-adjusted mortality rate for suicide was 14.3 per 100,000 population (95% CI: 13.4-15.2) in 2014, a rate statistically higher than the U.S. rate of 13.0 per 100,000 population (95% CI: 12.8-13.1) (see Figure 3.10). Rates were significantly higher for males (23.4 per 100,000 population; 95% CI: 21.7-25.1) than for females (5.7 per 100,000 population; 95% CI: 4.8–6.5), and for whites (15.5 per 100,000 population; 95% CI: 14.5-16.6) than for blacks (5.0 per 100,000 population; 95% CI: 3.4-7.1) in Indiana (CDC, 2015).

From 2000 through 2014, a total of 5,387 homicides were committed in Indiana. Applying ARDI's alcohol-attributable fraction of 47%, this means that 2,532 homicide deaths were attributable to alcohol during that time period. Indiana's age-adjusted homicide death rate was 5.7 per 100,000 population (95% CI: 5.1-6.3) in 2014, which was statistically similar to the U.S. rate of 5.1 per 100,000 population (95% CI: 5.0–5.2) (see Figure 3.10). In 2014, rates were significantly higher for Indiana males (9.0 per 100,000 population; 95% CI: 7.9-10.0) than for females (2.3 per 100,000 population; 95% CI: 1.8-2.9), and for blacks (28.6 per 100,000 population; 95% CI: 24.5-32.6) than for whites (2.9 per 100,000 population; 95% CI: 2.4-3.4) (CDC, 2015).

Figure 3.10 Age-Adjusted Mortality Rates per 100,000 Population for Intentional Self-Harm (Suicide) and Assault (Homicide), Indiana and the United States (CDC WONDER, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Suicide Indiana	11.3	11.7	12.1	12.0	11.3	11.9	12.9	12.4	12.6	12.8	13.1	13.5	14.3	14.2	14.3
Suicide U.S.	10.4	10.7	10.9	10.8	10.9	10.8	10.9	11.3	11.6	11.8	12.1	12.3	12.6	12.6	13.0
Homicide Indiana	5.9	7.1	6.2	5.6	5.3	5.8	5.9	5.8	5.1	5.4	4.9	4.9	5.4	6.2	5.7
Homicide U.S.	5.9	6.0	6.0	6.0	5.8	6.0	6.1	6.0	5.8	5.4	5.2	5.2	5.3	5.2	5.1
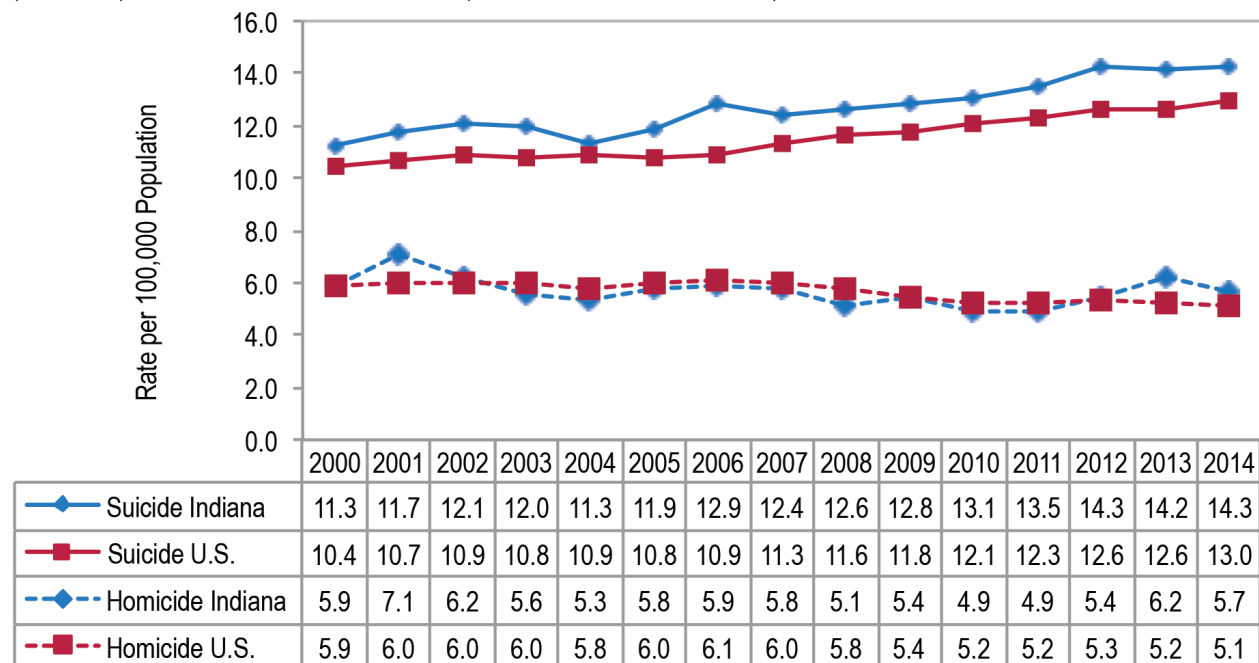
Source: CDC, 2015

[7]Intentional self-harm (suicide) includes ICD-10 codes X60–X84.
[8]Assault (homicide) includes ICD-10 codes X85–Y09.

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Alcohol consumption during pregnancy is another major concern since fetal alcohol spectrum disorders (FASD) are a direct result of prenatal exposure to alcohol. FASD is not a clinical diagnosis, but an umbrella term used to describe a range of disorders such as fetal alcohol syndrome, alcohol-related neurodevelopmental disorder, and alcohol-related birth defects. Possible physical effects include brain damage; facial anomalies; growth deficiencies; defects of heart, kidney, and liver; vision and hearing problems; skeletal defects; and dental abnormalities. In the United States, the prevalence of fetal alcohol spectrum disorders is 10.0 per 1,000 live births (SAMHSA, Fetal Alcohol Spectrum Disorders Center for Excellence, 2007).

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). State law requires doctors, hospitals, and other healthcare providers to submit a report to the registry at ISDH when a child is born with a birth defect. From 2006 through 2011, 187 children were born with fetal alcohol syndrome,[9] the most severe form of FASD, in Indiana (ISDH, 2006-2011).

Alcohol-Related Motor Vehicle Accidents

According to the Fatality Analysis Reporting System (FARS), a total of 709 fatal crashes occurred in Indiana in 2013, of which 181 (or 25%) were alcohol-related (U.S.: 9,158 alcohol-related crashes; 30%) (National Highway Traffic Safety Administration, 2013). Even though most fatal collisions happened in the afternoon between 3:00 and 5:59 p.m., the highest percentage of crashes attributable to alcohol-impaired driving[10] occurred at nighttime, especially between midnight and early morning hours (see Table 3.4).

Data from the Automated Reporting Information Exchange System (ARIES), part of the Indiana State Police's Vehicle Crash Records System, showed a decrease in alcohol-related collisions from 13,911 in 2003 to 8,018 in 2014. This represents a 42% drop. The number of fatal crashes with alcohol involvement also decreased from 242 to 153. (For a detailed listing of alcohol-related collisions and fatalities in Indiana by county for 2014, see Appendix 3D, pages 44-46). The overall rate for alcohol-related collisions in Indiana in 2014 was 1.2 per 1,000 population (Indiana State Police, 2014).

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[9]The ICD-9 code for fetal alcohol syndrome is 760.71.
[10]Alcohol-impaired driving means that at least one driver or motorcycle rider had a blood alcohol content (BAC) of .08 or higher.

Table 3.4 Number of Fatal Crashes and Percent Alcohol-Related in Indiana, by Time of Day and Crash Type (Fatality Analysis Reporting System, 2013)

Time of Crash	Single Vehicle			Multiple Vehicle			All Crashes		
	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving	Number	Alcohol-impaired driving	Percent Alcohol-impaired driving
Midnight to 2:59 a.m.	58	36	63%	16	8	51%	74	44	60%
3 a.m. to 5:59 a.m.	43	20	46%	21	11	50%	64	30	47%
6 a.m. to 8:59 a.m.	39	8	19%	36	6	15%	75	13	17%
9 a.m. to 11:59 a.m.	26	3	13%	42	2	4%	68	5	7%
Noon to 2:59 p.m.	45	3	7%	42	2	4%	87	5	5%
3 p.m. to 5:59 p.m.	58	11	19%	77	9	11%	135	20	14%
6 p.m. to 8:59 p.m.	62	19	31%	44	10	24%	106	30	28%
9 p.m. to 11:59 p.m.	71	24	34%	29	10	34%	100	34	34%
Total	402	124	31%	307	57	18%	709	181	25%

Note: National Highway Traffic Safety Administration estimates alcohol involvement when alcohol test results are unknown.
Source: National Highway Traffic Safety Administration, 2013

Alcohol-Related Crimes

Using the Uniform Crime Reporting Program (UCR) dataset, we compared alcohol-related offenses, including arrests for driving under the influence (DUI; commonly known as "drunk driving"), public intoxication ("public drunkenness"), and liquor law violations (i.e., violations of alcohol-related policies by the alcohol retail industry, including selling/furnishing alcohol to minors; minimum age of employee selling/serving alcohol; etc.), between Indiana and the United States (Federal Bureau of Investigation (FBI), 2012). In 2012, a total of 23,350 DUI arrests were made in Indiana. The arrest rate was statistically similar between Hoosiers, at 3.6 per 1,000 population (95% CI: 3.5–3.6), and U.S. residents, at 3.5 per 1,000 population (95% CI: 3.5–3.5). Close to 15,000

Hoosiers were arrested for public intoxication; the arrest rate was almost twice as high for Indiana, at 2.3 per 1,000 population (95% CI: 2.2–2.3), as for the nation, at 1.3 per 1,000 population (95% CI: 1.3–1.3). Additionally, almost 13,000 arrests occurred for liquor law violations in Indiana, representing an arrest rate of 2.0 per 1,000 population (95% CI: 1.9–2.0), which was significantly higher than the U.S. rate of 1.2 per 1,000 population (95% CI: 1.2–1.2) (see Figures 3.11–3.14).

Arrests for alcohol-related crimes varied among Indiana counties. These county differences are presented in Maps 3.2 through 3.4 (pages 50-52) and Appendix 3E (pages 47-48).

Figure 3.11 Number of Arrests for Driving Under the Influence (DUI), Public Intoxication, and Liquor Law Violations in Indiana (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
DUI	30,814	34,797	38,003	38,226	36,469	36,772	35,884	32,232	31,447	30,819	27,112	25,410	23,350
Public Intoxication	23,647	21,598	20,820	20,382	18,562	20,701	21,987	22,229	22,545	20,936	19,617	18,975	14,787
Liquor Law Violations	18,980	18,024	16,484	16,502	17,307	17,119	16,659	15,066	16,950	16,183	14,027	13,042	12,866
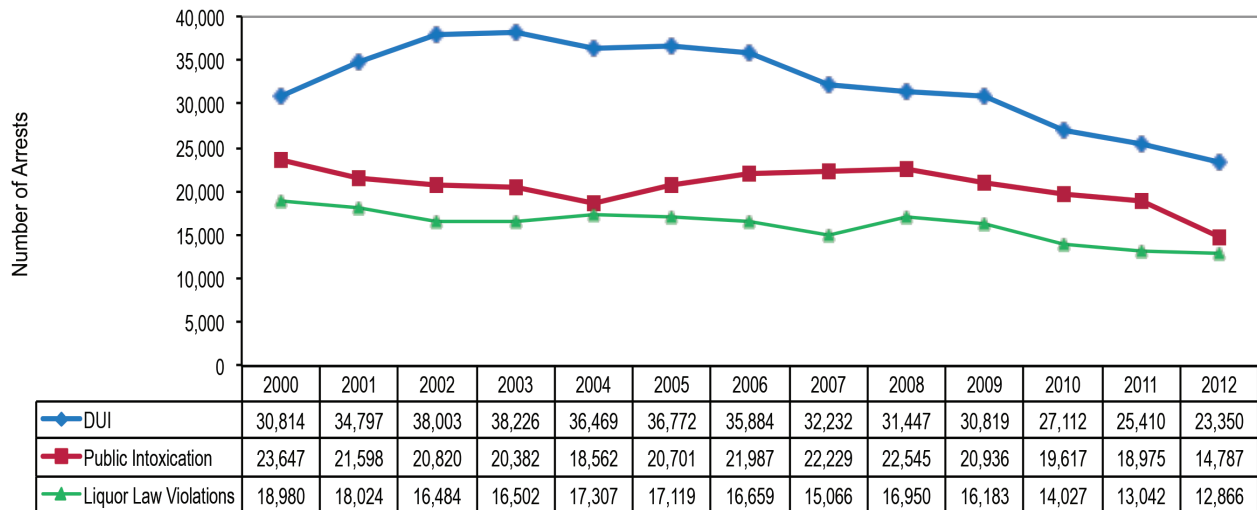
Source: FBI, 2012

Figure 3.12 Arrest Rates, per 1,000 Population, for Driving Under the Influence (DUI) in Indiana and the United States (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	5.1	5.7	6.2	6.2	5.8	5.9	5.7	5.1	4.9	4.8	4.2	3.9	3.6
U.S.	4.4	4.0	4.3	4.2	4.2	4.1	4.1	4.1	4.2	4.1	3.9	4.0	3.5
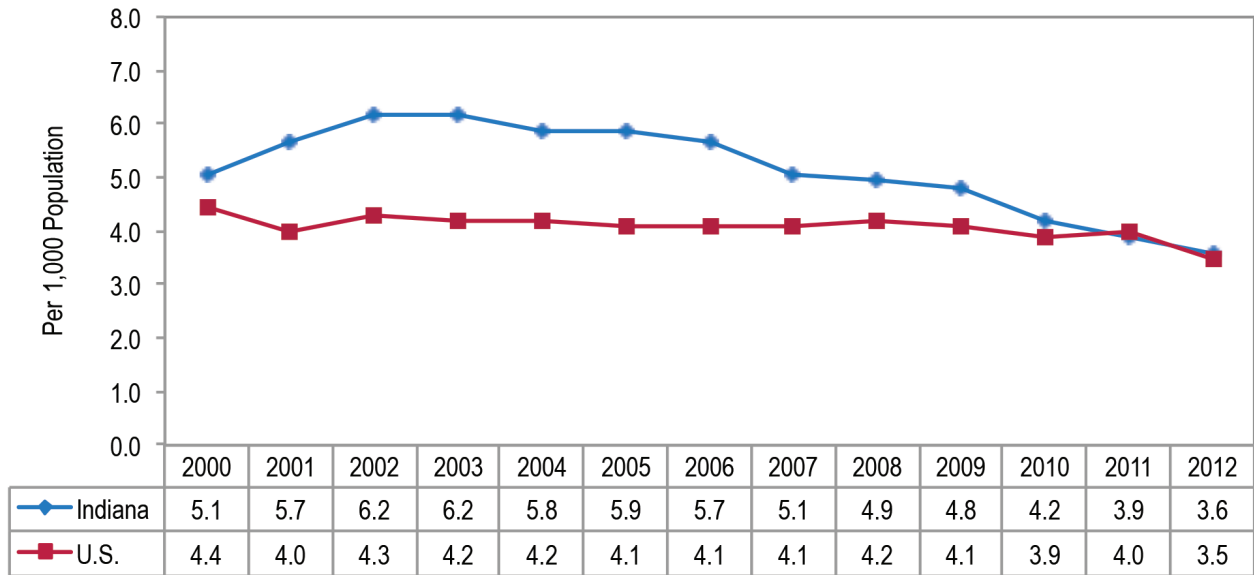
Source: FBI, 2012

Figure 3.13 Arrest Rates, per 1,000 Population, for Public Intoxication in Indiana and the United States (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	3.9	3.5	3.4	3.3	3.0	3.3	3.5	3.5	3.5	3.2	3.0	2.9	2.3
U.S.	1.9	1.8	1.7	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.5	1.5	1.3

Source: FBI, 2012

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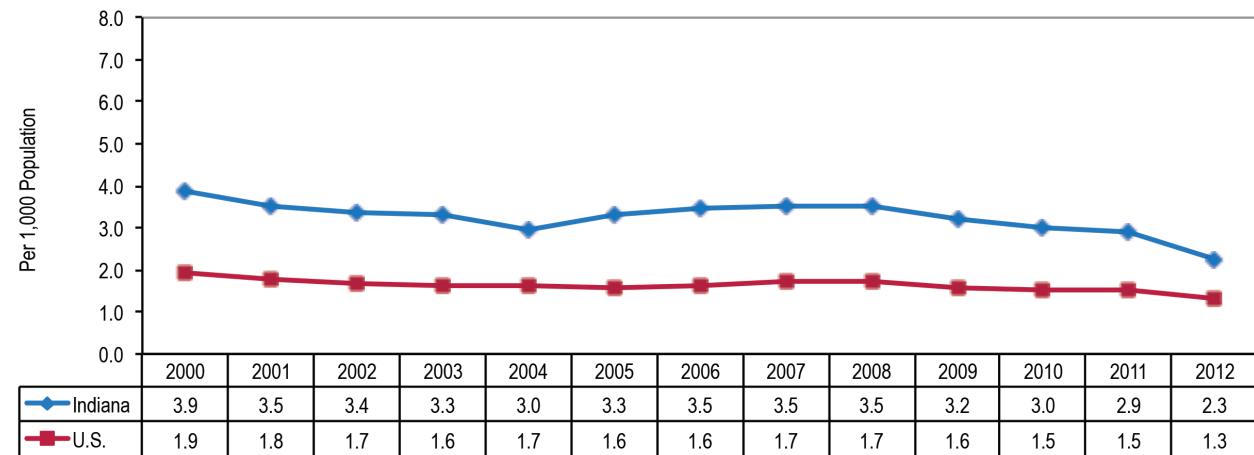
Figure 3.14 Arrest Rates, per 1,000 Population, for Liquor Law Violation in Indiana and the United States (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	3.1	2.9	2.7	2.7	2.8	2.7	2.6	2.4	2.7	2.5	2.2	2.0	2.0
U.S.	2.6	2.4	2.1	1.9	1.8	1.8	1.9	1.8	1.8	1.6	1.4	1.6	1.2
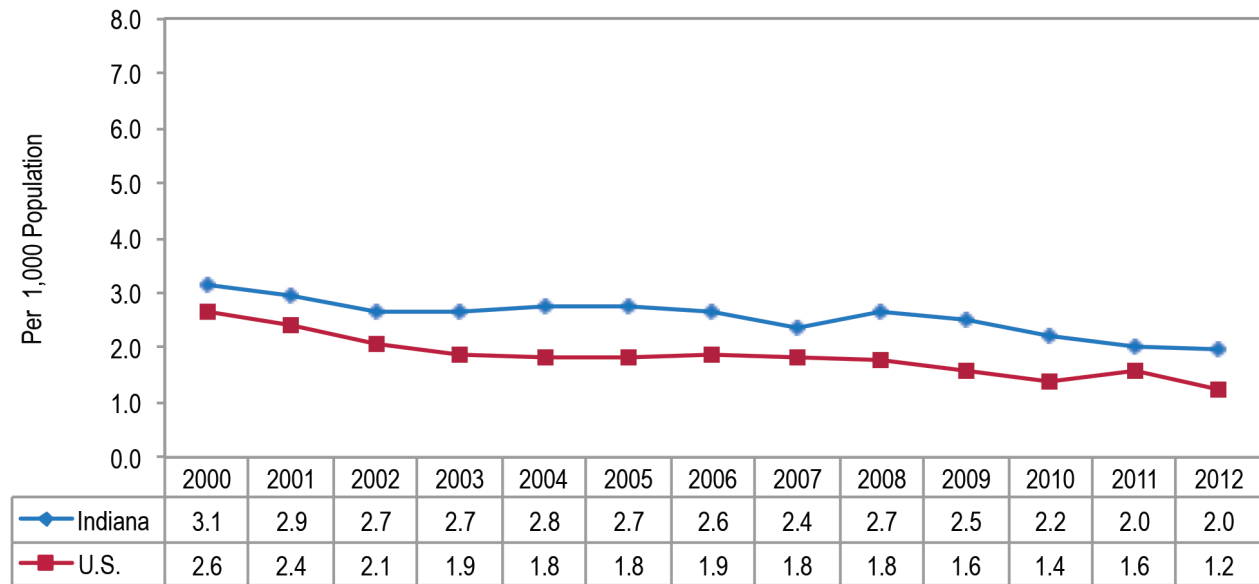
Source: FBI, 2012

APPENDIX 3A

Percentage of Indiana Students Reporting Monthly and Binge Alcohol Use, by Region and Grade (Indiana Youth Survey, 2015)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Monthly	3.5	4.5*	3.8	4.4	1.9*	3.6	4.1	2.7	3.1
	Binge†	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7th Grade	Monthly	7.7	8.8	8.5	8.7	6.7	8.2	7.4	6.3*	7.6
	Binge	2.7	2.9	2.7	3.1	2.2	3.1	2.9	1.9*	2.9
8th Grade	Monthly	13.3	16.9*	13.9	14.6	10.0*	9.7*	13.8	12.1*	14.8
	Binge	5.4	6.0	5.9	6.1	3.6*	4.1*	5.6	5.2	6.3*
9th Grade	Monthly	17.7	19.9	19.0	17.8	12.9*	16.1*	20.7	17.3*	17.1*
	Binge	7.3	7.9	7.9	6.1	5.4*	6.7	8.6	8.0	7.0
10th Grade	Monthly	22.8	26.7	19.8*	23.1*	19.8*	20.6*	24.0	21.8*	25.2
	Binge	10.1	11.0	9.8	9.2	8.5*	8.4*	10.5	11.2	12.2*
11th Grade	Monthly	28.1	28.5*	28.9*	29.4*	28.4*	26.6*	27.0*	28.2*	28.6*
	Binge	12.7	11.3	13.6	10.9	11.5	12.6	12.7	14.4*	12.9
12th Grade	Monthly	33.2	38.4	28.9*	30.9*	28.3*	30.4*	32.6*	34.5*	35.9*
	Binge	16.7	19.1*	14.1	14.5*	14.2*	15.6	15.3	18.2	18.6*

Notes: * Indicates a local rate that is significantly different from the overall state rate (*P* < 0.05).
Beginning in 2015, the Indiana Youth Survey stopped asking 6th grade students about binge drinking; also, lifetime prevalence is no longer available by region.
Source: Gassman et al., 2015

APPENDIX 3B

Number of Treatment Episodes with Alcohol Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Treatment Episodes Total	Alcohol Use Number	%	Alcohol Dependence Number	%	County	Treatment Episodes Total	Alcohol Use Number	%	Alcohol Dependence Number	%
Adams	176	124	70.5%	88	50.0%	Madison	1193	581	48.7%	381	31.9%
Allen	1715	1159	67.6%	688	40.1%	Marion	4457	1899	42.6%	1256	28.2%
Bartholomew	577	242	41.9%	154	26.7%	Marshall	190	113	59.5%	71	37.4%
Benton	49	37	75.5%	20	40.8%	Martin	46	19	41.3%	8	17.4%
Blackford	76	34	44.7%	20	26.3%	Miami	268	155	57.8%	99	36.9%
Boone	191	93	48.7%	71	37.2%	Monroe	1214	636	52.4%	479	39.5%
Brown	107	51	47.7%	35	32.7%	Montgomery	341	141	41.3%	79	23.2%
Carroll	107	66	61.7%	35	32.7%	Morgan	469	183	39.0%	117	24.9%
Cass	235	173	73.6%	121	51.5%	Newton	40	21	52.5%	18	45.0%
Clark	408	98	24.0%	95	23.3%	Noble	235	157	66.8%	84	35.7%
Clay	185	112	60.5%	75	40.5%	Ohio	33	21	63.6%	13	39.4%
Clinton	171	96	56.1%	66	38.6%	Orange	135	74	54.8%	43	31.9%
Crawford	37	24	64.9%	11	29.7%	Owen	184	82	44.6%	63	34.2%
Daviess	252	94	37.3%	63	25.0%	Parke	105	63	60.0%	35	33.3%
Dearborn	493	270	54.8%	157	31.8%	Perry	121	86	71.1%	61	50.4%
Decatur	199	121	60.8%	90	45.2%	Pike	38	24	63.2%	18	47.4%
DeKalb	274	199	72.6%	131	47.8%	Porter	679	327	48.2%	209	30.8%
Delaware	1067	480	45.0%	351	32.9%	Posey	132	96	72.7%	58	43.9%
Dubois	277	226	81.6%	156	56.3%	Pulaski	122	67	54.9%	41	33.6%
Elkhart	672	387	57.6%	270	40.2%	Putnam	208	96	46.2%	78	37.5%
Fayette	223	92	41.3%	59	26.5%	Randolph	156	86	55.1%	59	37.8%
Floyd	171	28	16.4%	28	16.4%	Ripley	217	134	61.8%	94	43.3%
Fountain	43	20	46.5%	11	25.6%	Rush	143	82	57.3%	47	32.9%
Franklin	145	80	55.2%	49	33.8%	Saint Joseph	1518	871	57.4%	561	37.0%
Fulton	160	102	63.8%	71	44.4%	Scott	144	27	18.8%	18	12.5%
Gibson	245	167	68.2%	122	49.8%	Shelby	142	66	46.5%	50	35.2%
Grant	526	341	64.8%	186	35.4%	Spencer	174	123	70.7%	60	34.5%
Greene	183	90	49.2%	52	28.4%	Starke	255	94	36.9%	44	17.3%
Hamilton	972	619	63.7%	438	45.1%	Steuben	262	191	72.9%	132	50.4%
Hancock	226	135	59.7%	83	36.7%	Sullivan	58	30	51.7%	23	39.7%
Harrison	31	<5	N/A	<5	N/A	Switzerland	69	33	47.8%	23	33.3%
Hendricks	346	153	44.2%	125	36.1%	Tippecanoe	461	284	61.6%	176	38.2%
Henry	347	153	44.1%	107	30.8%	Tipton	61	26	42.6%	17	27.9%
Howard	596	285	47.8%	186	31.2%	Union	31	12	38.7%	6	19.4%
Huntington	130	76	58.5%	45	34.6%	Vanderburgh	1333	724	54.3%	497	37.3%
Jackson	347	145	41.8%	85	24.5%	Vermillion	128	71	55.5%	46	35.9%
Jasper	127	60	47.2%	38	29.9%	Vigo	652	351	53.8%	179	27.5%
Jay	159	75	47.2%	41	25.8%	Wabash	281	162	57.7%	102	36.3%
Jefferson	375	154	41.1%	108	28.8%	Warren	17	6	35.3%	<5	N/A
Jennings	265	110	41.5%	70	26.4%	Warrick	253	151	59.7%	96	37.9%
Johnson	237	130	54.9%	76	32.1%	Washington	98	24	24.5%	16	16.3%
Knox	273	144	52.7%	103	37.7%	Wayne	386	192	49.7%	114	29.5%
Kosciusko	309	203	65.7%	120	38.8%	Wells	119	72	60.5%	38	31.9%
LaGrange	166	120	72.3%	65	39.2%	White	133	74	55.6%	39	29.3%
Lake	2344	1462	62.4%	1097	46.8%	Whitley	102	63	61.8%	36	35.3%
LaPorte	451	246	54.5%	172	38.1%	County Info Missing	61	35	57.4%	22	36.1%
Lawrence	467	191	40.9%	112	24.0%	**Indiana**	**34,596**	**18,296**	**52.9%**	**12060**	**34.9%**

Note: We defined alcohol dependence as "individuals in substance abuse treatment listing alcohol as their primary substance at admission."

We calculated the percentages by dividing the number of reported alcohol use/dependence by the number of treatment episodes.

Information on treatment episodes <5 was suppressed due to confidentiality constraints.

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 3C

Conditions that are Directly Attributable to Alcohol in Indiana (Alcohol-Related Disease Impact, Based on Averages from 2006-2010)

Condition	Percentage Directly Attributable to Alcohol	Condition	Percentage Directly Attributable to Alcohol
Alcohol abuse/dependence	100%	Chronic pancreatitis	84%
Alcohol cardiomyopathy	100%	Gastroesophageal hemorrhage	47%
Alcohol polyneuropathy	100%	Homicide	47%
Alcohol-induced chronic pancreatitis	100%	Fire Injuries	42%
Alcoholic gastritis	100%	Hypothermia	42%
Alcoholic liver disease	100%	Esophageal varices	40%
Alcoholic myopathy	100%	Liver cirrhosis, unspecified	40%
Alcoholic psychosis	100%	Portal hypertension	40%
Degeneration of nervous system due to alcohol	100%	Drowning	34%
Fetal alcohol syndrome/Fetus and newborn affected by maternal alcohol use	100%	Fall injuries	32%
		Poisoning (not alcohol)	29%
Alcohol poisoning	100%	Acute pancreatitis	24%
Excessive blood alcohol level	100%	Suicide	23%
Suicide by and exposure to alcohol	100%		

Source: Centers for Disease Control and Prevention, 2006-2010

APPENDIX 3D

Number and Rate (per 1,000) of All and Fatal Alcohol-Related Collisions in Indiana, by County (Automated Reporting Information Exchange System, 2014)

County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Adams	747	23	0.7	5	1	0.03*
Allen	12,182	507	1.4	30	11	0.03*
Bartholomew	2,169	80	1.0	11	1	0.01*
Benton	156	10	1.1*	2	1	0.11*
Blackford	345	14	1.1*	0	0	0.00*
Boone	1,888	50	0.8	11	1	0.02*
Brown	535	26	1.7	4	0	0.00*
Carroll	522	24	1.2	6	2	0.10*
Cass	1,162	39	1.0	6	3	0.08*
Clark	4,593	137	1.2	11	3	0.03*
Clay	802	34	1.3	1	1	0.04*
Clinton	1,161	60	1.8	3	0	0.00*
Crawford	260	12	1.1*	1	0	0.00*
Daviess	345	20	0.6	7	0	0.00*
Dearborn	1,947	98	2.0	1	1	0.02*
Decatur	890	30	1.1	6	0	0.00*
DeKalb	1,393	57	1.3	8	1	0.02*
Delaware	4,204	154	1.3	15	3	0.03*
Dubois	1,636	72	1.7	7	4	0.09*
Elkhart	7,579	239	1.2	20	5	0.02*
Fayette	439	30	1.3	3	0	0.00*
Floyd	2,720	112	1.5	5	1	0.01*
Fountain	471	28	1.7	4	0	0.00*

(Continued on next page)

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County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Franklin	513	26	1.1	1	0	0.00*
Fulton	544	23	1.1	1	0	0.00*
Gibson	1,159	47	1.4	6	1	0.03*
Grant	2,484	87	1.3	7	1	0.01*
Greene	887	31	0.9	9	2	0.06*
Hamilton	7,576	268	0.9	14	2	0.01*
Hancock	1,645	84	1.2	5	1	0.01*
Harrison	1,235	56	1.4	5	2	0.05*
Hendricks	4,029	141	0.9	7	4	0.03*
Henry	1,045	34	0.7	8	0	0.00*
Howard	2,282	104	1.3	10	5	0.06*
Huntington	1,232	45	1.2	1	0	0.00*
Jackson	1,907	58	1.3	8	1	0.02*
Jasper	1,361	48	1.4	11	2	0.06*
Jay	712	26	1.2	6	2	0.09*
Jefferson	998	37	1.1	7	2	0.06*
Jennings	834	19	0.7*	4	0	0.00*
Johnson	3,218	115	0.8	7	2	0.01*
Knox	936	48	1.3	5	2	0.05*
Kosciusko	2,522	99	1.3	7	1	0.01*
LaGrange	1,032	39	1.0	7	1	0.03*
Lake	17,301	718	1.5	43	13	0.03*
LaPorte	3,669	175	1.6	19	7	0.06*
Lawrence	1,495	70	1.5	8	1	0.02*
Madison	3,876	145	1.1	21	5	0.04*
Marion	30,385	1,068	1.1	79	9	0.01*
Marshall	1,408	56	1.2	7	2	0.04*
Martin	100	7	0.7*	0	0	0.00*
Miami	987	35	1.0	4	1	0.03*
Monroe	4,167	176	1.2	7	0	0.00*
Montgomery	1,089	44	1.2	3	1	0.03*
Morgan	1,642	49	0.7	11	1	0.01*
Newton	356	20	1.4	3	1	0.07*
Noble	1,482	70	1.5	7	2	0.04*
Ohio	79	6	1.0*	1	0	0.00*
Orange	595	21	1.1	1	0	0.00*
Owen	514	31	1.5	3	1	0.05*
Parke	504	37	2.1	4	0	0.00*
Perry	436	31	1.6	3	1	0.05*
Pike	187	22	1.7	1	0	0.00*
Porter	5,128	262	1.6	12	4	0.02*
Posey	619	33	1.3	4	1	0.04*
Pulaski	434	14	1.1*	2	0	0.00*
Putnam	764	25	0.7	8	1	0.03*
Randolph	546	17	0.7	4	1	0.04*
Ripley	806	50	1.8	5	4	0.14*
Rush	357	16	0.9*	2	0	0.00*
Saint Joseph	7,891	321	1.2	23	8	0.03*
Scott	715	19	0.8*	6	0	0.00*
Shelby	1,227	51	1.1	6	0	0.00*

County	All Collisions			Fatal Collisions		
	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Spencer	586	23	1.1	2	0	0.00*
Starke	617	19	0.8*	5	0	0.00*
Steuben	1,681	62	1.8	6	3	0.09*
Sullivan	489	25	1.2	2	1	0.05*
Switzerland	165	9	0.9*	4	0	0.00*
Tippecanoe	7,228	246	1.3	5	2	0.01*
Tipton	361	15	1.0*	6	2	0.13*
Union	125	9	1.2*	2	0	0.00*
Vanderburgh	6,960	230	1.3	17	2	0.01*
Vermillion	400	25	1.6	4	0	0.00*
Vigo	3,553	148	1.4	9	1	0.01*
Wabash	953	47	1.5	7	1	0.03*
Warren	278	7	0.8*	1	1	0.12*
Warrick	1,428	59	1.0	3	1	0.02*
Washington	737	38	1.4	6	1	0.04*
Wayne	2,373	91	1.3	8	1	0.01*
Wells	688	24	0.9	3	1	0.04*
White	981	36	1.5	7	1	0.04*
Whitley	869	24	0.7	5	1	0.03*
County Not Reported	4	1	N/A	0	0	N/A
Indiana	**205,532**	**8,018**	**1.2**	**702**	**153**	**0.02**

* Rates based on numbers lower than 20 are unreliable.
Source: Indiana State Police, 2014

Number and Rate, per 1,000 Population, of Arrests for Driving Under the Influence (DUI), Public Intoxication, and Liquor Law Violations in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Number of Arrests for DUI	DUI Arrest Rate	Number of Arrests for Public Intoxication	Public Intoxication Arrest Rate	Number of Arrests for Liquor Law Violations	Liquor Law Violation Arrest Rate
Adams	147	4.3	32	0.9	67	1.9
Allen	1,500	4.2	679	1.9	264	0.7
Bartholomew	375	4.8	203	2.6	217	2.8
Benton	17	*1.9	5	*0.6	10	*1.1
Blackford	38	3.0	13	*1.0	12	*1.0
Boone	89	1.5	54	0.9	110	1.9
Brown	31	2.0	3	*0.2	30	2.0
Carroll	97	4.8	20	1.0	48	2.4
Cass	152	3.9	160	4.1	145	3.7
Clark	919	8.2	318	2.8	171	1.5
Clay	96	3.6	46	1.7	31	1.1
Clinton	127	3.8	39	1.2	68	2.0
Crawford	61	5.7	22	2.1	15	*1.4
Daviess	145	4.5	54	1.7	58	1.8
Dearborn	116	2.3	57	1.1	37	0.7
Decatur	75	2.9	52	2.0	66	2.5
DeKalb	149	3.5	47	1.1	100	2.3
Delaware	405	3.4	248	2.1	205	1.7
Dubois	112	2.6	42	1.0	92	2.2
Elkhart	676	3.4	153	0.8	272	1.4
Fayette	96	3.9	49	2.0	78	3.2
Floyd	373	5.0	251	3.3	127	1.7
Fountain	68	3.9	20	1.2	34	2.0
Franklin	5	*0.2	0	*0.0	55	2.6
Fulton	69	3.3	27	1.3	38	1.8
Gibson	182	5.4	0	*0.0	135	4.0
Grant	177	2.5	85	1.2	90	1.3
Greene	103	3.1	81	2.5	40	1.2
Hamilton	948	3.3	150	0.5	841	3.0
Hancock	238	3.2	106	1.4	166	2.3
Harrison	42	1.1	10	*0.3	34	0.9
Hendricks	508	3.4	152	1.0	249	1.7
Henry	85	1.7	46	0.9	200	4.0
Howard	211	2.5	169	2.0	110	1.3
Huntington	165	4.4	20	0.5	90	2.4
Jackson	146	3.4	79	1.8	112	2.6
Jasper	93	2.8	33	1.0	55	1.6
Jay	73	3.4	88	4.1	54	2.5
Jefferson	116	3.6	53	1.6	84	2.6
Jennings	77	2.7	35	1.2	49	1.7
Johnson	475	3.3	95	0.7	403	2.8
Knox	117	3.0	49	1.3	379	9.8
Kosciusko	591	7.7	100	1.3	147	1.9
LaGrange	92	2.5	9	*0.2	98	2.6
Lake	2,395	4.8	1,678	3.4	1,144	2.3
LaPorte	645	5.8	308	2.8	368	3.3
Lawrence	117	2.5	53	1.1	113	2.4
Madison	349	2.7	282	2.1	159	1.2

County	Number of Arrests for DUI	DUI Arrest Rate	Number of Arrests for Public Intoxication	Public Intoxication Arrest Rate	Number of Arrests for Liquor Law Violations	Liquor Law Violation Arrest Rate
Marion	2,394	2.6	4,463	4.9	988	1.1
Marshall	307	6.5	114	2.4	169	3.6
Martin	27	2.6	21	2.0	20	1.9
Miami	77	2.1	58	1.6	19	*0.5
Monroe	417	3.0	635	4.5	666	4.7
Montgomery	144	3.7	100	2.6	89	2.3
Morgan	175	2.5	70	1.0	191	2.7
Newton	83	5.8	40	2.8	6	*0.4
Noble	177	3.7	68	1.4	140	2.9
Ohio	15	*2.5	4	*0.7	8	*1.3
Orange	117	5.8	43	2.1	14	*0.7
Owen	55	2.6	15	*0.7	30	1.4
Parke	106	6.1	27	1.6	27	1.6
Perry	86	4.4	62	3.2	66	3.4
Pike	41	3.2	16	*1.3	26	2.0
Porter	1,028	6.2	217	1.3	544	3.3
Posey	67	2.6	31	1.2	37	1.4
Pulaski	59	4.4	29	2.2	8	*0.6
Putnam	247	6.5	50	1.3	61	1.6
Randolph	29	1.1	14	*0.5	56	2.1
Ripley	78	2.6	22	0.7	41	1.3
Rush	64	3.7	1	*0.1	92	5.3
Saint Joseph	653	2.4	94	0.4	311	1.2
Scott	61	2.5	75	3.1	70	2.9
Shelby	82	1.8	27	0.6	34	0.8
Spencer	60	2.9	19	*0.9	30	1.4
Starke	49	2.1	28	1.2	33	1.4
Steuben	148	4.3	26	0.8	105	3.1
Sullivan	35	1.6	22	1.0	28	1.3
Switzerland	30	2.8	10	*0.9	15	*1.4
Tippecanoe	593	3.4	616	3.5	372	2.1
Tipton	33	2.1	37	2.3	11	*0.7
Union	19	*2.5	5	*0.7	10	*1.3
Vanderburgh	626	3.5	731	4.0	230	1.3
Vermillion	37	2.3	49	3.0	10	*0.6
Vigo	353	3.3	204	1.9	423	3.9
Wabash	108	3.3	55	1.7	83	2.5
Warren	24	2.8	8	*0.9	12	*1.4
Warrick	141	2.3	51	0.8	70	1.2
Washington	204	7.2	46	1.6	49	1.7
Wayne	171	2.5	239	3.5	65	0.9
Wells	46	1.7	9	*0.3	45	1.6
White	99	4.0	32	1.3	32	1.3
Whitley	102	3.0	29	0.9	60	1.8
Indiana	**23,350**	**3.6**	**14,787**	**2.3**	**12,866**	**2.0**

* Rates based on arrest numbers lower than 20 are unreliable.
Source: FBI, 2012

Map 3.1 Total Number of Alcohol-Induced Causes of Death in Indiana from 2000 through 2014

Lake 399
Porter 114
LaPorte 95
St. Joseph 412
Elkhart 149
LaGrange 13
Steuben 27
Starke 19
Marshall 38
Kosciusko 70
Noble 30
DeKalb 31
Newton 8
Jasper 18
Pulaski 6
Fulton 12
Whitley 14
Allen 318
White 27
Cass 29
Miami 31
Wabash 23
Huntington 22
Wells 12
Adams 13
Benton 2
Carroll 10
Howard 66
Grant 66
Blackford 13
Jay 15
Warren 3
Tippecanoe 76
Clinton 21
Tipton 5
Delaware 133
Randolph 29
Fountain 12
Montgomery 25
Boone 29
Hamilton 98
Madison 153
Henry 57
Wayne 103
Vermillion 9
Parke 12
Putnam 32
Hendricks 61
Marion 1380
Hancock 44
Rush 13
Fayette 31
Union 6
Vigo 114
Clay 23
Owen 14
Morgan 37
Johnson 95
Shelby 55
Franklin 11
Decatur 21
Sullivan 17
Greene 29
Monroe 113
Brown 7
Bartholomew 67
Ripley 23
Dearborn 36
Ohio 3
Jennings 28
Jackson 36
Jefferson 52
Switzerland 8
Knox 19
Daviess 13
Martin 7
Lawrence 37
Scott 30
Washington 20
Clark 82
Orange 17
Floyd 77
Pike 13
Dubois 13
Crawford 20
Harrison 35
Gibson 21
Posey 17
Vanderburgh 179
Warrick 25
Spencer 17
Perry 18

Total Number of Dea

	0 - 13
	14 - 27
	28 - 61
	> 61

* ICD10 codes used: E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, Y15.
Source: ISDH, 2016

Map 3.2 DUI Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)

Rate per 1,000

- 0.00 - 2.10
- 2.11 - 3.49
- 3.50 - 4.95
- > 4.95

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: FBI, 2012

Map 3.3 Public Intoxication Arrest Rates per 1,000 in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Rate
Lake	3.38
Porter	1.31
LaPorte	2.76
St. Joseph	0.35
Elkhart	0.76
LaGrange	0.24
Steuben	0.76
Starke	1.2
Marshall	2.42
Kosciusko	1.3
Noble	1.43
DeKalb	1.1
Newton	2.82
Jasper	0.98
Pulaski	2.16
Fulton	1.29
Whitley	0.87
Allen	1.89
White	1.29
Cass	4.11
Miami	1.58
Wabash	1.68
Huntington	0.54
Wells	0.32
Adams	0.93
Benton	0.56
Carroll	1
Howard	2.03
Grant	1.21
Blackford	1.04
Jay	4.09
Warren	0.95
Tippecanoe	3.51
Clinton	1.17
Tipton	2.34
Madison	2.14
Delaware	2.1
Randolph	0.53
Fountain	1.16
Montgomery	2.59
Boone	0.94
Hamilton	0.53
Henry	0.93
Wayne	3.47
Vermillion	3.01
Parke	1.56
Hendricks	1.02
Marion	4.9
Hancock	1.44
Rush	0.06
Fayette	2.01
Union	0.66
Putnam	1.31
Morgan	1
Johnson	0.67
Shelby	0.61
Franklin	0
Vigo	1.88
Clay	1.71
Owen	0.7
Decatur	2
Monroe	4.53
Brown	0.2
Bartholomew	2.61
Dearborn	1.13
Sullivan	1.03
Greene	2.45
Ripley	0.72
Ohio	0.66
Jennings	1.24
Jackson	1.83
Jefferson	1.64
Switzerland	0.94
Lawrence	1.14
Scott	3.12
Knox	1.27
Daviess	1.68
Martin	2.03
Washington	1.63
Clark	2.84
Orange	2.15
Floyd	3.34
Pike	1.25
Dubois	0.99
Crawford	2.06
Harrison	0.25
Gibson	0
Posey	1.2
Vanderburgh	4.04
Warrick	0.84
Spencer	0.9
Perry	3.19

Rate per 1,000

	0.00 - 0.90
	0.90 - 1.27
	1.27 - 2.10
	> 2.10

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: FBI, 2012

Map 3.4 Liquor Law Violation Arrest Rates Per 1,000 in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Rate
LaPorte	3.29
St. Joseph	1.16
Elkhart	1.36
LaGrange	2.61
Steuben	3.08
Lake	2.3
Porter	3.28
Noble	2.93
DeKalb	2.35
Starke	1.42
Marshall	3.58
Kosciusko	1.91
Whitley	1.79
Allen	0.73
Newton	0.42
Jasper	1.64
Pulaski	0.6
Fulton	1.81
Wabash	2.54
Huntington	2.41
Wells	1.62
Adams	1.94
White	1.29
Cass	3.72
Miami	0.52
Benton	1.13
Carroll	2.39
Howard	1.32
Grant	1.29
Blackford	0.96
Jay	2.51
Warren	1.42
Tippecanoe	2.12
Clinton	2.05
Tipton	0.69
Delaware	1.74
Randolph	2.14
Fountain	1.97
Montgomery	2.31
Boone	1.91
Hamilton	2.96
Madison	1.21
Henry	4.05
Wayne	0.94
Vermillion	0.61
Parke	1.56
Hendricks	1.68
Marion	1.08
Hancock	2.26
Putnam	1.6
Rush	5.31
Fayette	3.2
Union	1.33
Vigo	3.9
Clay	1.15
Owen	1.39
Morgan	2.74
Johnson	2.83
Shelby	0.77
Franklin	2.56
Decatur	2.54
Sullivan	1.31
Greene	1.21
Monroe	4.75
Brown	1.98
Bartholomew	2.79
Ripley	1.34
Dearborn	0.74
Jennings	1.73
Ohio	1.31
Jackson	2.6
Jefferson	2.6
Switzerland	1.41
Lawrence	2.44
Scott	2.91
Knox	9.81
Daviess	1.81
Martin	1.93
Orange	0.7
Washington	1.74
Clark	1.53
Pike	2.04
Dubois	2.17
Crawford	1.4
Floyd	1.69
Gibson	4.02
Harrison	0.86
Posey	1.43
Vanderburgh	1.27
Warrick	1.16
Spencer	1.43
Perry	3.4

Rate per 1,000

- 0.00 - 1.31
- 1.31 - 1.79
- 1.79 - 2.54
- > 2.54

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: FBI, 2012

REFERENCES, CHAPTER 3

Alcohol and Tobacco Commission. (2015). *Number of alcohol sales licenses* in Indiana by county, 2015. Data received November 19, 2015, from the Indiana Prevention Resource Center.

Centers for Disease Control and Prevention. (2006-2010). *Alcohol-related disease impact (ARDI).* Retrieved from http://nccd.cdc.gov/DPH_ARDI

Centers for Disease Control and Prevention. (2015). *Behavioral Risk Factor Surveillance System (BRFSS) prevalence & trends data.* Retrieved from http://www.cdc.gov/brfss/brfssprevalence/index.html

Centers for Disease Control and Prevention. (2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Centers for Disease Control and Prevention. (2015). *CDC WONDER underlying cause of death (compressed mortality).* Retrieved from http://wonder.cdc.gov/

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University.
Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Indiana State Department of Health. (2014). *Indiana hospital discharge data, 2014.* Retrieved from http://www.in.gov/isdh/20624.htm

Indiana State Department of Health. (2006-2011). *Table 1: Number of Children Reported to IBDPR by Birth Year.* Retrieved from http://www.in.gov/isdh/20425.htm

Indiana State Police. (2014). *Automated Reporting Information Exchange System (ARIES), Vehicle Crash Records System, 2014.* Data received December 8, 2015, from the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

King, R.A., & Jun, M.K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

National Highway Traffic Safety Administration. (2013). *Fatality Analysis Reporting System (FARS).* Retrieved from http://www-fars.nhtsa.dot.gov/Main/index.aspx

National Institute on Alcohol Abuse and Alcoholism. (2015). *Apparent per capita alcohol consumption: National, state, and regional trends, 1977–2013.*
Retrieved from http://pubs.niaaa.nih.gov/publications/surveillance102/CONS13.pdf

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.*
Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

Substance Abuse and Mental Health Services Administration, Fetal Alcohol Spectrum Disorders Center for Excellence. (2007). *Fetal Alcohol Spectrum Disorders by the numbers.*
Retrieved from http://www.fascenter.samhsa.gov/documents/WYNK_Numbers.pdf

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.*
Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

Indiana University Center for Health Policy

TOBACCO USE IN INDIANA:
CONSUMPTION PATTERNS AND CONSEQUENCES

TOBACCO CONSUMPTION

The harmful effects of tobacco on population health have been widely studied. Cigarette smoking remains the leading cause of preventable death in the United States, accounting for approximately one of every five deaths (U.S. Department of Health and Human Services (USDHHS), 2014). The impact of tobacco on Indiana is staggering. Each year over 11,100 Hoosier adults die from their own smoking and 333,000 Hoosiers are living with a tobacco-related illness or chronic disease (USDHHS, 2014). Over 1,200 adult nonsmokers die each year due to exposure to secondhand smoke (Zollinger, Saywell, & Lewis, 2012), and 151,000 (approximately 1 in 10) youth in Indiana now under the age of 18 will prematurely die from a smoking related disease (USDHSS, 2014). Indiana incurs nearly $3 billion annually in health care costs directly caused by smoking, including $600 million that is absorbed by Medicaid (CDC, 2015b). Electronic vapor products, including e-cigarettes, have surged in popularity in recent years. Although e-cigarettes have been promoted as less dangerous than cigarettes, they have not been approved as safe by the U.S. Food and Drug Administration (FDA) and health effects of exposure to aerosol from e-cigarettes are currently unknown (Indiana State Department of Health, Tobacco Prevention and Cessation Commission (ISDH/TPCC), 2015a).

General Consumption Patterns

The 2014 National Survey on Drug Use and Health (NSDUH) estimates that 29.8% (95% Confidence Interval [CI]: 27.2–32.4) of Indiana residents 12 years and older used a tobacco product in the past month, which was significantly higher than the U.S. rate (25.4%; 25.0–25.8). Tobacco products include cigarettes, smokeless tobacco, cigars, and pipe tobacco. Indiana's rate has remained stable for at least the past 14 years, from 2000 through 2014 (see Figure 4.1) (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014).

Figure 4.1   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, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	32.8%	32.9%	34.3%	33.1%	32.3%	32.7%	33.4%	33.5%	32.9%	31.9%	30.6%	29.9%	32.9%	32.3%	29.8%
U.S.	29.8%	29.4%	30.4%	30.1%	29.5%	29.3%	29.5%	29.1%	28.5%	28.0%	27.6%	27.0%	26.6%	26.1%	25.4%
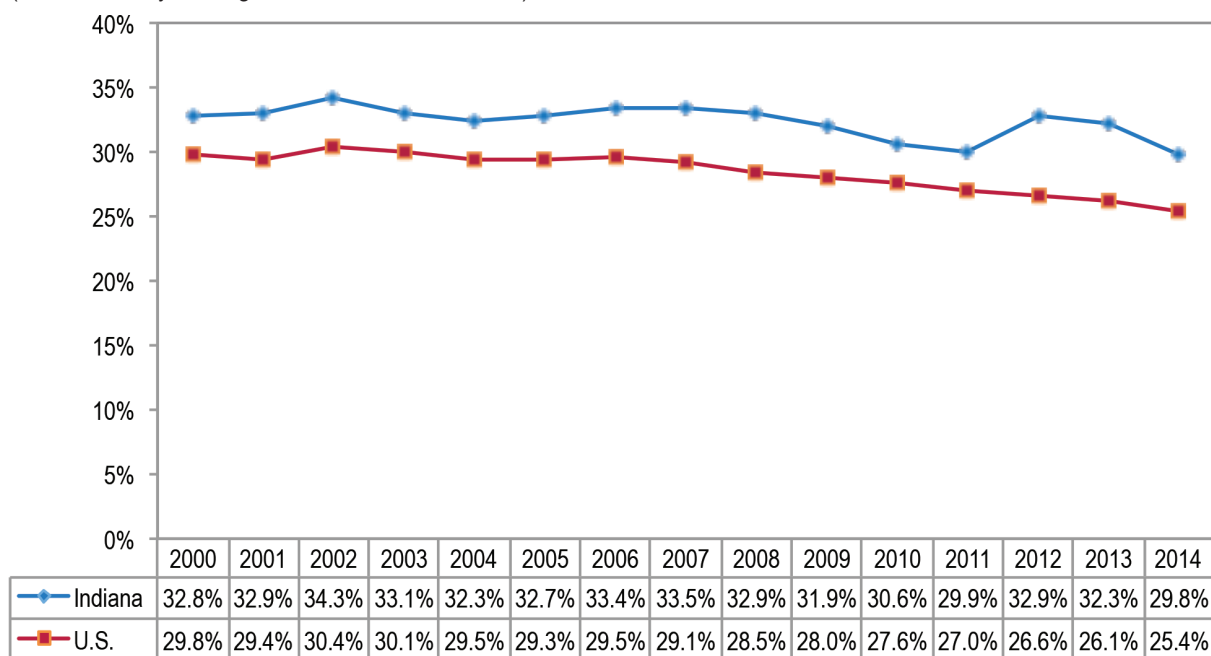
Source: SAMHSA, 2014

The majority of tobacco consumers smoke cigarettes. In 2014, 24.8% (95% CI: 22.6–27.2) of Hoosiers ages 12 years and older admitted to having used cigarettes in the past month, which was significantly higher than the U.S. rate (21.0%; 95% CI: 20.7–21.4). The smoking prevalence for Indiana remained stable from 2000 (27.2%; 95% CI: 24.7–29.9) to 2014 (see Figure 4.2).

Figure 4.2   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, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	27.2%	27.4%	29.1%	28.3%	27.4%	28.0%	28.2%	28.0%	27.6%	26.8%	25.9%	25.3%	26.8%	25.7%	24.8%
U.S.	25.3%	24.9%	26.0%	25.4%	24.9%	24.9%	25.0%	24.6%	24.1%	23.6%	23.2%	22.5%	22.1%	21.7%	21.0%
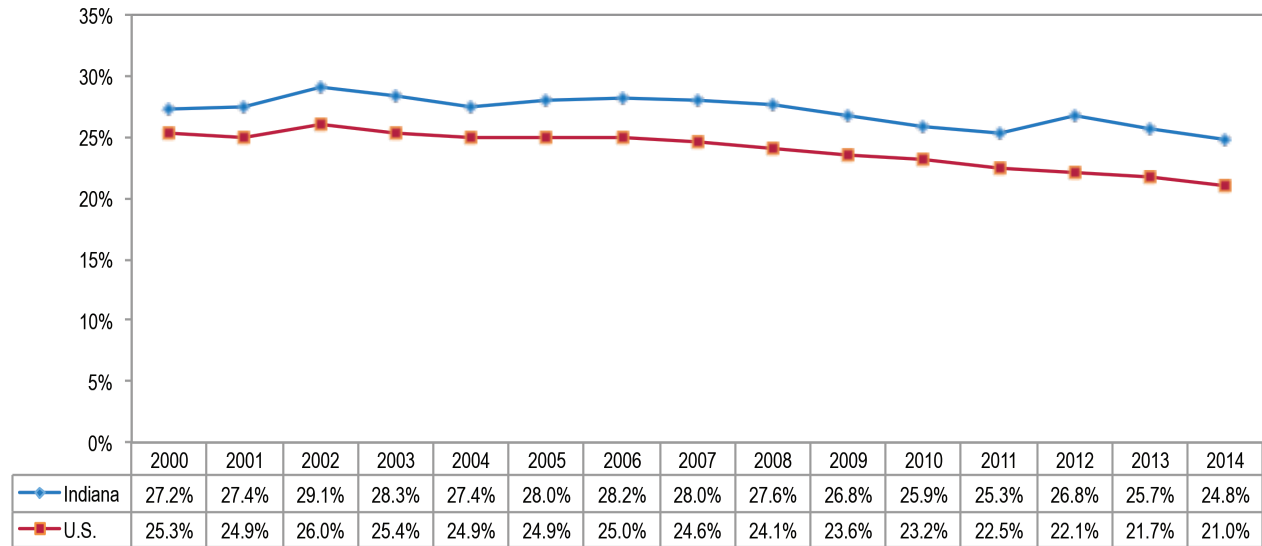
Source: SAMHSA, 2014

Figure 4.3   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, 2014)

	Total	12-17	18-25	26 and older
Indiana	24.8%	6.6%	34.7%	25.4%
U.S.	21.1%	5.2%	29.5%	21.5%

Source: SAMHSA, 2014

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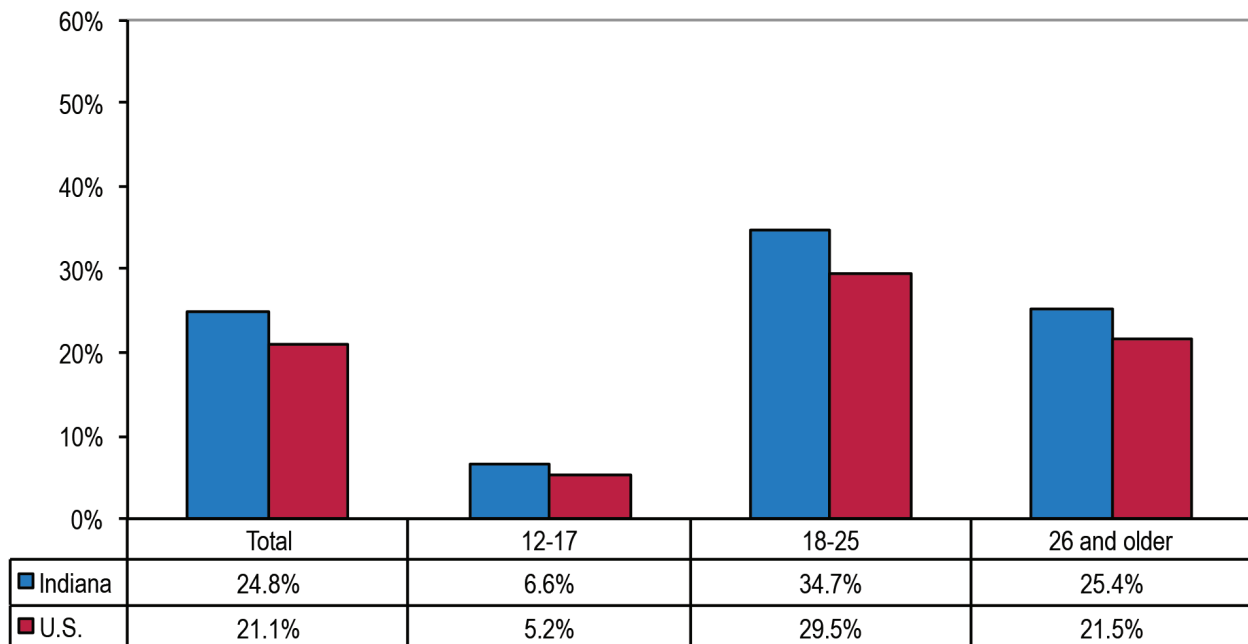
In Indiana, 68.8% (95% CI: 66.3–71.3) of the population 12 years and older perceived smoking one or more packs of cigarettes per day to be a great risk (U.S.: 71.1%; 95% CI: 70.7–71.5) (SAMHSA, 2014).

In addition to smoking rates, cigarette consumption is also an indicator of smoking behavior. Cigarette consumption decreased from 113.9 packs sold per capita in 2001 to 63.8 packs sold per capita in 2015 (ISDH/TPCC, 2015b).

Adult Consumption Patterns

The highest rate of tobacco use was among 18- to 25-year-olds. An estimated 43.3% of Hoosiers in this age group (95% CI: 39.5–47.1) reported currently, i.e., within the past 30 days, using a tobacco product, which was significantly higher than the national rate (36.0%; 95% CI: 35.3–36.8). The 30-day prevalence rate for cigarette smoking among 18- to 25-year-olds was 34.7% (95% CI: 31.0–38.5) in Indiana (U.S.: 29.5%; 95% CI: 28.8–30.2) (see Figure 4.3).

Among Hoosiers ages 26 and older, 30.1% (95% CI: 27.0–33.3) used a tobacco product, and 25.4% (95% CI: 22.7–28.4) smoked cigarettes in the past month. U.S. rates were significantly lower for both tobacco use (25.7%; 95% CI: 25.2–26.2) and cigarette smoking (21.5%; 95% CI: 21.1–22.0) (SAMHSA, 2014).

The Behavioral Risk Factor Surveillance System (BRFSS) focuses on behaviors and conditions that are linked with leading causes of death. According to the 2013 BRFSS, the past-month prevalence rate for adult (18 years and older) smoking in Indiana was 21.9% (95% CI: 20.8-23.1). Moreover, 16.6% (95% CI: 15.6-17.7) of Hoosiers used cigarettes every day. Indiana's smoking prevalence rates were significantly higher than national rates: 19.0% of U.S. residents smoked in the past month and 13.4% reported smoking every day (Centers for Disease Control and Prevention (CDC), 2015a).

Statistically significant differences in current smoking prevalence were observed by age, educational attainment, and income, but not by gender or race (see Table 4.1):

- Younger adults displayed higher smoking rates than older adults.

- Educational attainment was inversely associated with prevalence rate, i.e., individuals who achieved higher levels of education had lower smoking rates.
- Income level was inversely associated with prevalence rate, i.e., individuals with higher income levels had lower smoking rates.

Table 4.1   Adult Smoking Prevalence (95% CI) in Indiana and the United States, by Gender, Race/Ethnicity, Age Group, Educational Attainment, and Income Level (Behavioral Risk Factor Surveillance System, 2013)

		Indiana	U.S.
Gender	Male	23.6% (21.8-25.3)	21.6%
	Female	20.4% (19.0-21.9)	17.2%
Race/ Ethnicity	White	22.1% (20.8-23.3)	18.6%
	Black	24.8% (20.1-29.5)	22.2%
	Hispanic	15.2% (10.1-20.2)	17.5%
Age Group	18-24	19.7% (15.9-23.5)	19.7%
	25-34	29.5% (25.9-33.1)	25.5%
	35-44	28.6% (25.5-31.7)	21.2%
	45-54	26.1% (23.6-28.6)	22.4%
	55-64	19.1% (17.1-21.1)	17.9%
	65+	9.6% (8.4-10.8)	8.7%
Education	Less than High School	37.6% (33.4-41.8)	33.4%
	High School or GED	24.3% (22.4-26.2)	24.3%
	Some Post-High School	20.9% (18.9-22.9)	19.1%
	College Graduate	9.0% (7.7-10.3)	7.8%
Income	Less than $15,000	38.3% (34.2-42.5)	34.0%
	$15,000 – $24,999	31.9% (28.7-35.1)	27.7%
	$25,000 – $34,999	25.0% (21.3-28.7)	22.0%
	$35,000 – $49,999	20.4% (17.5-23.4)	19.3%
	$50,000 and above	13.2% (11.7-14.7)	11.9%
Total		**21.9% (20.8-23.1)**	**19.0%**

Note: U.S. rates are based on median percentages and do not have an associated confidence interval (CI).
Source: CDC, 2015a

Adult smoking prevalence in Indiana has been above the U.S. level for at least the past eleven years (see Figure 4.4) and ranked 12th among the 50 U.S. states in 2013 (CDC, 2015a). Adult smoking prevalence, as shown in Figure 4.4, has been trending downward from 2002 through 2010. Due to changes the Centers for Disease Control and Prevention made to BRFSS methodology, findings starting in 2011 should not be compared to results from previous years (for more detailed information, see Chapter 2 "Methods"). However, from 2011 through 2013, Indiana's adult smoking prevalence has again been trending downward.

The 2015 Indiana Adult Tobacco Survey (IATS) estimated the overall smoking prevalence among Indiana adults at 14.7%. Approximately 16.4% of adults in Indiana reported ever trying an e-cigarette. Both current cigarette smokers (68.0%) and former smokers (14.8%) were significantly more likely to have used e-cigarettes in their lifetime than never-smokers (4.0%). However, there were increases in usage of e-cigarettes since 2013 by current (49.2%), former (9.8%), and never smokers (3.6%) (Brown, Raines, & Stedman, 2015).

The Indiana College Substance Use Survey includes questions on the use of cigarettes, cigars, chewing/smokeless tobacco, and smoking tobacco with hookah/water pipe. According to findings from the 2015 survey, which is based on eight participating colleges and universities, 23.5% of Indiana college students reported use of cigarettes in the past year (U.S.: 22.6%; *P* > 0.05), while 11.2% reported current (past-month) use (U.S. 12.9%; *P* > 0.05). Results for the different types of tobacco by demographic characteristics can be found in Table 4.2 (King & Jun, 2015).[1]

Youth Consumption Patterns

Based on results from the 2014 NSDUH, 9.0% (95% CI: 7.3–11.1) of Hoosiers ages 12 to 17 used a tobacco product in the past month (U.S.: 7.4%; 95% CI: 7.1–7.8). Of these, 6.6% (95% CI: 5.2–8.3) of young Hoosiers smoked cigarettes (U.S.: 5.2%; 95% CI: 5.0–5.5) (SAMHSA, 2014).

According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 49.5% (95% CI: 45.9–53.0) of Indiana high school students (grades 9 through 12) have tried smoking a cigarette, even one or two puffs, in their lifetime (Centers for Disease Control and Prevention (CDC), 2016. This rate has remained stable from 2003 to 2011 and is similar to the nation's rate (44.7%; 95% CI: 42.3–47.2). The percentage of Indiana students in grades 9 through 12 who currently use any

Figure 4.4 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Current Cigarette Use (Behavioral Risk Factor Surveillance System, 2002–2013)
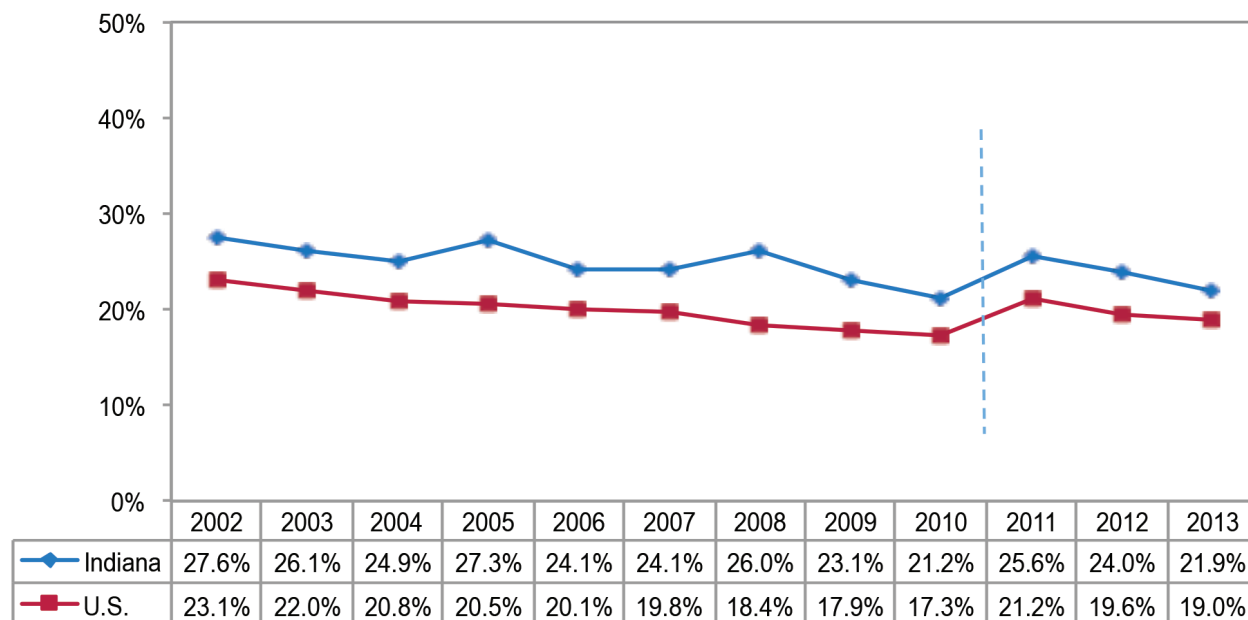
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	27.6%	26.1%	24.9%	27.3%	24.1%	24.1%	26.0%	23.1%	21.2%	25.6%	24.0%	21.9%
U.S.	23.1%	22.0%	20.8%	20.5%	20.1%	19.8%	18.4%	17.9%	17.3%	21.2%	19.6%	19.0%

Note: Prevalence rates, starting with 2011, should not be compared to previous years due to changes in methodology.
Source: CDC, 2015a

[1] Eight Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

Table 4.2 Rates of Past-Year and Past-Month (Current) Tobacco Use by Indiana College Students, by Type of Product and by Overall Use, Gender, Age Group, and Type of Institution (Indiana College Substance Use Survey, 2015)

	All Students		Gender		Age		Type of Institution	
	Indiana	U.S.	Male	Female	Under 21	21 or Over	Private	Public
Cigarettes (Past-Year)	23.5	22.6	27.7	21.0†	19.8	27.0‡	21.8	26.6*
Cigarettes (Past-Month)	11.2	12.9	12.7	10.4	8.6	13.7†	10.2	13.1
Cigars (Past-Year)	20.6	N/A	34.7	12.3‡	22.5	18.8	22.1	17.7*
Cigars (Past-Month)	5.4	N/A	9.5	2.9‡	6.8	4.0*	6.3	3.8*
Chewing/ smokeless tobacco (Past-Year)	7.4	N/A	17.2	1.6‡	7.8	7.0	8.0	6.3
Chewing/ smokeless tobacco (Past-Month)	3.9	N/A	9.4	0.7‡	4.1	3.7	4.4	3.1
Smoking tobacco with hookah/water pipe (Past-Year)	26.3	32.7	28.5	25.1	29.2	23.7*	28.3	22.7*
Smoking tobacco with hookah/water pipe (Past-Month)	19.2	N/A	11.4	7.8*	10.6	7.9	10.2	7.3

Note: *$P < 0.05$; †$P < 0.01$; ‡$P < 01$; Indiana data are from 2015, while U.S. data are from 2014.
Source: King & Jun, 2015

Figure 4.5 Percentage of Indiana and U.S. High School Students Reporting Tobacco Consumption (Youth Risk Behavior Surveillance System, 2011)

	Lifetime cigarette use	Current tobacco use	Current cigarette use	Current cigar use	Current smokeless tobacco use
Indiana	49.5%	24.5%	18.1%	14.6%	8.2%
U.S.	44.7%	23.4%	18.1%	13.1%	7.7%
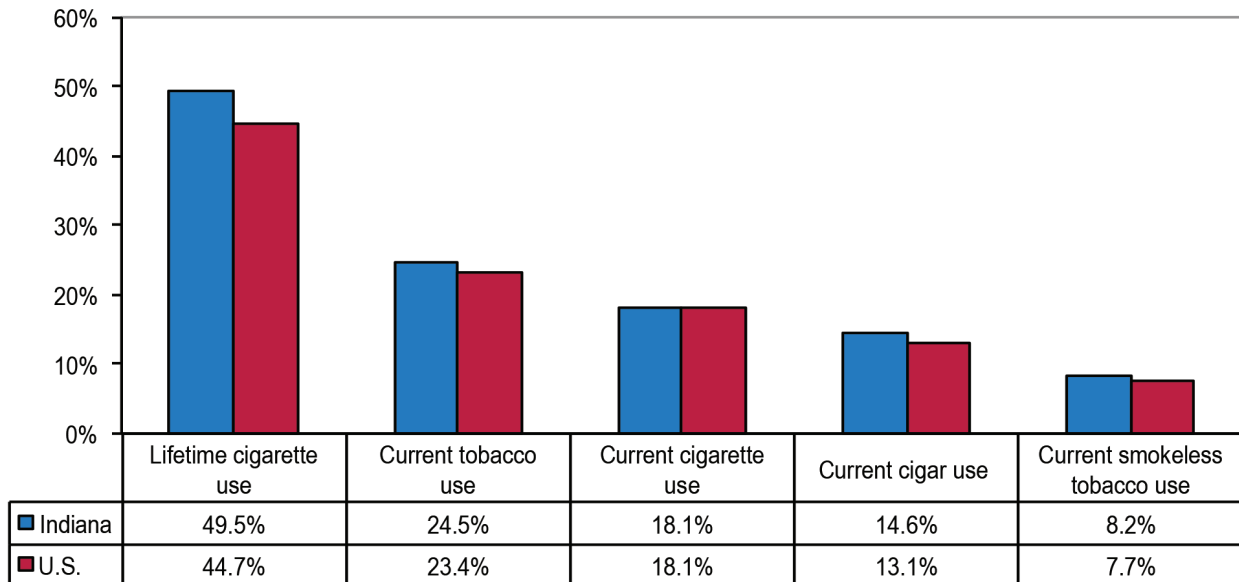
Source: CDC, 2016

tobacco product (24.5%; 95% CI: 21.8–27.3) has also remained stable and is statistically similar to the U.S. rate of 23.4% (95% CI: 21.8–25.1). The YRBSS further found that in 2011, as illustrated in Figure 4.5:

- 18.1% (95% CI: 15.9–20.4) of Hoosier high school students currently smoke cigarettes (U.S.: 18.1%; 95% CI: 16.7–19.5);
- 14.6% (95% CI: 12.6–16.9) currently smoke cigars (U.S.: 13.1%; 95% CI: 12.2–14.1); and
- 8.2% (95% CI: 7.2–9.3) currently use smokeless tobacco (U.S.: 7.7%; 95% CI: 6.6–9.0) (CDC, 2016).

Current cigarette use rates did not differ by gender. Indiana males seemed to have higher rates in 2011 (19.9%; 95% CI: 17.4–22.8) than females (16.0%; 95% CI: 13.4–19.0), but the difference was statistically not significant. Overall smoking rates remained stable from 2003 to 2011, as did smoking rates by gender (see Table 4.3).

The prevalence rate for current cigarette use among high school students was three times higher among white students (19.8%; 95% CI: 17.2–22.8) than black students (6.6%; 95% CI: 3.5–12.1); use among white and Hispanic students (18.5%; 95% CI: 11.4–28.5) was similar (see Figure 4.6).

Prevalence of current cigarette use increased as students progressed through high school. In 2011, 12.6% (95% CI: 11.1–14.3) of 9th grade students reported current use; this represents a rate significantly lower than the rates for 11th and 12th grade students (11th grade: 19.0%; 95% CI: 14.4–24.7; 12th grade: 22.6%; 95% CI: 17.0–29.4) in Indiana (see Figure 4.7) (CDC, 2016).

Table 4.3 Rates of Current Cigarette Use in Indiana and U.S. High School Students (9th–12th grade), by Gender (Youth Risk Behavior Surveillance System, 2003–2011)

Year	Gender	Indiana (95% CI)	U.S. (95% CI)
2003	Females	25.7% (23.2–28.5)	21.9% (19.2–24.9)
	Males	25.6% (22.2–29.4)	21.8% (19.8–24.1)
	Total	**25.6% (23.2–28.2)**	**21.9% (19.8–24.2)**
2005	Females	**20.5%** (16.1–25.8)	**23.0%** (20.4–25.8)
	Males	23.2% (18.7–28.3)	22.9% (20.7–25.3)
	Total	**21.9% (18.0–26.4)**	**23.0% (20.7–25.5)**
2007	Females	19.9% (15.2–25.5)	18.7% (16.5–21.1)
	Males	24.6% (19.4–30.6)	21.3% (18.3–24.6)
	Total	**22.5% (17.8–27.9)**	**20.0% (17.6–22.6)**
2009	Females	**22.6** (18.6–27.1)	**19.1** (17.2–21.0)
	Males	24.3 (20.5–28.6)	19.8 (17.8–21.9)
	Total	**23.5 (20.4–27.0)**	**19.5 (17.9–21.2)**
2011	Females	16.0 (13.4–19.0)	16.1 (14.6–17.8)
	Males	19.9 (17.4–22.8)	19.9 (18.2–21.7)
	Total	**18.1 (15.9–20.4)**	**18.1 (16.7–19.5)**

Source: CDC, 2016

Figure 4.6 Rates of Current Cigarette Use in Indiana and U.S. High School Students (9th–12th Grade), by Race/Ethnicity (Youth Risk Behavior Surveillance System, 2011)

	White	Black	Hispanic
■ Indiana	19.8%	6.6%	18.5%
■ U.S.	20.3%	10.5%	17.5%
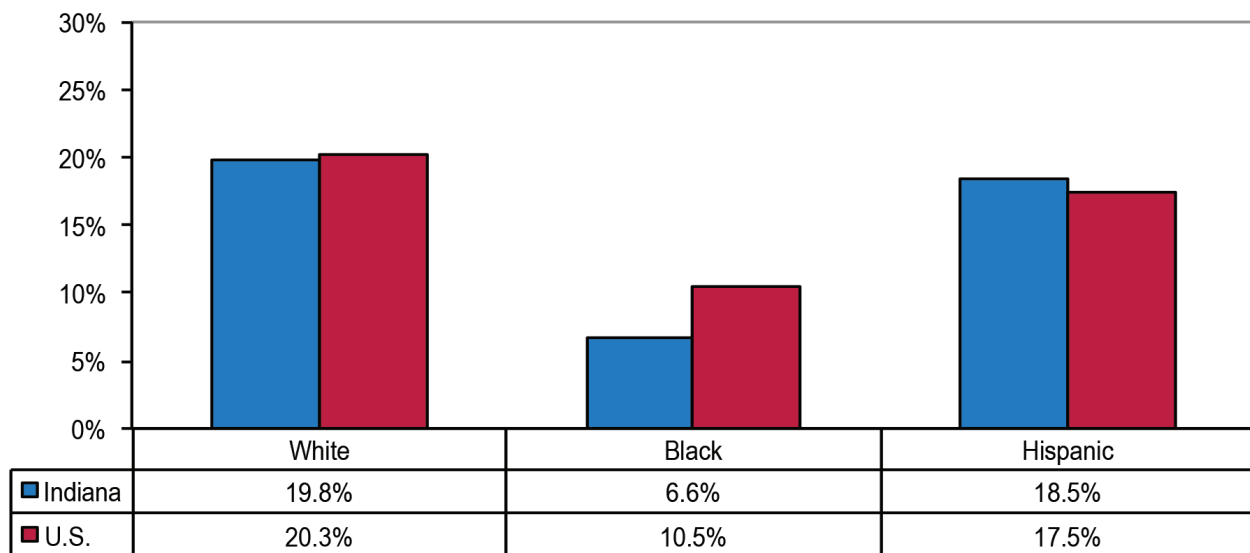
Note: Percentages are only reported for whites, blacks, and Hispanics. Results for other races/ethnicities were too few in number to make valid statistical inferences.
Source: CDC, 2016

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Figure 4.7 Current Smoking Prevalence for Indiana and U.S. High School Students (9th–12th Grade), by Grade (Youth Risk Behavior Surveillance System, 2011)

	9th Grade	10th Grade	11th Grade	12th Grade
Indiana	12.6%	18.7%	19.0%	22.6%
U.S.	13.0%	15.6%	19.3%	25.1%
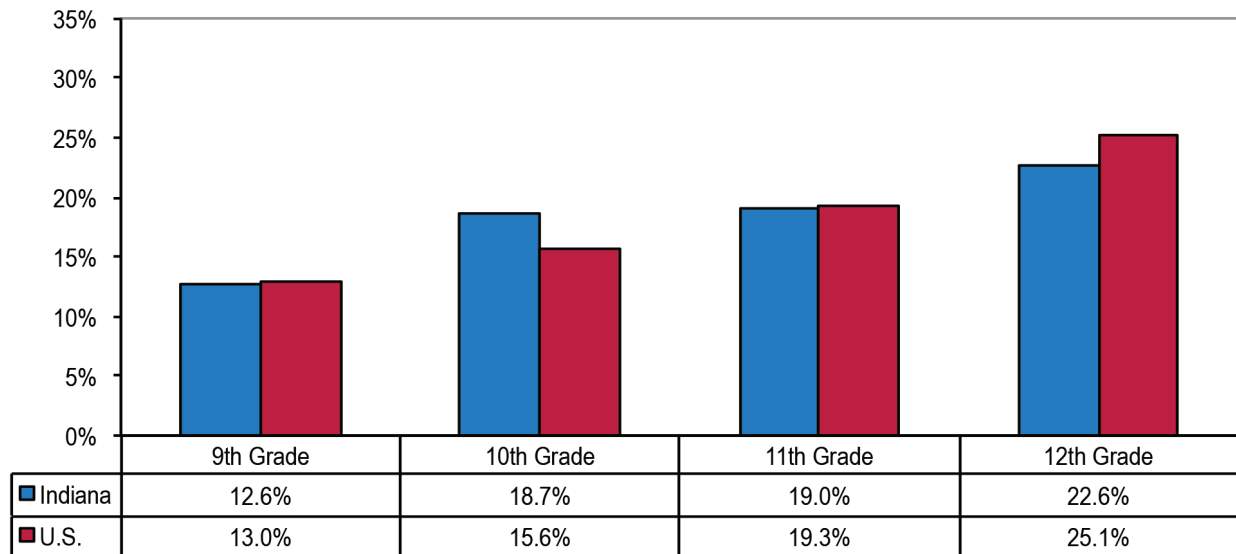
Source: CDC, 2016

The Indiana Youth Tobacco Survey (IYTS) is a statewide school-based survey of middle school (grades 6 through 8) and high school (grades 9 through 12) students that captures information on various tobacco-related issues, such as tobacco use, smoking cessation, tobacco-related attitudes and beliefs, social influences on tobacco use, and secondhand smoke exposure. According to IYTS results, cigarette and overall tobacco use declined significantly in Indiana from 2004 to 2014; however consumption of smokeless tobacco products remained stable (see Figures 4.8 and 4.9) (ISDH/TPCC, 2015c).

Figure 4.8 Tobacco Use Among Indiana High School Students (9th–12th Grade) (Indiana Youth Tobacco Survey, 2004–2014)

	2004	2006	2008	2010	2012	2014
Current Tobacco Use	28.3%	31.0%	27.5%	24.2%	22.0%	20.5%
Current Cigarette Use	21.3%	23.2%	18.3%	17.5%	13.7%	12.0%
Current Smokeless Tobacco Use	7.3%	7.9%	8.2%	7.2%	6.6%	8.0%
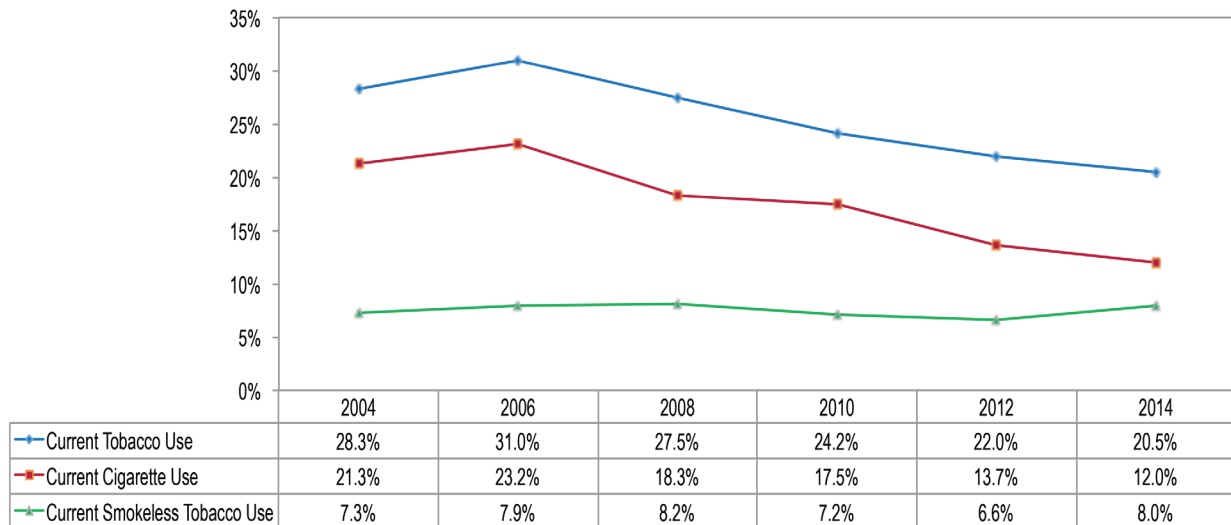
Source: ISDH/TPCC, 2015c

Based on 2014 IYTS results, a total of 4.8% of middle school students (95% CI: 3.5–6.0) and 20.5% of high school students (95% CI: 15.4–25.6) used any tobacco product[2] in the past month. Among middle school students, 2.9% (95% CI: 1.9–3.8) and among high school students, 12.0% (95% CI: 8.6–15.4) reported smoking cigarettes in the past month (ISDH/TPCC, 2015c).

Appendix 4A (pages 67-70) shows the percentages, including 95% confidence intervals, of Indiana middle and high school students who reported current use of various tobacco products, grouped by gender, race/ethnicity, and grade, from 2004 through 2014.

Findings of the 2015 Indiana Youth Survey show that tobacco use increased as students progressed in school, i.e., higher smoking rates were found in 12th grade students than 8th grade students both for cigarettes and electronic vapor products (including e-cigarettes, vaping pens, e-hookahs, etc.) (see Figure 4.10) (Gassman, Jun, Samuel, Agley, King, & Lee, 2015; Inter-university Consortium for Political and Social Research, 2015). See Appendix 4B (page 71) for Indiana students' 2015 monthly cigarette and e-cigarette use by region and grade.

Comparisons between Indiana and the United States on 30-day prevalence of cigarette use among 12th grade students imply that (a) Hoosier students have had higher rates throughout the years, and (b) rates have been declining for both groups (see Figure 4.11). However, these results need to be interpreted with caution; due to the lack of detail provided in the publicly available data set, statistical significance could not be determined.

In 2014, 11.2% of middle school students and 29.0% of high school students in Indiana had used e-cigarettes in their lifetime. Among Indiana youth who currently smoke cigarettes, 63.7% of middle school students and 65.9% of high school students also reported currently using e-cigarettes (ISDH/TPCC, 2015c).

Figure 4.9   Percentage of Indiana Middle School and High School Students Reporting Current Tobacco and Cigarette Use (Indiana Youth Tobacco Survey, 2004–2014)

	2004	2006	2008	2010	2012	2014
Current MS Tobacco Use	12.4%	13.0%	8.5%	7.1%	5.9%	4.8%
Current HS Tobacco Use	28.3%	31.0%	27.5%	24.2%	22.0%	20.5%
Current MS Cigarettes Use	7.8%	7.7%	4.1%	4.4%	3.7%	2.9%
Current HS Cigarettes Use	21.3%	23.2%	18.3%	17.5%	13.7%	12.0%
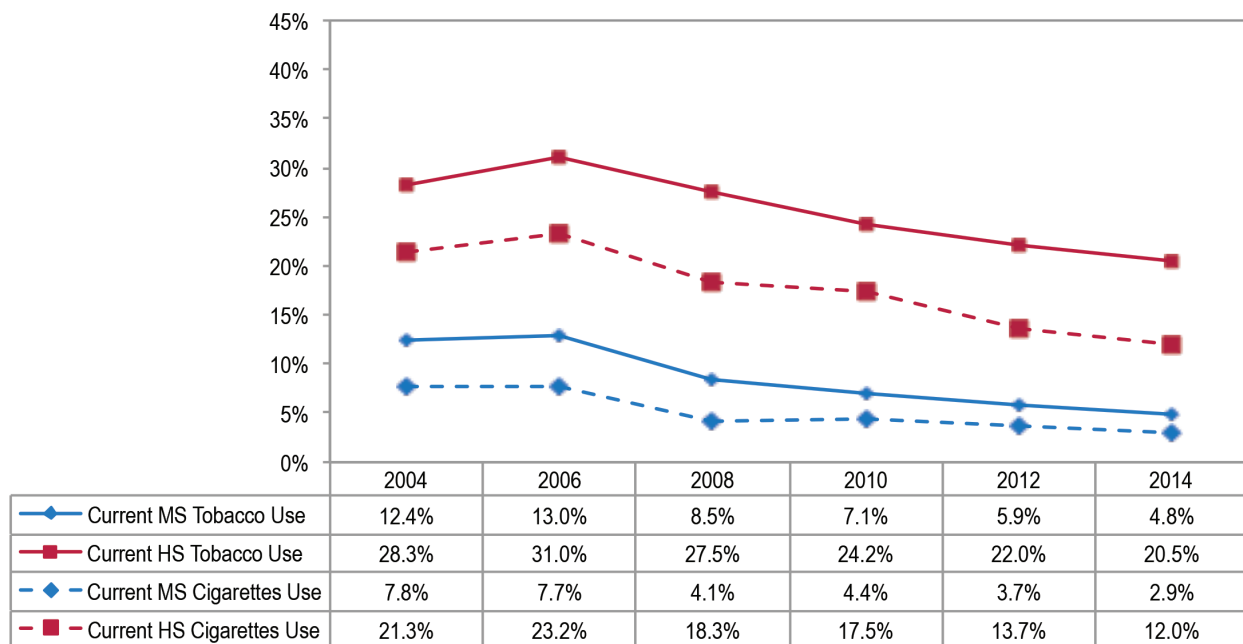
Source: ISDH/TPCC, 2015c

[2]This included use of cigarettes, cigars, smokeless tobacco (chewing tobacco, snuff, or dip), pipe, bidis, or kreteks.

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Figure 4.10   Monthly Cigarette and E-Cigarette Use Among 8th, 10th, and 12th Grade Students, Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2015)
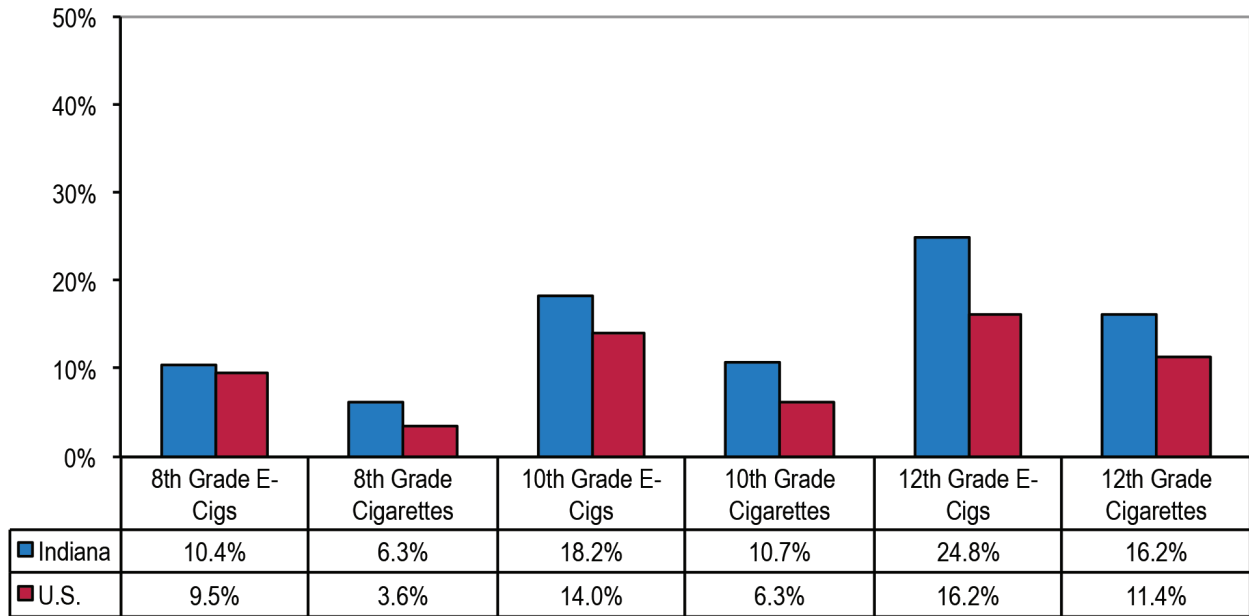
	8th Grade E-Cigs	8th Grade Cigarettes	10th Grade E-Cigs	10th Grade Cigarettes	12th Grade E-Cigs	12th Grade Cigarettes
Indiana	10.4%	6.3%	18.2%	10.7%	24.8%	16.2%
U.S.	9.5%	3.6%	14.0%	6.3%	16.2%	11.4%

Source: Gassman et al., 2015; Inter-university Consortium for Political and Social Research, 2015

Figure 4.11   Past-Month Smoking Prevalence for 12th Grade Students in Indiana and the United States (Indiana Youth Survey and Monitoring the Future Survey, 2001–2015)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indiana	35.1%	30.5%	28.8%	27.4%	26.5%	26.9%	24.3%	24.8%	24.4%	24.9%	24.6%	22.8%	19.5%	17.6%	16.2%
U.S.	29.5%	26.7%	24.4%	25.0%	23.2%	21.6%	21.6%	20.4%	20.1%	19.2%	18.7%	17.1%	16.3%	13.6%	11.4%
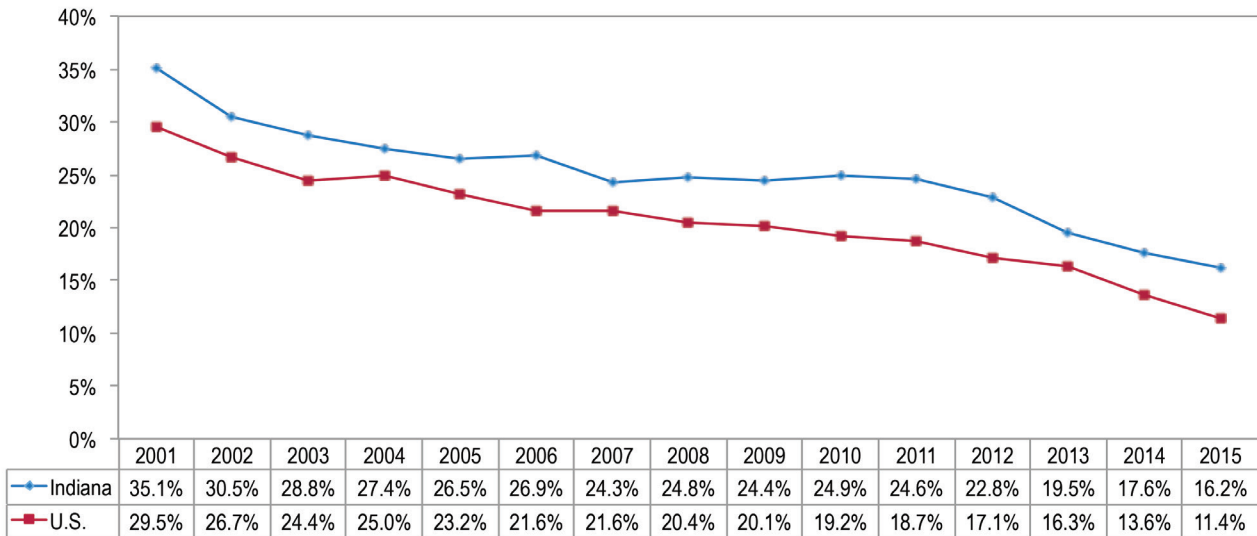
Source: Gassman et al., 2015; Inter-university Consortium for Political and Social Research, 2015

CONSEQUENCES

Health Consequences

Tobacco is the second major cause of death in the world. It is responsible for approximately 6 million deaths annually, including about 600,000 deaths from exposure to second-hand smoke (World Health Organization, 2015). In the United States, cigarette smoking is the single most preventable cause of disease and death, causing more deaths each year than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires combined (USDHHS, 2014).

Tobacco use is responsible for more than 480,000 deaths per year among adults age 35 and older in the United States. In addition, 16 million adults are suffering from smoking-related conditions. On average, smoking reduces adult life expectancy by at least 10 years. It contributes greatly to the number of deaths from lung cancer, heart disease, chronic lung diseases, and other illnesses (USDHHS, 2014).

Smoking affects respiratory health as well; it is related to chronic coughing and wheezing among adults. Smokers are more likely than nonsmokers to have upper and lower respiratory tract infections. Generally, lung function declines in smokers faster than in nonsmokers.

Smoking can result in cancers of the oral cavity, pharynx, larynx, esophagus, lung, bladder, stomach, cervix, kidney, and pancreas, as well as acute myeloid leukemia. Furthermore, the Surgeon General Report (USDHHS, 2014) links the following additional cancers to smoking: liver, colorectal, prostate, and breast. What is more, smoking is associated with adverse health outcomes in cancer patients. For smoking-attributable cancers, the risk generally increases with the number of cigarettes smoked and the number of years of smoking, and generally decreases after the smoker quits completely. The leading cause of cancer deaths is lung cancer, and cigarette smoking causes most cases. However, any tobacco use can be detrimental. Smokeless tobacco has been shown to cause oral cancers and may be a risk factor for cardiovascular disease as well (CDC, 2015c). Other specific health-related outcomes include age-related macular degeneration, dental disease, diabetes, autoimmune disease, rheumatoid arthritis, systemic lupus erythematosus, and inflammatory bowel disease (USDHHS, 2014).

The effects of smoking can also be observed in unborn babies, infants, and children, and may influence women's reproductive health. Women who smoke have an increased risk for infertility and ectopic pregnancies. Smoking during pregnancy causes health problems for both mothers and babies, such as an increased risk of spontaneous abortions, pregnancy complications (e.g., placenta previa, placental abruption, and premature rupture of membranes before labor begins), premature delivery, low-birth-weight infants, stillbirth, and sudden infant death syndrome (SIDS). Mothers who smoke during pregnancy reduce their babies' lung function (CDC, 2015c). The percentage of births to mothers who smoked during pregnancy declined in Indiana from 21.3% in 1997 to 15.1% in 2014; a higher percentage of white mothers (16.4%) smoked during pregnancy than black mothers (12.1%) (ISDH/Epidemiology Resource Center, 2015).

The health effects of exposure to aerosol from e-cigarettes are currently unknown; however, research shows that the aerosol releases measurable amounts of carcinogens and other toxins into the air, including nicotine, formaldehyde and acetaldehyde. In addition, research has demonstrated that e-cigarette aerosol has a high concentration of ultrafine particles. Exposure to fine and ultrafine particles may exacerbate respiratory conditions and constrict arteries (ISDH/TPCC, 2015a).

The use of tobacco products has wide-ranging consequences for adolescents and young adults. Factors associated with youth tobacco use include low socioeconomic status; use and approval of tobacco use by peers or siblings; smoking by parents or guardians; accessibility, availability and price of tobacco products; a perception that tobacco use is normative; lack of parental support or involvement; low levels of academic achievement; lack of skills to resist influences to tobacco use; lower self-image or self-esteem; belief in functional benefits of tobacco use; and lack of self-efficacy to refuse offers of tobacco (CDC, 2015c).

An estimated 11,100 Hoosiers die annually from smoking-attributable causes (USDHHS, 2014). Indiana's age-adjusted mortality rate was 308.9 per 100,000 population (95% CI: 302.8–315.0), a rate significantly higher than the U.S. median of 263.3 per 100,000 population (CDC, n.d.).

The Indiana State Department of Health, Tobacco Prevention and Cessation provides county-level information on various smoking-related outcomes. For a detailed list, see Appendix 4C, pages 72-75.

Figure 4.12   Percentage of Smoke-free Homes and Workplaces in Indiana (Adult Tobacco Survey, 2002–2015)

	2002	2006	2007	2008	2013	2015
Homes	60.1%	73.8%	79.3%	81.1%	80.0%	83.4%
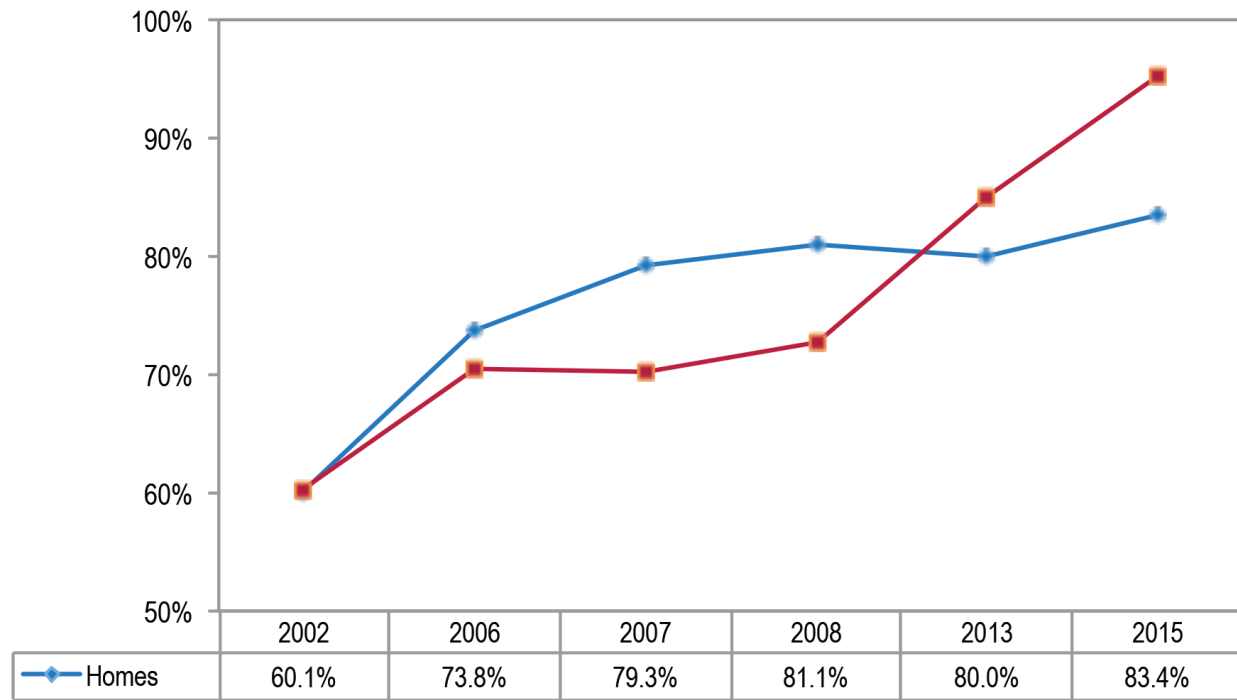
Source: ISDH/TPCC; Brown et al., 2015

Secondhand smoke: Furthermore, even secondhand smoke (sometimes called environmental tobacco smoke) has serious health consequences. An estimated 88 million nonsmoking Americans continue to be exposed to secondhand smoke in homes, vehicles, workplaces, and public places. Exposure to tobacco smoke can cause heart disease and lung cancer even in nonsmoking adults, increasing the risk by 25% to 30% for heart disease and by 20% to 30% for lung cancer. Children, in particular, are heavily impacted by secondhand smoke. Exposure increases their possibility of developing significant lung conditions, especially asthma and bronchitis. Secondhand smoke can cause SIDS, acute respiratory infections, ear problems, and more frequent and severe asthma attacks in children. In the U.S. population, secondhand smoke is responsible for an estimated 34,000 deaths due to heart disease and 7,300 lung cancer deaths each year among nonsmoking adults (CDC, 2015c). It is estimated that 1,426 Hoosiers die each year from secondhand smoke (ISDH/TPCC, 2014).

In Indiana, the percentage of smoke-free homes has increased from 60.1% in 2002 to 83.4% in 2015. However, among smokers, only 40.8% do not allow smoking in their homes. The percentage of smoke-free workplaces[3] rose from 60.3% to 95.3% during that time period (see Figure 4.12). Indiana is making progress but is lagging behind the rest of the nation in terms of comprehensive coverage from secondhand smoke exposure in workplaces. Currently, there are 40 (including the Indianapolis International Airport) ordinances, of which 35 meet the Surgeon General's guidelines for clean indoor air laws. With the addition of the statewide smoke-free air law in 2012, 100% of the population is covered by some type of smoke-free air law. Eighteen communities[4] in Indiana have passed comprehensive smoke-free air ordinances which cover all work places, including bars, ensuring all workers are protected from secondhand smoke. These eighteen comprehensive ordinances cover approximately 28% of all residents in Indiana. (ISDH/TPCC, 2015d).

[3]This measure refers to the prevalence of workers reporting a 100% smoke-free workplace (Adult Tobacco Survey).
[4]These include Delaware Co., Hancock Co., Monroe Co., Vanderburgh Co., Vigo Co., Bloomington, Columbus, Cumberland, Elkhart, Fort Wayne, Franklin, Greencastle, Indianapolis, Lawrence, Plainfield, Terre Haute, West Lafayette, and Zionsville

Economic Consequences

Annual U.S. tobacco industry marketing expenditures were estimated at $9.6 billion in 2012, including Indiana's share of $288.0 million. Total tobacco marketing expenditures in Indiana declined after peaking at $475.4 million in 2003 (Campaign for Tobacco-Free Kids, 2015a; Federal Trade Commission, 2015a, 2015b).

The federal excise tax, as of January 1, 2015, is $1.01 per pack of cigarettes. The median state cigarette excise tax rate is $1.61 per pack, but varies from 17 cents in Missouri to $4.35 in New York; Indiana's tobacco excise tax rate is 99.5 cents (Campaign for Tobacco-Free Kids, 2016b).

Cigarette smoking is estimated to be responsible for greater than $300 billion in annual health-related economic losses in the United States ($170 billion in direct medical costs and approximately $156 billion in lost productivity) (CDC, 2015c). In Indiana, $2.93 billion dollars of health-related costs in 2009 were smoking-attributable expenditures (SAE). Most of these costs accrued through hospital care ($1.57 billion) and prescription drugs ($525 million); the SAE estimate also included ambulatory care ($405 million), nursing home care ($283 million), and other health-related costs ($147 million) (CDC, 2015b). The combination of increased medical costs, higher insurance rates, added maintenance expenses, lower productivity, and higher rates of absenteeism due to smoking adds financial strain to American businesses every year.

APPENDIX 4A - Part 1

Percentage of Indiana Middle School and High School Respondents Who Currently Use Any Tobacco Product, by Gender, Race/ Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2004–2014)

	2004		2006		2008		2010		2012		2014	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
MIDDLE SCHOOL												
Gender												
Male	10.8	(8.8-12.8)	13.2	(10.3-16.1)	9.9	(7.3-12.5)	9.3	(7.0-11.6)	6.2	(4.6-7.8)	5.3	(4.0-6.7)
Female	14.0	(10.8-17.2)	12.7	(10.2-15.2)	7.1	(5.2-9)	4.5	(2.9-6.1)	5.5	(3.8-7.2)	4.0	(2.6-5.3)
Race/Ethnicity												
White	11.8	(9.2-14.4)	11.9	(9.1-14.7)	7.7	(5.5-9.9)	6.4	(5.0-7.8)	5.4	(3.8-7.0)	4.3	(2.9-5.7)
Black	13.8	(9.1-18.5)	17.4	(12.9-21.9)	10.6	(7.6-13.6)	9.0	(4.8-13.2)	5.3	(3.5-7.1)	5.0	(1.4-8.6)
Hispanic	13.6	(8.2-19.0)	12.5	(8.5-16.5)	11.5	(8.7-14.3)	12.2	(8.5-15.9)	8.2	(4.8-11.6)	8.0	(3.5-12.4)
Grade												
6	8.6	(4.7-12.5)	6.2	(4.3-8.1)	2.7	(1.2-4.2)	2.1	(0.6-3.6)	1.9	(1.0-2.8)	2.4	(0.8-4.0)
7	11.0	(8.4-13.6)	10.9	(8.9-12.9)	8.2	(6.0-10.4)	5.3	(3.6-7.0)	5.2	(3.5-6.9)	4.8	(2.9-6.7)
8	16.8	(12.6-21.0)	21.3	(16.3-26.3)	14.6	(10.9-18.3)	11.8	(7.6-16.0)	10.6	(7.7-13.5)	7.1	(4.2-9.9)
Total	**12.4**	**(10.2-14.6)**	**13.0**	**(10.6-15.4)**	**8.5**	**(6.6-10.4)**	**7.1**	**(5.7-8.5)**	**5.9**	**(4.5-7.3)**	**4.8**	**(3.5-6.0)**
HIGH SCHOOL												
Gender												
Male	33.0	(29.8-36.2)	35.0	(30.3-39.7)	31.2	(28.6-33.8)	28.6	(24.9-32.3)	27.4	(23.9-30.9)	24.6	(18.4-30.9)
Female	23.2	(20.8-25.6)	26.8	(22.0-31.6)	23.7	(20.9-26.5)	19.3	(16.6-22.0)	16.2	(12.7-19.7)	16.1	(12.1-20.0)
Race/Ethnicity												
White	28.5	(25.8-31.2)	31.9	(27.0-36.8)	28.4	(26.1-30.7)	24.5	(21.9-27.1)	22.5	(19.5-25.5)	22.2	(16.5-27.9)
Black	22.8	(18.5-27.1)	22.8	(16.9-28.7)	20.4	(16.6-24.2)	16.2	(12.4-20.0)	17.4	(11.0-23.8)	11.6	(7.8-15.3)
Hispanic	32.2	(25.4-39)	29.1	(23.1-35.1)	28.9	(24.5-33.3)	27.5	(22.7-32.3)	23.1	(17.6-28.6)	14.9	(9.4-20.5)
Grade												
9	24.4	(21.8-27.0)	23.8	(20.1-27.5)	19.2	(15.9-22.5)	17.9	(14.8-21.0)	14.5	(10.4-18.6)	15.7	(12.4-19.1)
10	24.7	(21.6-27.8)	30.2	(24.4-36.0)	25.6	(21.5-29.7)	20.9	(17.2-24.6)	18.0	(15.9-20.1)	15.9	(9.9-21.9)
11	31.0	(26.1-35.9)	35.0	(29.7-40.3)	33.2	(28.1-38.3)	28.7	(25.1-32.3)	26.4	(20.6-32.2)	17.8	(13.9-21.8)
12	34.3	(28.3-40.3)	37.2	(30.2-44.2)	34.3	(28.8-39.8)	29.4	(24.2-34.6)	30.0	(24.5-35.5)	32.9	(21.9-44.0)
Total	**28.3**	**(25.9-30.7)**	**31.0**	**(26.8-35.2)**	**27.5**	**(25.5-29.5)**	**24.2**	**(21.9-26.5)**	**22.0**	**(19.3-24.7)**	**20.5**	**(15.4-25.6)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2015c
*Students were considered to currently use tobacco products if they reported use of cigarettes, cigars, smokeless tobacco (chewing tobacco, snuff, or dip), pipe, bidis, or kreteks (2012 and 2014 only) on one or more of the past 30 days.

Percentage of Indiana Middle School and High School Respondents Who Currently Use Cigarettes, by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2004–2014)

	2004		2006		2008		2010		2012		2014	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
MIDDLE SCHOOL												
Gender												
Male	5.7	(3.7–7.6)	7.1	(5.2–9.1)	4.5	(2.9–6.0)	5.2	(3.7–6.8)	3.6	(2.5-4.7)	2.9	(1.8-3.9)
Female	10.1	(7.5–12.6)	8.3	(6.2–10.5)	3.7	(2.4–4.9)	3.5	(1.9–5.1)	3.9	(2.8-5.0)	2.8	(1.6-4.0)
Race/Ethnicity												
White	8.2	(5.6–10.7)	7.4	(5.5–9.4)	7.0	(4.8–9.1)	4.1	(2.9–5.3)	3.5	(2.5-4.5)	2.8	(1.7-3.9)
Black	6.2	(2.9–9.6)	7.8	(4.5–11.1)	2.9	(1.3–4.4)	4.7	(1.8–7.5)	1.9	(-0.1-3.9)	2.2	(0.1-4.3)
Hispanic	7.6	(2.9–12.3)	8.4	(5.3–11.5)	4.2	(2.5–6.0)	8.8	(5.6–12.0)	6.2	(3.2-9.2)	3.9	(1.2-6.6)
Grade												
6	4.9	(0.6–9.2)	2.9	(1.7–4.1)	1.3	(0.3–2.2)	1.5	(0.1–2.9)	1.1	(0.2-2.0)	1.0	(0.0-2.3)
7	8.2	(6.2–10.2)	5.4	(3.8–7.0)	4.1	(2.6–5.7)	2.6	(1.1–4.0)	3.2	(1.7-4.7)	3.4	(1.6-5.1)
8	10.2	(7.1–13.3)	14.6	(10.8–18.5)	6.9	(4.6–9.3)	8.1	(5.3–10.9)	7.0	(4.8-9.2)	4.3	(2.4-6.2)
Total	**7.8**	**(5.9–9.7)**	**7.7**	**(5.9–9.6)**	**4.1**	**(2.9–5.3)**	**4.4**	**(3.3–5.5)**	**3.7**	**(2.7-4.7)**	**2.9**	**(1.9-3.8)**
HIGH SCHOOL												
Gender												
Male	22.8	(20.1–25.6)	23.6	(20.0–27.1)	19.0	(16.0–21.9)	18.8	(15.6–21.9)	14.8	(12.2-17.4)	12.5	(9.1-15.9)
Female	19.4	(17.1–21.8)	22.7	(18.0–27.4)	17.5	(15.1–20.0)	15.8	(13.1–18.5)	12.7	(9.4-16.0)	11.3	(7.8-14.7)
Race/Ethnicity												
White	22.1	(19.4–24.9)	24.8	(20.6–28.9)	21.1	(17.6–24.6)	18.2	(15.4–20.9)	14.5	(11.8-17.2)	13.0	(9.2-16.7)
Black	12.6	(8.9–16.3)	12.5	(8.3–16.8)	12.7	(9.4–16.0)	9.2	(6.2–12.2)	8.6	(4.5-12.7)	5.3	(2.7-7.9)
Hispanic	22.6	(17.3–27.9)	19.9	(14.6–25.1)	15.5	(12.4–18.5)	21.0	(15.6–26.4)	14.1	(9.1-19.1)	8.5	(2.8-14.2)
Grade												
9	18.5	(15.5–21.5)	16.4	(13.5–19.4)	11.5	(8.5–14.5)	13.2	(10.8–15.5)	10.0	(6.4-13.6)	9.0	(6.6-11.4)
10	19.1	(16.6–21.6)	22.5	(18.1–27.0)	16.9	(13.4–20.3)	14.1	(10.5–17.6)	11.5	(8.8-14.2)	8.9	(4.4-13.3)
11	22.9	(18.4–27.3)	27.5	(22.1–32.9)	23.4	(18.2–28.6)	21.2	(17.4–24.9)	18.2	(13.5-22.9)	11.0	(7.8-14.1)
12	25.6	(20.4–30.8)	28.1	(20.6–35.7)	22.7	(18.5–26.9)	21.5	(16.4–26.6)	15.6	(11.1-20.1)	19.1	(11.9-26.3)
Total	**21.3**	**(19.1–23.5)**	**23.2**	**(19.5–26.8)**	**18.3**	**(16.0–20.5)**	**17.5**	**(15.1–19.9)**	**13.7**	**(11.3-16.1)**	**12.0**	**(8.6-15.4)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2015c

Percentage of Indiana Middle School and High School Respondents Who Currently Use Smokeless Tobacco, by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2004–2014)

	2004		2006		2008		2010		2012		2014	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
MIDDLE SCHOOL												
Gender												
Male	3.1	(1.5–4.7)	5.2	(3.1–7.3)	4.3	(2.7–5.9)	4.2	(2.6–5.8)	2.1	(1.0-3.2)	2.7	(1.7-3.7)
Female	1.1	(0.3–2.0)	2.0	(1.1–2.8)	2.2	(1.0–3.4)	0.7	(0.2–1.1)	0.8	(0.2-1.4	0.9	(0.2-1.5)
Race/Ethnicity												
White	2.3	(1.2–3.4)	3.4	(1.9–4.9)	4.1	(2.0–6.2)	2.4	(1.4–3.3)	1.6	(0.9-2.3)	1.7	(1.0-2.3)
Black	3.0	(0.7–5.3)	3.9	(1.4–6.3)	2.8	(1.3–4.3)	1.9	(0.2–3.6)	0.0	(0.0-0.0)	1.0	(0.0-2.3)
Hispanic	0.6	(0.0–1.4)	2.7	(0.8–4.6)	2.7	(1.1–4.2)	2.9	(0.3–5.5)	1.7	(0.3-3.1)	3.0	(0.0-6.1)
Grade												
6	1.9	(0.2–3.5)	1.5	(0.6–2.3)	0.9	(0.1–1.8)	0.5	(0.0–1.3)	0.7	(0.0-1.4)	1.1	(0.2-2.1)
7	1.6	(0.6–2.6)	3.2	(1.8–4.5)	2.9	(1.6–4.1)	1.7	(0.7–2.7)	1.2	(0.1-2.3)	1.8	(0.9-2.8)
8	2.6	(1.1–4.1)	6.1	(2.9–9.3)	6.1	(3.4–8.8)	4.5	(2.3–6.8)	2.6	(1.1-4.1)	2.4	(1.2-3.5)
Total	**2.2**	**(1.2–3.1)**	**3.6**	**(2.4–4.9)**	**3.3**	**(2.0–4.6)**	**2.5**	**(1.7–3.4)**	**1.5**	**(0.9-2.1)**	**1.8**	**(1.2-2.4)**
HIGH SCHOOL												
Gender												
Male	11.8	(9.4–14.1)	14.1	(10.1–18.1)	13.9	(10.5–17.2)	11.8	(9.7–13.9)	11.2	(8.7-13.7)	13.6	(7.8-19.4)
Female	2.5	(1.6–3.3)	1.6	(0.7–2.5)	2.4	(1.5–3.4)	2.3	(1.3–3.3)	1.8	(0.9-2.7)	2.0	(1.1-2.9)
Race/Ethnicity												
White	7.8	(6.2–9.5)	8.9	(6.3–11.4)	10.3	(7.3–13.3)	7.5	(6.1–9.0)	7.3	(5.8-8.8)	9.4	(5.5-13.3)
Black	2.6	(1.0–4.1)	2.5	(0.9–4.0)	5.7	(3.1–8.3)	1.4	(0.1–2.9)	2.2	(0.3-4.1)	0.9	(0.0-1.8)
Hispanic	7.6	(4.3–11.0)	7.1	(3.3–10.9)	4.5	(2.5–6.6)	10.2	(6.5–13.9)	6.0	(2.8-9.2)	2.7	(0.6-4.7)
Grade												
9	6.2	(5.0–7.5)	6.9	(4.3–9.4)	4.6	(3.2–6.0)	3.7	(1.8–5.7)	5.7	(2.9-8.5)	7.3	(4.2-10.3)
10	7.3	(5.3–9.4)	7.0	(3.5–10.5)	8.5	(5.6–11.4)	7.9	(5.5–10.3)	5.9	(3.9-7.9)	4.2	(1.2-7.1)
11	7.8	(5.0–10.6)	7.3	(3.6–11.1)	10.9	(5.9–15.9)	9.1	(6.9–11.4)	8.2	(5.1-11.3)	6.5	(4.5-8.4)
12	8.0	(5.5–10.5)	10.9	(6.9–14.9)	9.4	(6.5–12.4)	8.1	(4.7–11.6)	6.7	(3.5-9.9)	14.0	(7.0-21.0)
Total	**7.3**	**(5.9–8.8)**	**7.9**	**(5.7–10.1)**	**8.2**	**(6.1–10.2)**	**7.2**	**(5.9–8.6)**	**6.6**	**(5.3-7.9)**	**8.0**	**(4.6-11.3)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2015c

APPENDIX 4A - Part 4

Percentage of Indiana Middle and High School Respondents Who Currently Use E-cigarettes,* by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2012-2014)

	2012		2014	
	%	(95% CI)	%	(95% CI)
MIDDLE SCHOOL				
Gender				
Male	1.1	(0.4-1.9)	5.8	(4.2-7.4)
Female	1.5	(0.6-2.5)	4.2	(2.6-5.9)
Race/Ethnicity				
White	1.5	(0.8-2.3)	4.4	(2.7-6.1)
Black	0.2	(-0.2-0.5)	7.0	(2.7-11.3)
Hispanic	0.9	(-0.3-2.0)	7.4	(3.9-10.8)
Grade				
6	0.5	(-0.2-1.2)	2.4	(0.5-4.4)
7	0.8	(0.3-1.4)	4.9	(2.2-7.6)
8	2.7	(1.1-4.3)	8.0	(5.1-10.9)
Total	1.3	(0.7-2.0)	5.2	(3.8-6.6)
HIGH SCHOOL				
Gender				
Male	5.2	(3.6-6.8)	17.3	(13.4-21.2)
Female	2.6	(1.4-3.7)	13.6	(10.8-16.4)
Race/Ethnicity				
White	4.4	(3.4-5.3)	16.5	(13.2-19.9)
Black	1.1	(-0.3-2.4)	10.0	(7.3-12.7)
Hispanic	4.5	(2.1-6.9)	13.5	(8.1-18.8)
Grade				
9	2.4	(1.3-3.6)	10.7	(7.7-13.6)
10	3.6	(2.5-4.8)	12.2	(8.7-15.8)
11	4.4	(2.7-6.2)	15.6	(11.7-19.5)
12	5.2	(3.5-6.8)	24.1	(16.4-31.8)
Total	**3.9**	**(3.0-4.7)**	**15.6**	**(12.5-18.6)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2015c

*In 2012, current e-cigarette use was assessed by the question, "In the past 30 days, which of the following [tobacco] products have you used on at least one day?" and was the 8th response option available. In 2014, current e-cigarette use was assessed using the question, "During the past 30 days, on how many days did you use electronic cigarettes?" Students who reported using e-cigarettes on one or more of the past 30 days were considered current e-cigarette users.

Indiana University Center for Health Policy

APPENDIX 4B - Part 1

Percentage of Indiana Students Reporting Monthly Cigarette Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	1.5	1.1	1.4	1.9	1.6	1.3	2.1	0.9*	1.9
7th Grade	1.3	0.8	1.3	1.4	2.4*	1.1	1.3	0.8*	1.8
8th Grade	6.3	5.6*	7.1	6.4	5.3*	4.4*	7.8	5.8	8.2*
9th Grade	7.7	6.9*	7.9	7.4	6.9	6.9*	9.4	7.5	8.5
10th Grade	10.7	10.3	11.2	9.4*	10.4	8.5*	11.7	10.6	13.8*
11th Grade	13.1	12.7*	11.6*	14.2	14.1	10.9*	14.5	13.8	14.9
12th Grade	16.2	16.0*	16.4	14.3*	13.8*	14.8*	16.5	15.8*	20.2*

Notes: * Indicates a local rate that is significantly different from the overall state rate (*P* < 0.05).
Beginning in 2015, lifetime prevalence is no longer available by region.

Source: Gassman, et al., 2015

APPENDIX 4B - Part 2

Percentage of Indiana Students Reporting Monthly E-Cigarette Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7th Grade	5.5	6.7*	5.2	6.7	5.2	6.5	5.6	3.6*	5.0
8th Grade	10.4	14.6*	9.7	11.9	7.0*	7.8*	12.5*	8.5*	11.2
9th Grade	14.4	18.3*	15.4	15.2	9.3*	12.4*	18.0*	13.0*	13.3*
10th Grade	18.2	23.9*	14.1*	18.3	13.7*	16.9*	18.8	16.3*	21.1*
11th Grade	20.3	21.6	19.3*	20.9	16.2*	19.7*	21.5	20.6	21.1
12th Grade	24.8	27.4	21.0*	22.9*	20.4*	24.4*	27.6	23.6*	27.6

Notes: * Indicates a local rate that is significantly different from the overall state rate (*P* < 0.05).
Beginning in 2015, lifetime prevalence is no longer available by region; the Indiana Youth Survey did not ask 6th grade students about e-cigarette use.

Source: Gassman, et al., 2015

APPENDIX 4C - Part 1

Health Consequences Attributable to Smoking in Indiana, by County (The State of Tobacco Control)

County	Estimated Adult Smoking Rate	Estimated Number of Adult Smokers	Asthma ER Visits Age-Adjusted Rate per 10,000 (2014	Lung Cancer Average Mortality Rate per 100,000 (2009-2013)	COPD Average Age-adjusted Mortality Rate per 100,000 (2010-2014)	Major CVD Average Age-adjusted Mortality Rate per 100,000 (2010-2014)
Adams	20.8%	4,924	29.7	32.9	39.7	228.6
Allen	21.0%	54,468	50.6	44.6	54.5	222.5
Bartholomew	19.4%	11,142	38.0	59.2	65.7	241.4
Benton	28.2%	1,853	45.9	79.1	47.3	246.2
Blackford	29.4%	2,896	68.2	51.8	60.3	252.9
Boone	17.1%	6,964	25.1	56.6	56.8	269.1
Brown	20.2%	2,438	23.6	59.4	49.4	202.5
Carroll	25.8%	3,921	25.2	39.2	48.4	201.5
Cass	23.0%	6,641	44.7	66	59.9	242.6
Clark	25.8%	21,704	33.3	67.5	62.2	261.9
Clay	22.9%	4,683	52.6	58.4	60.2	290
Clinton	18.9%	4,607	48.4	61.5	59	276.7
Crawford	25.3%	2,079	23.2	70.6	52.1	254.9
Daviess	23.6%	5,317	27.1	55.9	49.1	266.6
Dearborn	24.9%	9,345	28.0	60.7	50.5	242.6
Decatur	21.2%	4,066	53.5	57	47	261.9
DeKalb	22.3%	6,932	34.5	53.2	61.7	268.3
Delaware	25.2%	23,713	55.3	58.2	76.8	257.6
Dubois	18.3%	5,713	5.0	39.6	30.1	246.9
Elkhart	20.1%	28,418	41.0	48	50.1	247.3
Fayette	24.8%	4,578	38.9	71.4	72	276.9
Floyd	28.1%	15,918	30.5	53.7	58.8	259.4
Fountain	27.3%	3,567	88.2	62.2	68	264.2
Franklin	31.7%	5,406	11.9	52.8	43.2	216.6
Fulton	17.6%	2,758	35.5	69.3	68.5	309.8
Gibson	25.7%	6,517	59.7	48.7	52.7	246.4
Grant	28.7%	15,754	84.4	63.1	73.2	246.4
Greene	24.2%	6,118	28.7	67.7	62.2	270.2
Hamilton	12.4%	23,762	21.3	33.7	38.3	178.8
Hancock	20.4%	10,539	29.4	58.9	53.4	226.9
Harrison	13.4%	4,028	25.9	62.6	56.7	232.5
Hendricks	18.1%	19,103	19.2	50.6	56.9	214.2
Henry	28.3%	10,872	45.5	65.2	58.7	262.2
Howard	24.0%	15,160	53.6	52	59	267.8
Huntington	25.7%	7,281	47.8	50	60	274.8
Jackson	23.2%	7,415	76.5	69.9	65.7	259.8
Jasper	27.1%	6,744	32.3	69.8	54.6	267.4
Jay	25.6%	3,996	45.0	56.9	58.7	275.3
Jefferson	29.1%	7,302	30.7	57.6	72.9	326.4
Jennings	33.1%	6,949	60.2	62	81.2	260.4
Johnson	24.1%	24,764	33.4	49.9	74.7	243.6
Knox	30.3%	9,165	47.1	53.1	69.4	315.2
Kosciusko	21.9%	12,601	28.9	53.6	59.7	237
LaGrange	19.3%	4,694	23.9	41	44.2	257.1
Lake	24.0%	88,496	71.8	52.9	44.9	259.3
LaPorte	26.6%	22,899	55.5	55.6	55.8	274
Lawrence	20.1%	7,088	55.3	65.4	57.4	301.1
Madison	27.9%	28,248	79.6	67.5	65.1	253.1
Marion	24.2%	163,807	78.1	63.8	63.9	251.7

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County	Estimated Adult Smoking Rate	Estimated Number of Adult Smokers	Asthma ER Visits Age-Adjusted Rate per 10,000 (2014	Lung Cancer Average Mortality Rate per 100,000 (2009-2013)	COPD Average Age-adjusted Mortality Rate per 100,000 (2010-2014)	Major CVD Average Age-adjusted Mortality Rate per 100,000 (2010-2014)
Marshall	21.0%	7,224	44.3	45.1	59.1	216.3
Martin	17.5%	1,374	U	58.5	62	261.7
Miami	31.1%	8,867	52.5	67.9	41.8	315.8
Monroe	17.8%	20,560	22.2	49.3	41.7	185.4
Montgomery	23.2%	6,725	52.0	54.5	57.3	270.7
Morgan	24.2%	12,479	42.9	66.4	83.1	279.3
Newton	41.7%	4,572	17.2	63.2	52	277.2
Noble	26.7%	9,261	36.8	52.9	78.7	236.1
Ohio	28.4%	1,371	U	79.2	55.9	232.6
Orange	28.2%	4,217	55.8	67.9	60.7	269.4
Owen	32.0%	5,300	28.7	62.9	64.1	281.3
Parke	30.0%	4,088	29.5	62.1	45.4	278.9
Perry	24.5%	3,723	72.0	76.1	41	253.5
Pike	18.4%	1,834	U	58	43.2	232.1
Porter	21.4%	26,626	36.9	52.4	42.4	213.2
Posey	21.5%	4,251	19.9	41.3	49.3	217.7
Pulaski	22.4%	2,286	28.2	63.4	59.5	312.1
Putnam	24.4%	7,312	31.9	76.8	49.5	246.1
Randolph	23.5%	4,650	41.5	57.9	50.9	245.4
Ripley	26.5%	5,625	39.6	56.6	52	251.4
Rush	21.9%	2,866	75.3	67.5	80.9	291.3
Scott	24.6%	4,519	55.1	80.6	83.2	281
Shelby	27.0%	9,070	42.9	55.9	53.3	261.2
Spencer	20.0%	3,178	22.5	49.2	48.6	210.7
St. Joseph	20.8%	41,825	51.4	51.8	48.8	241.5
Starke	32.6%	5,759	50.1	75.2	63.5	342.6
Steuben	21.7%	5,718	48.8	46.7	43	238.4
Sullivan	25.0%	4,221	24.6	63.2	54.5	311.4
Switzerland	29.2%	2,304	46.0	78.3	69.2	300.1
Tippecanoe	14.7%	20,148	61.0	46.7	49.5	229.9
Tipton	25.4%	3,107	18.2	42.4	42.4	258.8
Union	29.8%	1,678	U	43.1	62.6	276.9
Vanderburgh	25.1%	35,092	68.6	57.1	54.2	238.6
Vermillion	24.7%	3,080	53.4	78.1	69.8	394.6
Vigo	23.4%	19,843	46.8	64.4	65.5	282
Wabash	19.3%	4,908	40.8	46.4	62	229.8
Warren	19.3%	1,257	63.3	53.9	58.2	159.5
Warrick	13.7%	6,063	31.9	46.1	45.9	200.3
Washington	37.1%	7,841	43.8	69.7	78.6	286.8
Wayne	26.0%	13,789	33.9	64.3	57.8	255.1
Wells	20.5%	4,251	37.5	42.9	47	218.2
White	21.7%	4,054	64.2	62.8	64.5	214.5
Whitley	21.5%	5,398	38.2	52.1	53.5	232.2
Indiana	**22.9%**	**1,116,490**	**49.2**	**55.8**	**56.2**	**247.0**

Notes: Estimated number of adult smokers and smoking rate are based on findings from the 2014 BRFSS and 2014 County Health Rankings; rate for Asthma-related emergency room (ER) visits is based on 2014 data; lung cancer mortality rate is based on pooled averages from 2009-2013; COPD mortality rate is based on pooled averages from 2010-2014; and major cardiovascular disease (CVD) mortality rate is based on pooled averages from 2010-2014.

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission (2015d)

County	Percent of Pregnant Women who Smoke	Estimated cost of smoking-affected births	Number of people living with tobacco-related illnesses	Annual deaths due to tobacco	Annual deaths due to Secondhand Smoke (SHS)	Economic burden of SHS
Adams	6.8	$62,332	1,617	54	8	$6,911,787
Allen	10.3	$731,401	17,715	591	78	$71,421,129
Bartholomew	14.4	$205,721	3,923	131	17	$15,435,594
Benton	20.2	$ 29,900	449	15	2	$1,779,654
Blackford	36.8	$ 67,965	673	22	3	$2,565,966
Boone	11.7	$124,884	2,781	93	13	$11,384,640
Brown	16.5	$ 21,735	824	27	3	$3,063,642
Carroll	14.5	$ 43,320	1,038	35	4	$4,051,155
Cass	21.7	$151,763	1,972	66	9	$7,832,166
Clark	16.1	$313,308	5,746	192	24	$22,156,632
Clay	21.6	$ 89,758	1,397	47	6	$5,404,890
Clinton	18.4	$115,191	1,665	55	7	$6,678,024
Crawford	38.5	$ 70,582	561	19	2	$2,153,313
Daviess	11.7	$ 84,368	1,539	51	7	$6,361,248
Dearborn	21.8	$150,982	2,563	85	11	$10,059,447
Decatur	22.8	$103,105	1,310	44	6	$5,173,740
DeKalb	23.5	$179,351	2,123	71	9	$8,486,823
Delaware	21.7	$362,758	6,427	214	26	$23,651,871
Dubois	11.5	$ 89,485	2,132	71	9	$8,419,689
Elkhart	9.9	$417,980	9,657	322	43	$39,709,359
Fayette	25.7	$ 86,902	1,261	42	5	$4,879,677
Floyd	16.5	$195,613	3,869	129	16	$14,990,178
Fountain	25.0	$ 61,110	892	30	4	$3,465,240
Franklin	18.0	$ 61,110	1,165	39	5	$4,640,487
Fulton	22.6	$ 85,627	1,070	36	5	$4,188,036
Gibson	18.0	$105,843	1,732	58	7	$6,734,103
Grant	29.5	$299,256	3,749	125	15	$14,082,261
Greene	24.3	$114,178	1,727	58	7	$6,666,165
Hamilton	2.7	$142,557	13,089	436	60	$55,188,369
Hancock	10.8	$107,358	3,529	118	15	$14,070,402
Harrison	16.4	$100,666	2,053	68	9	$7,912,164
Hendricks	8.1	$197,666	7,208	240	32	$29,235,048
Henry	22.4	$146,925	2,624	87	11	$9,941,862
Howard	21.8	$296,932	4,314	144	18	$16,633,152
Huntington	16.8	$ 97,646	1,935	64	8	$7,461,924
Jackson	21.1	$177,654	2,183	73	9	$8,517,576
Jasper	22.6	$118,160	1,700	57	7	$6,729,078
Jay	21.2	$97,597	1,066	36	5	$4,271,853
Jefferson	27.1	$142,791	1,714	57	7	$6,518,028
Jennings	25.9	$127,675	1,434	48	6	$5,733,525
Johnson	15.5	$381,829	7,018	234	31	$28,070,454
Knox	27.5	$180,750	2,066	69	9	$7,726,440
Kosciusko	15.6	$228,796	3,930	131	17	$5,548,958
LaGrange	6.7	$ 63,599	1,661	55	8	$7,462,728
Lake	10.2	$842,177	25,185	839	109	$99,697,005
LaPorte	24.3	$439,222	5,880	196	25	$22,404,867
Lawrence	29.0	$191,397	2,408	80	10	$9,272,934
Madison	22.0	$427,824	6,915	231	29	$26,458,836
Marion	12.4	$2,453,977	46,232	1541	199	$181,581,993

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County	Percent of Pregnant Women who Smoke	Estimated cost of smoking-affected births	Number of people living with tobacco-related illnesses	Annual deaths due to tobacco	Annual deaths due to Secondhand Smoke (SHS)	Economic burden of SHS
Marshall	17.2	$133,138	2,350	78	10	$9,457,251
Martin	27.1	$ 48,946	536	18	2	$2,077,134
Miami	26.2	$134,491	1,947	65	8	$7,417,503
Monroe	16.3	$289,752	7,889	263	30	$27,732,774
Montgomery	24.7	$144,233	1,980	66	8	$7,662,924
Morgan	24.5	$247,204	3,522	117	15	$13,847,694
Newton	26.5	$ 47,503	749	25	3	$2,863,044
Noble	19.0	$162,553	2,369	79	11	$9,554,736
Ohio	25.0	$ 17,654	330	11	1	$1,231,728
Orange	23.4	$ 68,003	1,021	34	4	$3,987,840
Owen	34.3	$100,612	1,131	38	5	$4,336,575
Parke	19.0	$ 50,314	931	31	4	$3,485,139
Perry	28.8	$ 69,225	1,038	35	4	$3,886,938
Pike	25.4	$ 43,461	681	23	3	$2,581,845
Porter	10.5	$260,084	8,498	283	36	$33,032,943
Posey	18.1	$ 65,136	1,350	45	6	$5,207,910
Pulaski	27.4	$ 54,325	697	23	3	$2,693,802
Putnam	21.0	$100,669	2,047	68	8	$7,630,563
Randolph	23.6	$ 95,185	1,352	45	6	$5,260,371
Ripley	23.3	$104,733	1,450	48	6	$5,792,418
Rush	21.5	$ 58,394	894	30	4	$3,495,792
Scott	28.6	$103,311	1,255	42	5	$4,860,381
Shelby	23.2	$164,459	2,294	76	10	$8,931,636
Spencer	17.7	$ 59,851	1,085	36	5	$4,211,352
St. Joseph	12.3	$581,278	13,734	458	59	$53,653,131
Starke	25.3	$ 88,299	1,207	40	5	$4,695,963
Steuben	24.6	$122,269	1,800	60	8	$6,871,185
Sullivan	18.6	$ 62,389	1,153	38	5	$4,316,475
Switzerland	33.6	$ 58,405	539	18	2	$2,133,213
Tippecanoe	13.4	$425,814	9,361	312	38	$34,728,780
Tipton	23.2	$ 51,669	836	28	4	$3,203,136
Union	23.2	$ 25,835	385	13	2	$1,510,716
Vanderburgh	19.7	$598,188	9,549	318	40	$36,120,303
Vermillion	18.7	$ 38,092	852	28	4	$3,258,612
Vigo	18.9	$337,511	5,792	193	24	$21,677,448
Wabash	25.2	$112,931	1,737	58	7	$6,610,488
Warren	22.6	$ 28,542	445	15	2	$1,710,108
Warrick	10.8	$ 97,385	3,023	101	13	$11,997,489
Washington	23.2	$ 97,982	1,444	48	6	$5,680,662
Wayne	20.8	$216,085	3,622	121	15	$13,852,317
Wells	17.0	$ 77,569	1,416	47	6	$5,554,836
White	17.4	$ 65,217	1,276	43	5	$4,953,243
Whitley	17.5	$ 97,912	1,715	57	8	$6,691,692
Indiana	**15.1**	**$17,209,903**	**333,000**	**11,100**	**1,426**	**$1.3 billion**

Notes: Estimates of pregnant women who smoke are based on 2014 data; Indiana's economic burden of second-hand smoke (SHS) is annually $201 per capita.

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission (2015d)

REFERENCES, CHAPTER 4

Brown, A., Raines, J., & Stedman, K. (2015). *2015 Indiana Adult Tobacco Survey. Final summary report: March 2015.* Report received on November 26, 2015, from the Indiana State Department of Health, Tobacco Prevention and Cessation Commission.

Campaign for Tobacco-Free Kids. (2015a). *State-specific tobacco company marketing expenditures 1998 to 2012.* Retrieved from http://www.tobaccofreekids.org/research/factsheets/pdf/0271.pdf

Campaign for Tobacco-Free Kids. (2016). *State cigarette excise tax rates & rankings.* Retrieved from http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf

Centers for Disease Control and Prevention. (2015a). *Behavioral Risk Factor Surveillance System (BRFSS) prevalence & trends data.* Retrieved from http://www.cdc.gov/brfss/brfssprevalence/index.html

Centers for Disease Control and Prevention. (2015b). *Smoking-attributable mortality, morbidity, and economic costs (SAMMEC).* Retrieved from https://chronicdata.cdc.gov/Health-Consequences-and-Costs/Smoking-Attributable-Mortality-Morbidity-and-Econo/ezab-8sq5

Centers for Disease Control and Prevention. (2015c). *Smoking and tobacco use: Fact sheets.* Retrieved from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm

Centers for Disease Control and Prevention. (2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Centers for Disease Control and Prevention. (n.d.). *State Tobacco Activities Tracking and Evaluation (STATE) System.* Retrieved from http://www.cdc.gov/statesystem/

Federal Trade Commission. (2015a). *Federal Trade Commission Cigarette Report for 2012.* Retrieved from https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2012/150327-2012cigaretterpt.pdf

Federal Trade Commission. (2015b). *Federal Trade Commission Smokeless Tobacco Report for 2012.* Retrieved from https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-smokeless-tobacco-report-2012/150327-2012smokelesstobaccorpt.pdf

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana State Department of Health, Epidemiology Resource Center. (2015). *Indiana natality report, state and county data, 2013 (Table 20).* Retrieved from http://www.in.gov/isdh/19095.htm

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2014). *Health effects of secondhand smoke.* Retrieved from http://www.in.gov/isdh/tpc/files/Health_Effects_of_Secondhand_Smoke_12_29_2014.pdf

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015a). *Electronic cigarettes.* Retrieved from http://www.in.gov/isdh/tpc/files/Electronic_Cigarettes__12_9_2015.pdf

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015b). *Indiana adult smoking.* Retrieved from http://www.in.gov/isdh/tpc/files/IN_Adult_Smoking_October_2015.pdf

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015c). *Indiana Youth Tobacco Survey, 2000-2014.* Data received on October 23, 2015, from the Indiana State Department of Health.

Indiana State Department of Health, Tobacco Prevention and Cessation Commission. (2015d). *The state of tobacco control.* Data received on February 19, 2015, from the Indiana State Department of Health.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

U.S. Department of Health and Human Services. (2014). *The Health Consequences of Smoking -- 50 years of progress: A Report of the Surgeon General.* Atlanta, GA.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health.

World Health Organization. (2015). *WHO global report on trends in tobacco smoking 2000-2025.* Retrieved from http://www.who.int/tobacco/publications/surveillance/reportontrendstobaccosmoking/en/

Zollinger, T., Saywell, R., Lewis, C. *Estimating the economic impact of secondhand smoke on Indiana in 2010.* Bowen Research Center – Indiana University School of Medicine, January 2012.

MARIJUANA USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

MARIJUANA CONSUMPTION

Marijuana comes from the hemp plant, known as Cannabis sativa, in the form of dried leaves, stems, seeds, and flowers, which all contain delta-9-tetrahydrocannabinol (THC) as the primary psychoactive (mind-altering) chemical. Marijuana is consumed in different ways such as "joints," which are cigarettes rolled by hand, and water pipes (Hall & Solowij, 1998). It can be smoked in "blunts," which are cigars that have been emptied of tobacco and refilled with marijuana. Also, marijuana can be mixed into foods or brewed as tea (National Institute on Drug Abuse (NIDA), 2015). Recent studies show an increased frequency in the consumption of marijuana as an edible, especially in states where medical marijuana is allowed (NIDA, 2014).

General Consumption Patterns

Marijuana is the most commonly used illicit drug in the United States (Bolla, Brown, Eldreth, Tate, & Cadet, 2002). According to results from the 2013–2014 National Survey on Drug Use and Health (NSDUH), an estimated 7.5% (95% Confidence Interval [CI]: 6.3–8.9) of Indiana residents aged 12 and older reported current (past-month) marijuana use (U.S.: 8.0%; 95% CI: 7.7–8.2). The number of reported past-year users was higher, estimated at 12.9% (95% CI: 11.3–14.7) in Indiana (U.S.: 12.9%; 95% CI: 12.6–13.2) (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014).

Examining the trend data, it appears that Indiana's prevalence of current marijuana use has risen from 4.4% in 2000 to 7.5% in 2014; however, this increase was statistically not significant (see Figure 5.1). During this period, reported marijuana use patterns in Indiana and the United States were similar (SAMHSA, 2014).

Figure 5.1 Percentage of Indiana and U.S. Population (Ages 12 and Older) Reporting Current Marijuana Use (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	4.4%	3.9%	6.4%	6.1%	5.6%	5.1%	5.5%	6.0%	6.3%	6.1%	6.1%	6.5%	6.2%	6.3%	7.5%
U.S.	4.8%	5.1%	6.2%	6.2%	6.1%	6.0%	6.0%	5.9%	6.0%	6.4%	6.8%	6.9%	7.1%	7.4%	8.0%
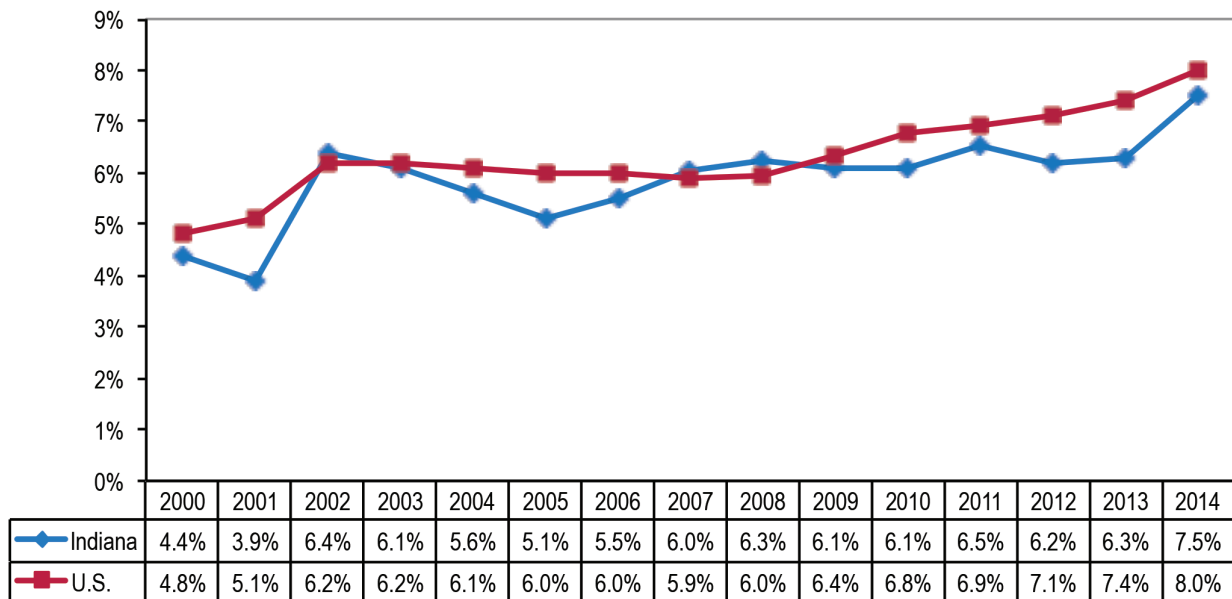
Source: SAMSHA, 2014

Adult Consumption Patterns

Patterns of marijuana use among adults were similar in Indiana and the United States. The 2014 NSDUH report showed that marijuana use was highest among individuals aged 18 to 25, with 20.3% (95% CI: 17.3–23.7) of Hoosiers in this age group reporting current use (U.S.: 19.3%; 95% CI: 18.8–19.9) and 35.6% (95% CI: 31.7–39.8) reporting past-year use (U.S.: 31.8; 95% CI: 31.1–32.5) (SAMHSA, 2014).

Among Indiana residents aged 26 and older, the rate for current marijuana use was 5.4% (95% CI: 4.2–6.9), similar to the U.S. rate of 6.1% (95% CI: 5.9–6.4), Past-year use within this age group was 8.9% (95% CI: 7.2–10.9) in Indiana and 9.6% (95% CI: 9.3–10.0) in the nation (SAMSHA, 2014). See Figure 5.2 for Indiana current marijuana use rates by age group.

Figure 5.2 Percentage of Indiana Residents Reporting Current Marijuana Use, by Age Group (National Survey on Drug Use and Health, 2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
12-17	7.5%	7.2%	7.6%	7.4%	7.6%	6.5%	6.2%	7.4%	7.6%	7.2%	6.7%	6.5%	6.2%	6.0%	6.5%
18-25	12.3%	11.4%	18.3%	17.2%	14.7%	14.4%	15.6%	16.2%	16.9%	16.5%	17.5%	18.2%	16.8%	17.7%	20.3%
26 and older	2.7%	2.2%	4.0%	3.9%	3.6%	3.2%	3.6%	4.1%	4.3%	4.2%	4.1%	4.4%	4.3%	4.3%	5.4%
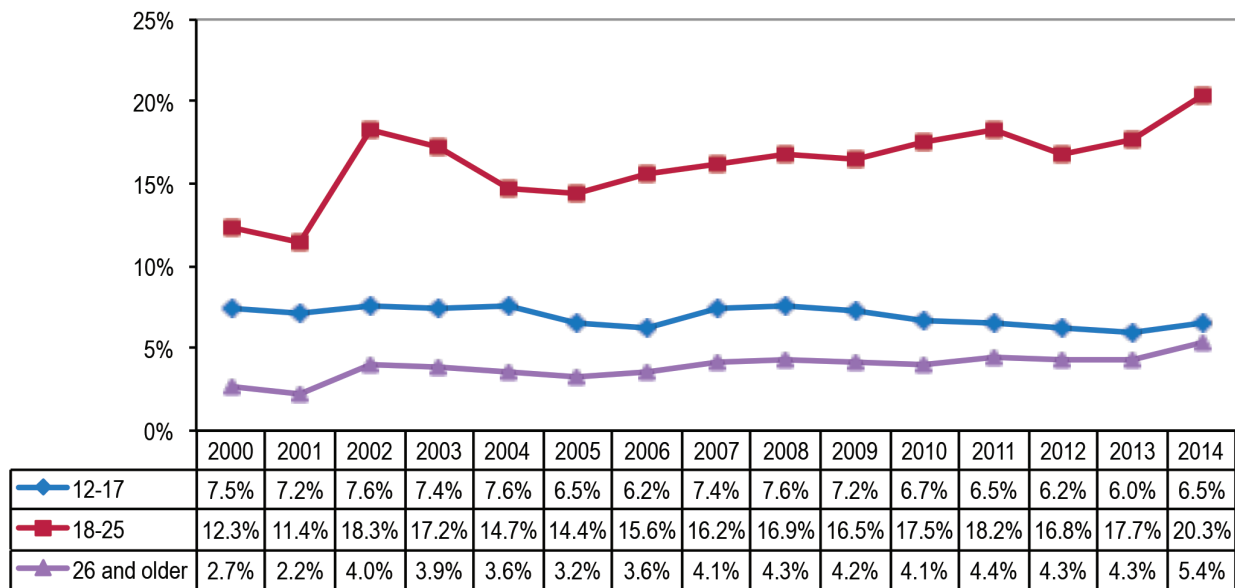
Source: SAMSHA, 2014

Regarding initiation of use in Indiana, 9.3% (95% CI: 7.5–11.4) of 18- to 25-year-olds and 0.2% (95% CI: 0.2–0.3) of individuals 26 years and older reported first use of marijuana during the past year. These rates were statistically similar to the nation's, 7.7% (95% CI: 7.3–8.1) and 0.2% (95% CI: 0.2–0.3), respectively (SAMHSA, 2014).

Marijuana use is also prevalent among college students. In the United States, the percentage of current marijuana users who were college students reached its highest level in 27 years, in 2014 (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2015). Results from the 2015 Indiana College Substance Use Survey, based on eight participating colleges and universities, showed that 12.8% of Indiana college students (U.S.: 20.8%)

reported current marijuana use and 27.7% (U.S.: 34.4%) reported past-year use. Users were more likely to be male and attend a public institution of higher education (King & Jun, 2015).[1]

The Treatment Episode Data Set (TEDS) series collects information from clients at substance abuse treatment admission. TEDS data from 2000 through 2013 showed that the percentage of treatment episodes in which marijuana use was reported was significantly higher in Indiana compared to the rest of the United States (P < 0.001). Between 2000 and 2013, roughly one-half of Indiana treatment episodes and approximately one-third of U.S. treatment episodes indicated marijuana use at admission (see Figure 5.3).

[1]Eight Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

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Figure 5.3 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Use Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	48.4%	53.8%	54.5%	54.0%	52.6%	52.0%	53.1%	54.0%	55.0%	51.0%	46.0%	46.9%	47.2%	48.3%
U.S.	34.6%	35.3%	35.2%	35.5%	36.2%	36.6%	36.4%	36.0%	37.1%	38.0%	39.0%	38.2%	38.0%	37.3%
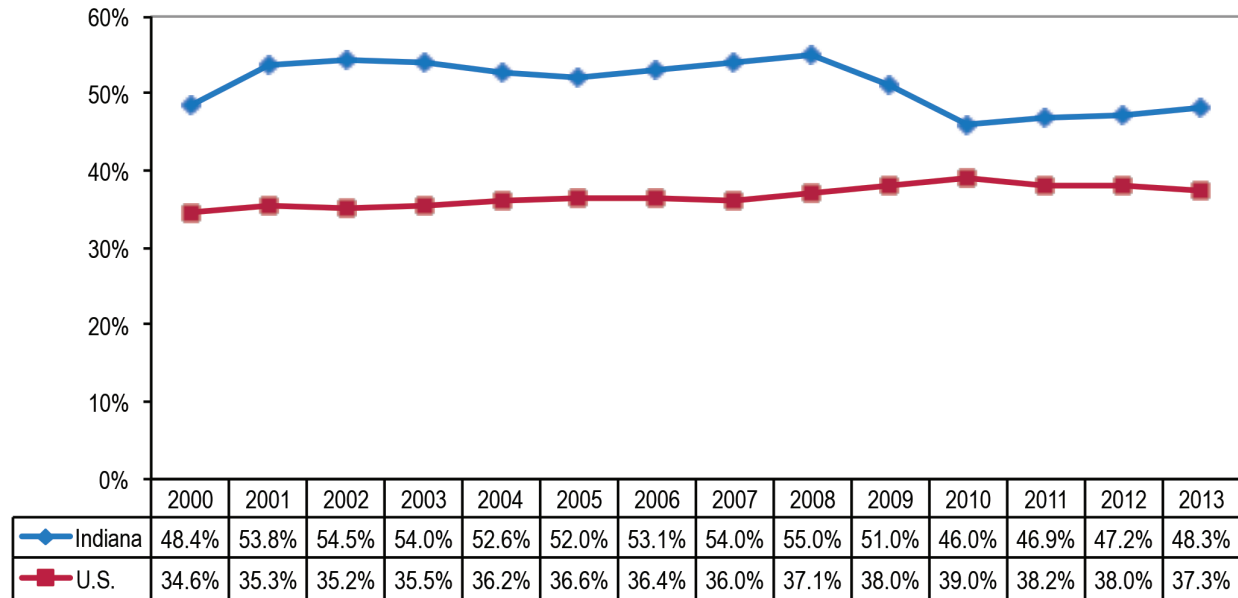
Source: SAMHSA, 2013

Statistically significant differences in marijuana use among Indiana's treatment population were observed by gender, race, and age ($P < 0.001$), as follows:

- Across the years, the percentage of males reporting marijuana use was higher than the percentage of females (see Figure 5.4).

- Since 2008, blacks had the highest percentage of reported marijuana use, compared to whites and other races (see Figure 5.5).

- Throughout the years, marijuana use in the treatment population was highest among adolescents and decreased with age. Of the Hoosiers in treatment in 2013, 85.8% who were under age of 18 reported marijuana use compared to 22.5% who were ages 55 and older (see Figure 5.6).

For county-level information on marijuana use, see Appendix 5A, page 90 (Indiana Family and Social Services Administration, 2015).

Figure 5.4 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	50.8%	56.4%	56.8%	56.5%	54.9%	54.1%	55.5%	56.7%	57.7%	53.5%	48.3%	49.2%	50.6%	52.4%
Female	43.4%	48.0%	49.5%	48.8%	48.1%	47.7%	48.4%	48.7%	49.5%	45.9%	41.8%	42.9%	41.5%	41.7%
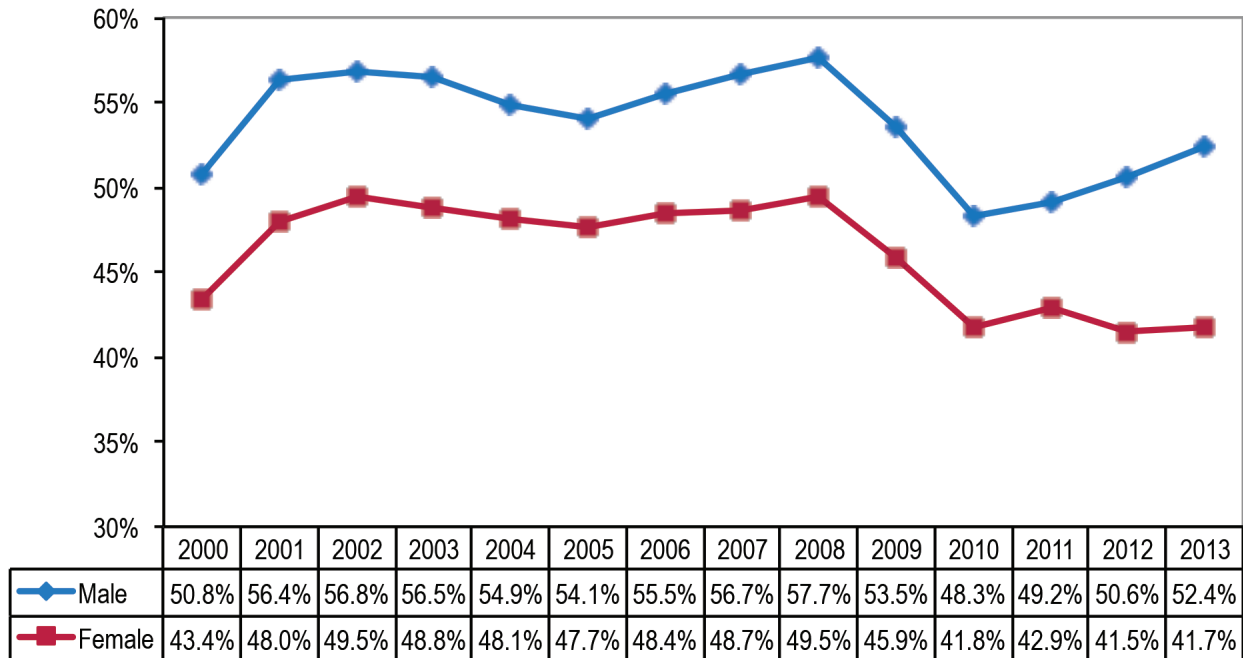
Source: SAMHSA, 2013

Figure 5.5 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	48.6%	56.2%	56.1%	56.7%	54.3%	52.0%	54.2%	56.6%	60.6%	58.8%	57.6%	55.8%	54.0%	57.6%
White	49.4%	53.4%	54.6%	53.9%	52.7%	52.7%	53.2%	53.3%	53.9%	49.6%	43.8%	45.4%	45.7%	46.4%
Other	36.1%	49.9%	44.5%	45.6%	46.1%	46.2%	49.4%	58.6%	54.9%	51.5%	50.7%	49.7%	52.9%	54.2%

Source: SAMHSA, 2013

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Figure 5.6 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
under 18	86.0%	88.8%	89.1%	89.9%	86.7%	85.9%	83.8%	83.3%	85.8%	82.0%	62.4%	71.9%	75.6%	85.8%
18 to 24	69.5%	72.7%	73.1%	72.2%	69.6%	68.9%	70.0%	69.7%	70.7%	66.3%	60.1%	60.4%	62.7%	64.2%
25 to 34	52.4%	57.5%	57.1%	56.4%	55.3%	55.2%	56.2%	57.0%	57.3%	53.9%	48.9%	49.1%	48.0%	48.5%
35 to 44	37.8%	41.0%	41.0%	41.5%	41.0%	40.8%	42.4%	44.0%	44.0%	41.5%	38.2%	38.9%	39.2%	39.6%
45 to 54	24.9%	27.7%	29.9%	29.7%	31.0%	32.1%	34.1%	35.1%	34.2%	30.3%	29.3%	32.2%	32.1%	32.2%
55 and over	12.7%	11.3%	11.7%	10.9%	14.3%	13.5%	19.2%	18.3%	20.0%	18.3%	16.5%	20.1%	21.3%	22.5%
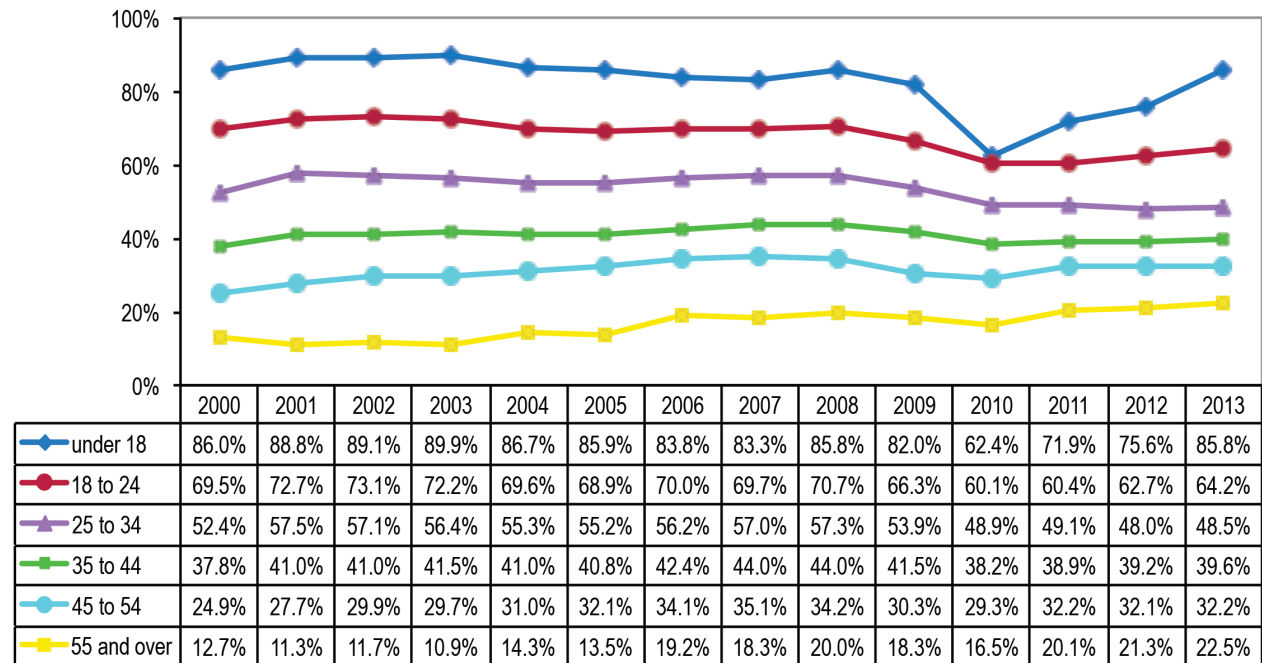
Source: SAMHSA, 2013

Youth Consumption Patterns

According to 2013 NSDUH findings, the rate of first time marijuana use for 12- to 17-year-olds in Indiana was 5.3% (95% CI: 4.4-6.3), which was similar to the national rate of 5.8% (95% CI: 5.5–6.0). About 12% (12.1%; 95% CI: 10.1–14.5) of youth in that age group reported past-year marijuana use (U.S.: 13.5%; 95% CI: 13.1–13.9). Patterns of current marijuana use among Indiana youth mirrored national rates and remained stable from 2000 to 2013 (see Figure 5.2) (SAMHSA, 2014).

Based on findings from the 2011 Youth Risk Behavior Surveillance System (YRBSS), 20.0% (95% CI: 17.8–22.4) of high school students (grades 9 through 12) reported current marijuana use; this was similar to the national rate of 23.1% (95% CI: 21.5–24.7) (Centers for Disease Control and Prevention (CDC), 2016). Prevalence has remained stable from 2003 levels when 22.1% (95% CI: 19.8–24.7) of Indiana students and 22.4% (95% CI: 20.2–24.6) of U.S. students indicated current use (see Figure 5.7).

In 2011, current use increased with grade level and was significantly lower among 9th graders compared to students in grades 11 and 12. Current use was significantly higher for male (23.4%; 95% CI: 19.9–27.3) than female (16.4%; 95% CI: 14.0–19.2) high school students in Indiana. Black students reported significantly higher current use (32.1%; 95% CI: 25.7–39.3) than white students (17.7%; 95% CI: 15.5–20.1) (see Table 5.1) (CDC, 2016).

Figure 5.7 Percentage of Indiana and U.S. High School Students Currently Using Marijuana (Youth Risk Behavior Surveillance System, 2003–2011)

	2003	2005	2007	2009	2011	2013
Indiana	22.1%	18.9%	18.9%	20.9%	20.0%	N/A
U.S.	22.4%	20.2%	19.7%	20.8%	23.1%	23.4%
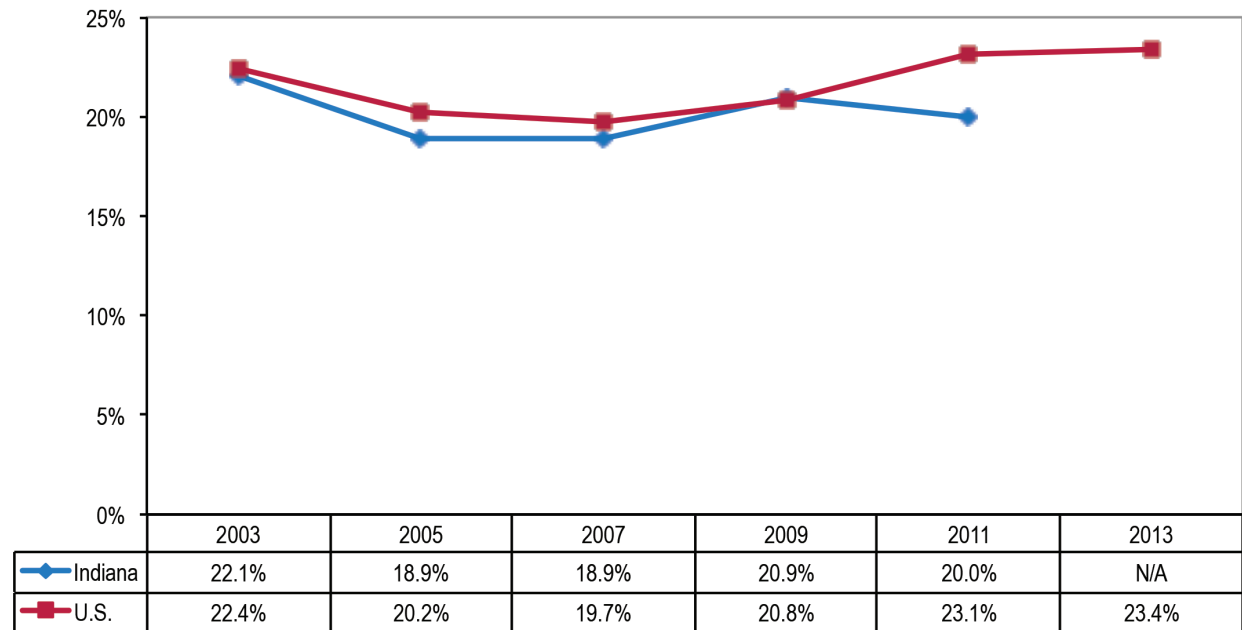
Source: CDC, 2016

Table 5.1 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, 2011)

		Indiana Prevalence Rate (95% CI)	U.S. Prevalence Rate (95% CI)
Grade	9th	12.2% (9.8–15.0)	18.0% (15.9–20.4)
	10th	20.6% (16.2–25.9)	21.6% (19.4–24.0)
	11th	24.6% (19.7–30.3)	25.5% (22.7–28.5)
	12th	23.8% (19.5–28.6)	28.0% (25.9–30.2)
Gender	Male	23.4% (19.9–27.3)	25.9% (23.9–28.0)
	Female	16.4% (14.0–19.2)	20.1% (18.2–22.1)
Race/Ethnicity	Black	32.1% (25.7–39.3)	25.1% (22.5–27.9)
	White	17.7% (15.5–20.1)	21.7% (19.6–24.0)
	Hispanic	21.5% (15.7–28.6)	24.4% (22.0–27.1)
Total		**20.0% (17.8–22.4)**	**23.1% (21.5–24.7)**

Source: CDC, 2016

Table 5.2 Percentage of Indiana and U.S. High School Students Reporting Marijuana Initiation Before Age 13, by Grade, Gender, and Race/Ethnicity (Youth Risk Behavior Surveillance System, 2011)

		Indiana Prevalence Rate (95% CI)	U.S. Prevalence Rate (95% CI)
Grade	9th	6.3% (4.3–9.1)	9.7% (8.3–11.3)
	10th	7.9% (6.0–10.4)	7.5% (6.3–8.9)
	11th	7.5% (4.4–12.5)	7.6% (6.4–9.1)
	12th	5.9% (2.8–12.2)	7.0% (5.8–8.5)
Gender	Male	8.1% (6.4–10.2)	10.4% (9.3–11.6)
	Female	5.8% (4.1–8.0)	5.7% (4.8–6.7)
Race/Ethnicity	Black	10.7% (5.9–18.7)	10.5% (8.8–12.6)
	White	5.8% (4.6–7.3)	6.5% (5.7–7.4)
	Hispanic	11.1% (7.3–16.5)	9.4% (7.9–11.2)
Total		**6.9% (5.6–8.6)**	**8.1% (7.3–9.0)**

Source: CDC, 2016

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Age at drug initiation is an important risk factor in the subsequent progression to substance abuse and dependence (King & Chassin, 2007). Researchers found that adolescents who used marijuana by the age of 17 were at greater risk to use other drugs and develop alcohol dependence and drug abuse/dependence (Lynskey, Heath, Bucholz, Slutske, Madden, Nelson, et al., 2003).

In 2011, 6.9% (95% CI: 5.6–8.6) of Indiana students reported that they had tried marijuana before the age of 13; that figure was similar at the national level (8.1%; 95% CI: 7.3–9.0).

No statistically significant differences in initiation of marijuana use before age 13 were observed by grade level, gender, or race/ethnicity in Indiana (see Table 5.2) (CDC, 2016).

Reported lifetime use of marijuana among Indiana high school students was 37.2% (95% CI: 33.5–41.1) in 2011 (see Figure 5.8). Prevalence rates did not differ by gender. Black students reported significantly higher lifetime use (54.5%; 95% CI: 45.8–63.0) than white students (33.9%; 95% CI: 30.0–38.1); the difference was not statistically significant between black students and Hispanic students (42.1%; 95% CI: 31.0–54.0). However, 9th grade students had a significantly lower rate than 11th and 12th graders (see Table 5.3). Lifetime prevalence decreased significantly among Indiana high school students from 2003 through 2011 (CDC, 2016).

Figure 5.8 Percentage of Indiana and U.S. High School Students Reporting Lifetime Marijuana Use (Youth Risk Behavior Surveillance System, 2003–2011)

	2003	2005	2007	2009	2011
Indiana	43.4%	38.2%	37.8%	37.1%	37.2%
U.S.	40.2%	38.4%	38.1%	36.8%	39.9%
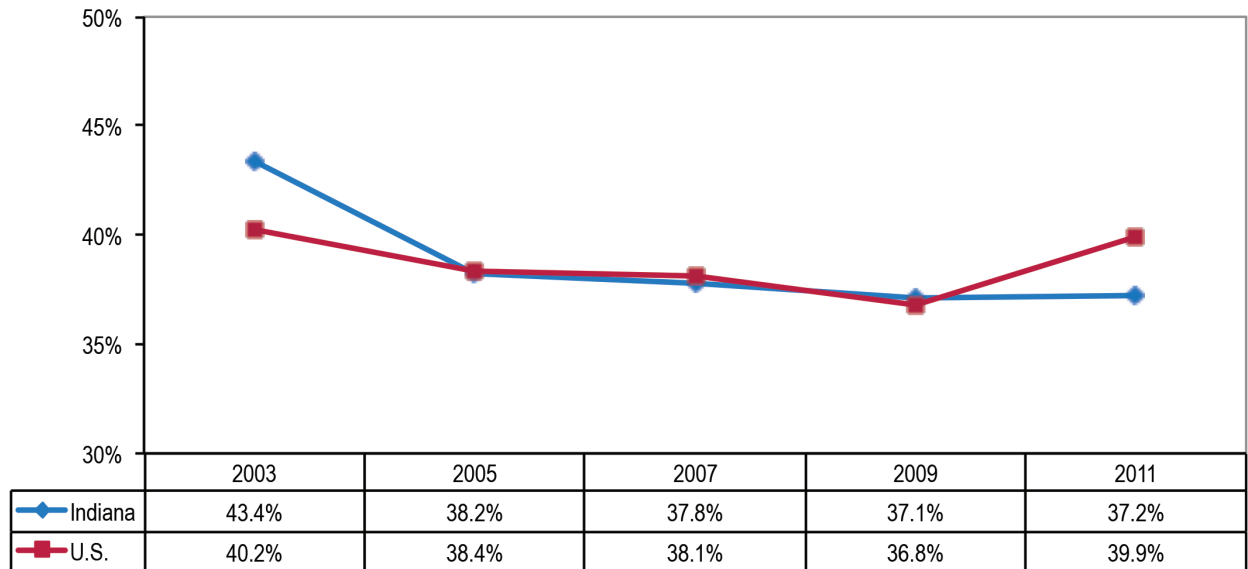
Source: CDC, 2016

Table 5.3   Percentage of Indiana and U.S. High School Students Reporting Lifetime Marijuana Use, by Grade, Gender, and Race/Ethnicity (Youth Risk Behavior Surveillance System, 2011)

		Indiana Prevalence Rate (95% CI)	U.S. Prevalence Rate (95% CI)
Grade	9th	23.8% (19.7–28.5)	30.8% (28.0–33.7)
	10th	35.1% (30.1–40.4)	36.4% (33.4–39.5)
	11th	44.3% (36.2–52.8)	45.5% (42.1–48.9)
	12th	47.7% (41.1–54.4)	48.9% (45.7–52.1)
Gender	Male	41.0% (35.9–46.3)	42.5% (39.8–45.2)
	Female	33.3% (29.4–37.4)	37.2% (34.7–39.7)
Race/Ethnicity	Black	54.5% (45.8–63.0)	43.0% (38.9–47.3)
	White	33.9% (30.0–38.1)	37.9% (35.3–40.6)
	Hispanic	42.1% (31.0–54.0)	42.1% (39.2–45.0)
Total		**37.2% (33.5–41.1)**	**39.9% (37.8–42.1)**

Source: CDC, 2016

Results from the Indiana Youth Survey (Gassman, Jun, Samuel, Agley, King, & Lee,2015) and the Monitoring the Future (MTF) survey (Inter-university Consortium for Political and Social Research (ICPSR), 2015) show that marijuana use among 8th, 10th, and 12th grade students increased with grade level/age. Prevalence rates for current marijuana use seemed comparable between Indiana and the nation; however, due to lack of detail provided in the publicly available dataset, statistical significance could not be determined. For current marijuana use trends among 8th, 10th, and 12th grade students from 2002 through 2015, see Figure 5.9.

From the 2015 Indiana Youth Survey, the previously-used lifetime substance use prevalence question was eliminated. Consequently, lifetime substance use prevalence was derived by subtracting the "Never used" percentage from the total percentage of responses (100). From 2002 to 2015, lifetime use among students in grades 8, 10, and 12 seemed to have declined both nationally and in Indiana (see Figure 5.10). As a result of the data format, statistical significance of the differences could not be determined (Gassman, et al., 2015; ICPSR, 2015). For monthly marijuana use by Indiana region and grade level for 2015, see Appendix 5B, page 91.

Figure 5.9   Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use (Indiana Youth Survey and Monitoring the Future Survey, 2002–2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indiana 8th Grade	11.1%	10.6%	9.8%	9.3%	8.2%	8.3%	7.1%	7.8%	8.9%	8.3%	8.0%	7.1%	6.8%	7.1%
U.S. 8th Grade	8.3%	7.5%	6.4%	6.6%	6.5%	5.7%	5.8%	6.5%	8.0%	7.2%	6.5%	7.0%	6.5%	6.5%
Indiana 10th Grade	19.2%	18.2%	17.2%	16.0%	14.6%	14.4%	13.5%	14.6%	16.8%	16.4%	15.4%	13.7%	13.6%	14.0%
U.S. 10th Grade	17.8%	17.0%	15.9%	15.2%	14.2%	14.2%	13.8%	15.9%	16.7%	17.6%	17.0%	18.0%	16.6%	14.8%
Indiana 12th Grade	20.5%	19.8%	18.3%	17.8%	17.2%	15.8%	16.2%	16.7%	19.2%	19.8%	17.8%	17.6%	17.6%	18.8%
U.S. 12th Grade	21.5%	21.2%	19.9%	19.8%	18.3%	18.8%	19.4%	20.6%	21.4%	22.6%	22.9%	22.7%	21.2%	21.3%

Source: Gassman, et al., 2015; ICPSR, 2015

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Figure 5.10 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Use of Marijuana Once or More in Their Life, by Grade (Indiana Youth Survey and Monitoring the Future Survey, 2002–2015)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indiana 8th Grade	20.0%	19.1%	18.6%	17.6%	15.6%	16.1%	14.4%	15.0%	15.3%	14.6%	14.6%	13.1%	12.7%	10.0%
U.S. 8th Grade	19.2%	17.5%	16.3%	16.5%	15.7%	14.2%	14.6%	15.7%	17.3%	16.4%	15.2%	16.5%	15.6%	15.5%
Indiana 10th Grade	36.9%	34.8%	33.5%	31.6%	30.1%	29.9%	28.3%	29.1%	30.9%	30.3%	29.4%	26.5%	26.6%	21.4%
U.S. 10th Grade	38.7%	36.4%	35.1%	34.1%	31.8%	31.0%	29.9%	32.3%	33.4%	34.5%	33.8%	35.8%	33.7%	31.1%
Indiana 12th Grade	44.8%	42.3%	40.5%	40.1%	37.1%	36.5%	36.5%	36.8%	38.6%	38.6%	37.5%	36.0%	37.4%	31.1%
U.S. 12th Grade	47.8%	46.1%	45.7%	44.8%	42.3%	41.8%	42.6%	42.0%	43.8%	45.5%	45.2%	45.5%	44.4%	44.7%

Source: Gassman, et al., 2015; ICPSR, 2015

CONSEQUENCES OF MARIJUANA USE

Health-Related Consequences

Marijuana use can produce adverse physical, mental, emotional, and behavioral changes. Short-term effects include memory impairment and learning problems, distorted perception, difficulty thinking and solving problems, loss of coordination, and increased heart rate (Crean, Crane, & Mason, 2011; Volkow, Baler, Compton, & Weiss, 2014). Other harmful effects of long-term use include respiratory illnesses and an increased risk of heart attack and cancer (Volkow, Baler, Compton, & Weiss, 2014; Thomas, Kloner, & Rezkalla, 2014). Also, associations have been found between prolonged marijuana use and mental health problems such as depression, anxiety, suicidal thoughts, and personality disturbances (Patton et al., 2002; Caspi et al., 2005).

Babies born to women who used marijuana during their pregnancy may be at an increased risk for neurobehavioral problems, potentially exhibiting problems with attention, memory, and problem solving (NIDA, 2015).

Marijuana Dependence

The Treatment Episode Data Set (TEDS) series indicates that at least for the past ten years, marijuana dependence[2]

was more of a problem among the treatment population in Indiana than in other parts of the nation. In 2013, marijuana dependence was indicated in 21.5% of Indiana's treatment episodes. This number was significantly higher than the national percentage (16.7%) ($P < 0.001$) (see Figure 5.11) (SAMHSA, 2013).

Based on 2013 TEDS findings, significant differences for marijuana dependence in Indiana were observed by gender, age, and race:

- More males (24.4%) than females (16.8%) reported marijuana dependency ($P < 0.001$) (see Figure 5.12).
- More blacks (36.4%) reported marijuana dependency than whites (18.5%) or persons from other races (27.7%) ($P < 0.001$) (see Figure 5.13).
- The percentage of adolescents (under age 18) reporting marijuana dependency was higher than any other age group ($P < 0.001$) (see Figure 5.14) (SAMHSA, 2013).

For county-level information on marijuana dependence, see Appendix 5A, page 90.

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[2]We defined marijuana dependence as "individuals in substance abuse treatment listing marijuana as their primary substance at admission."

Figure 5.11 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	20.4%	24.8%	24.7%	24.7%	24.6%	23.8%	24.1%	23.8%	24.7%	23.0%	21.4%	20.9%	20.1%	21.5%
U.S.	14.1%	15.0%	15.0%	15.4%	15.7%	15.8%	15.9%	15.7%	16.9%	18.0%	18.4%	18.0%	17.4%	16.7%
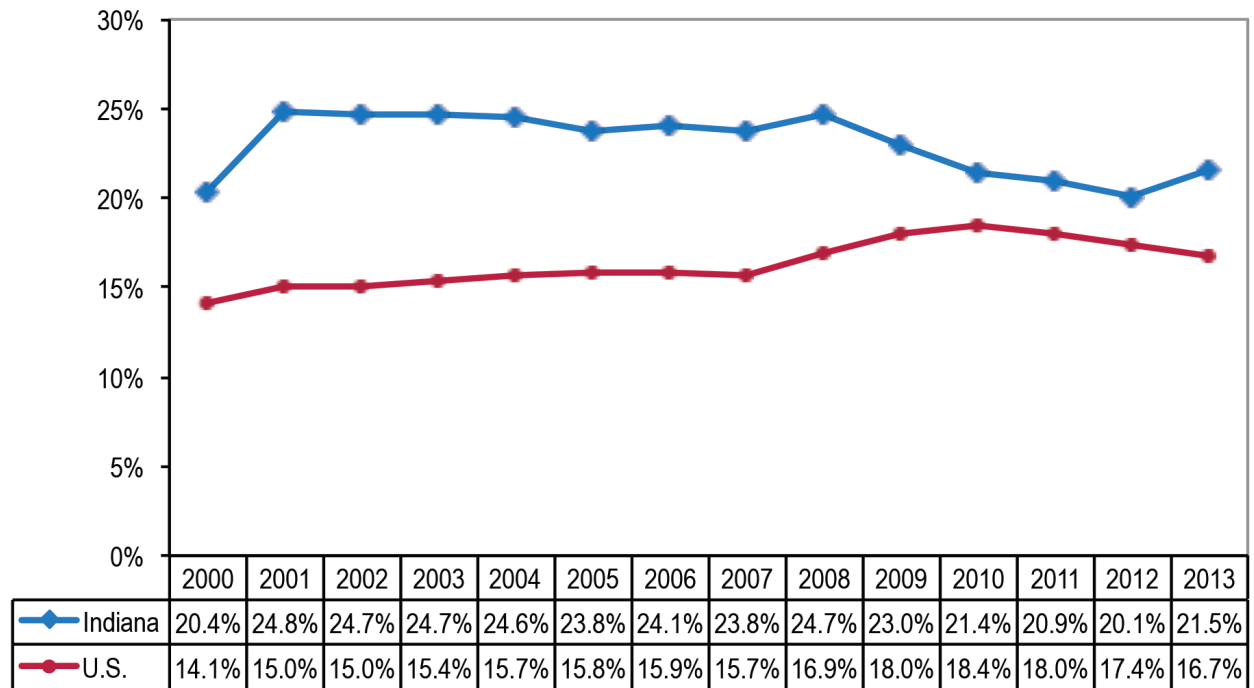
Source: SAMHSA, 2013

Figure 5.12 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	22.1%	27.0%	26.5%	26.2%	26.1%	25.0%	25.4%	25.4%	26.4%	24.2%	22.8%	22.7%	22.5%	24.4%
Female	16.6%	19.9%	21.0%	21.6%	21.6%	21.2%	21.6%	20.6%	21.1%	20.6%	19.0%	17.6%	16.1%	16.8%

Source: SAMHSA, 2013

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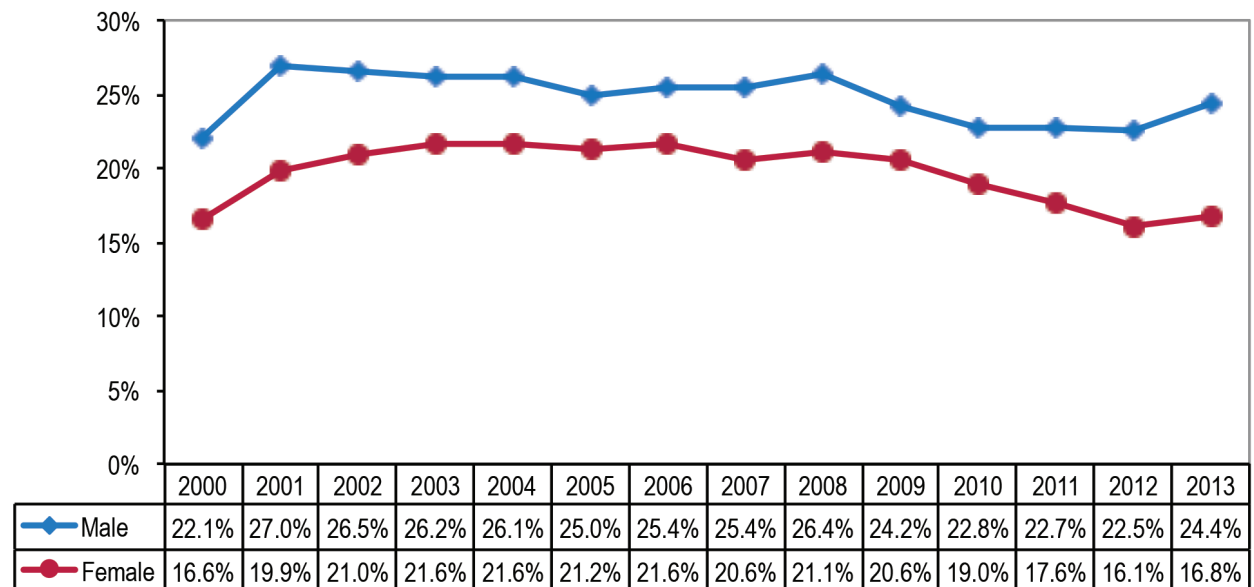
Figure 5.13 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	20.3%	27.8%	29.0%	29.7%	30.8%	28.4%	29.8%	30.2%	35.0%	33.7%	34.4%	32.9%	29.8%	36.4%
White	20.7%	24.0%	23.8%	23.8%	23.3%	23.3%	23.1%	22.2%	22.4%	20.9%	18.9%	18.7%	18.1%	18.5%
Other	15.6%	24.4%	23.6%	23.0%	23.6%	22.1%	20.9%	28.8%	27.0%	22.9%	26.0%	24.7%	24.6%	27.7%
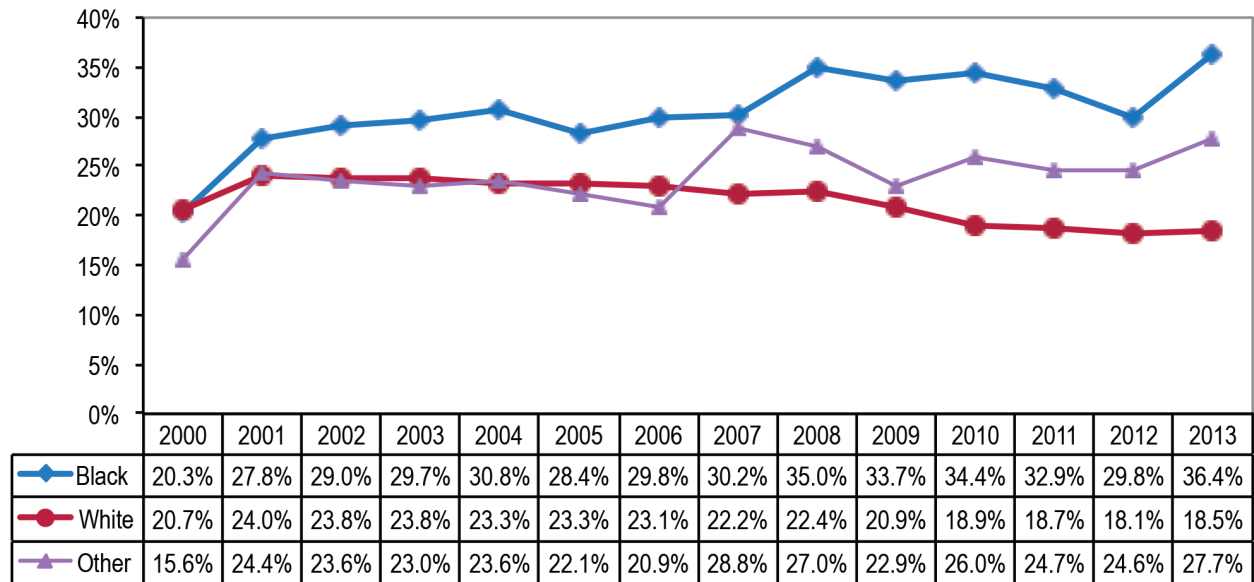
Source: SAMHSA, 2013

Figure 5.14 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2013)
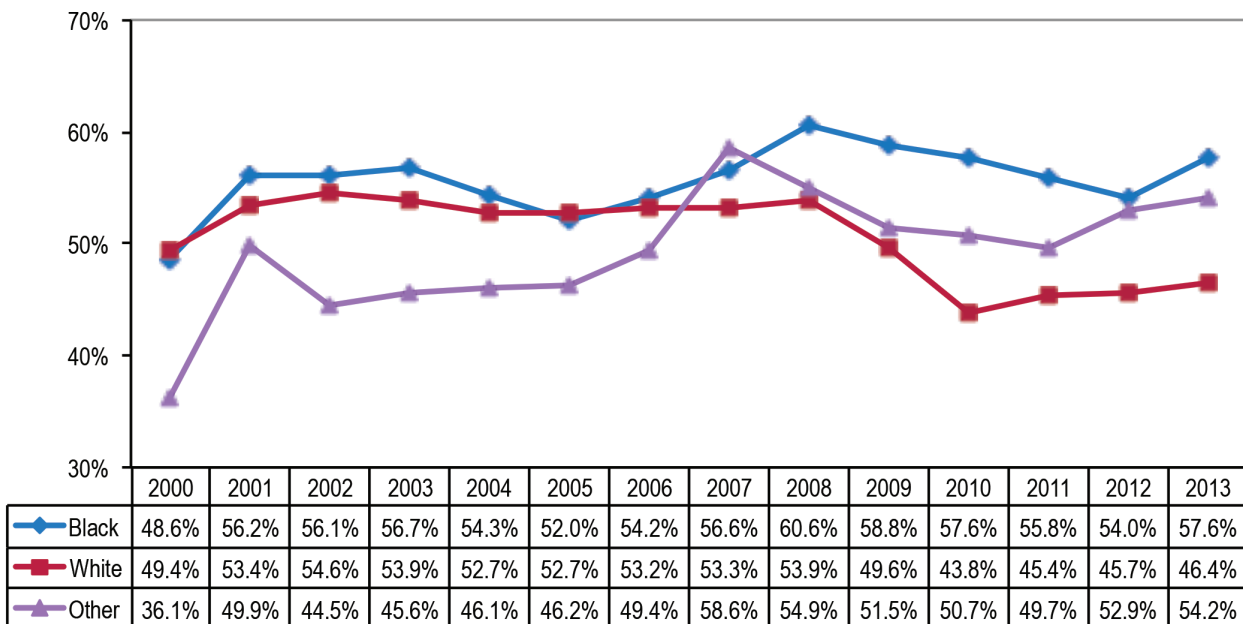
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
under 18	71.7%	73.2%	74.1%	74.0%	71.6%	66.4%	64.1%	63.3%	68.8%	70.3%	51.8%	56.2%	59.7%	69.6%
18 to 24	38.6%	41.4%	40.1%	40.4%	39.1%	37.9%	39.3%	37.6%	38.4%	35.7%	34.3%	33.0%	32.0%	34.0%
25 to 34	19.6%	23.7%	22.8%	23.2%	24.1%	24.4%	24.4%	24.3%	23.7%	22.8%	20.9%	20.2%	19.3%	19.1%
35 to 44	9.4%	11.1%	11.5%	11.8%	12.0%	12.5%	13.2%	13.0%	13.7%	12.6%	13.6%	13.1%	12.3%	13.5%
45 to 54	4.4%	6.1%	6.5%	7.2%	8.6%	8.7%	8.7%	8.5%	8.0%	8.0%	7.6%	8.7%	8.0%	9.4%
55 and over	2.1%	2.7%	3.6%	2.6%	3.1%	4.2%	5.2%	4.5%	4.5%	3.9%	4.0%	6.6%	5.8%	6.2%
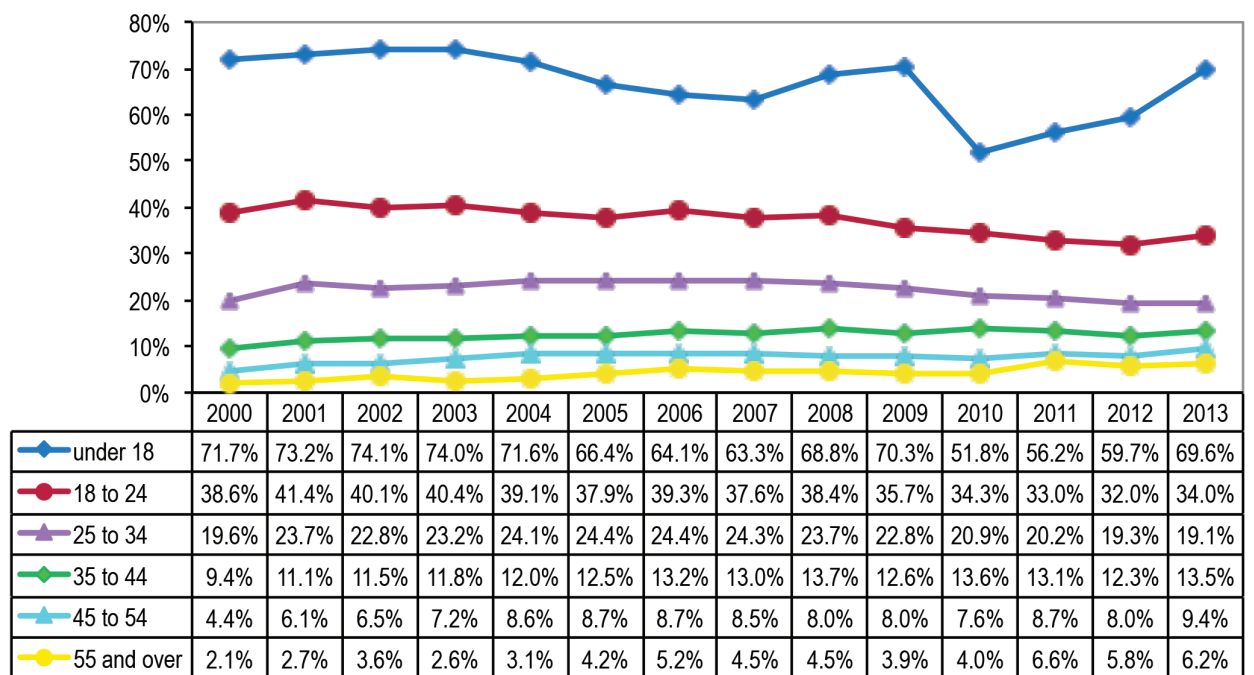
Source: SAMHSA, 2013

Criminal Consequences

The Uniform Crime Reporting (UCR) program collects drug violation arrest data nationwide (Federal Bureau of Investigation (FBI), 2012). According to 2012 results, more than 11,000 arrests were made in Indiana for the possession of marijuana. This represents an arrest rate of 1.7 (95% CI: 1.7–1.8) per 1,000 population (U.S.: 1.9 per 1,000; 95% CI: 1.9–1.9). Additionally, more than 1,800 Hoosiers were arrested for selling marijuana. Indiana's arrest rate for sale of the substance was 0.3 per 1,000 population (95% CI: 0.3–0.3), statistically higher than the national rate of 0.2 per 1,000 population (95% CI: 0.2–0.2) (see Figures 5.15 and 5.16).

Maps 5.1 and 5.2 (pages 94 and 95) and Appendix 5C (pages 92-93) depict the distribution by county of 2012 arrest rates (per 1,000 population) due to marijuana possession and dealing (sale/manufacture) based on UCR data. While geographic/regional arrest patterns are not immediately apparent, these data demonstrate that most counties' arrest rates for possession exceed those for dealing. Caution should be exercised when interpreting these data due to variations in reporting procedures. In Indiana, reporting coverage by county and local law enforcement jurisdictions is sometimes incomplete; therefore, a portion of these data are based on estimates. For further details, see the discussion of UCR data in Chapter 2, Methods.

Figure 5.15 Number of Indiana Arrests for Marijuana Possession and Sale/Manufacture (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Possession	14,608	14,484	13,945	12,670	13,511	14,431	15,358	16,373	14,493	13,797	14,432	14,552	13,702	11,385
Sales	1,608	1,806	1,744	1,655	2,086	2,124	2,053	2,082	1,904	2,106	2,297	2,324	2,241	1,839
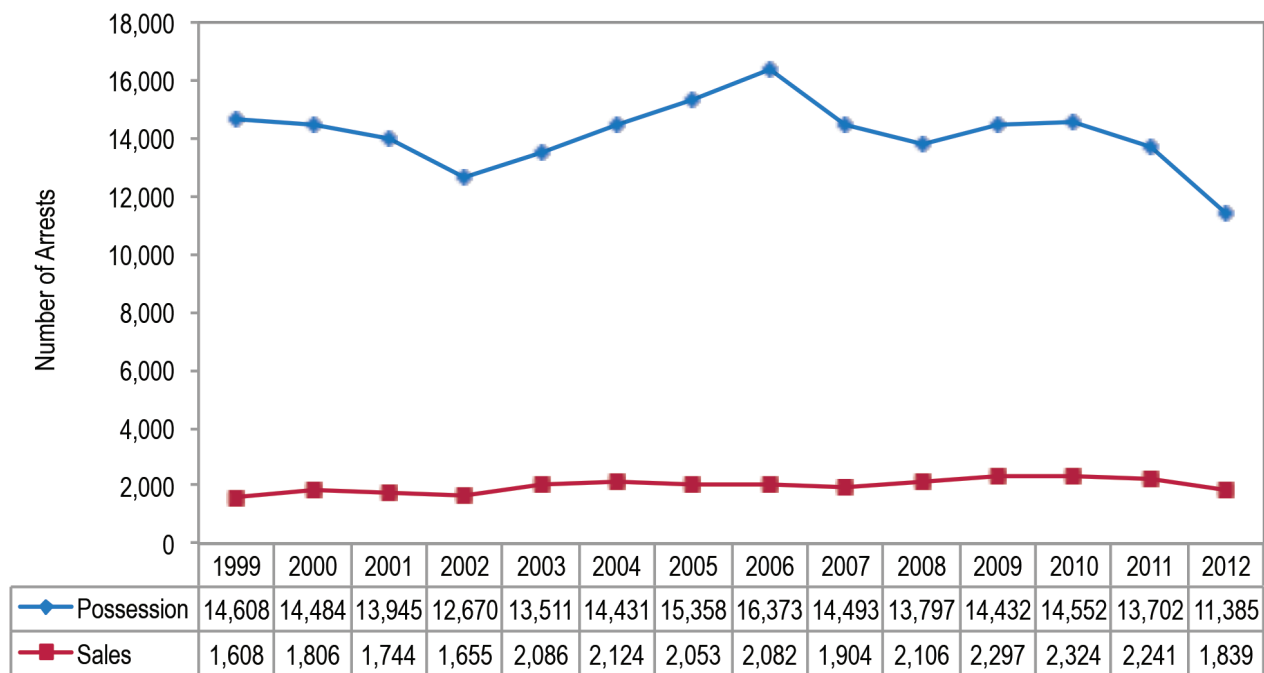
Source: FBI, 2012

Figure 5.16 Indiana and U.S. Arrest Rates for Marijuana Possession and Sale/Manufacture per 1,000 Population (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana Possession	2.5	2.4	2.3	2.1	2.2	2.3	2.4	2.6	2.3	2.2	2.2	2.2	2.1	1.7
U.S. Possession	2.1	2.2	2.0	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.2	2.2	2.2	1.9
Indiana Sales	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3
U.S. Sales	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
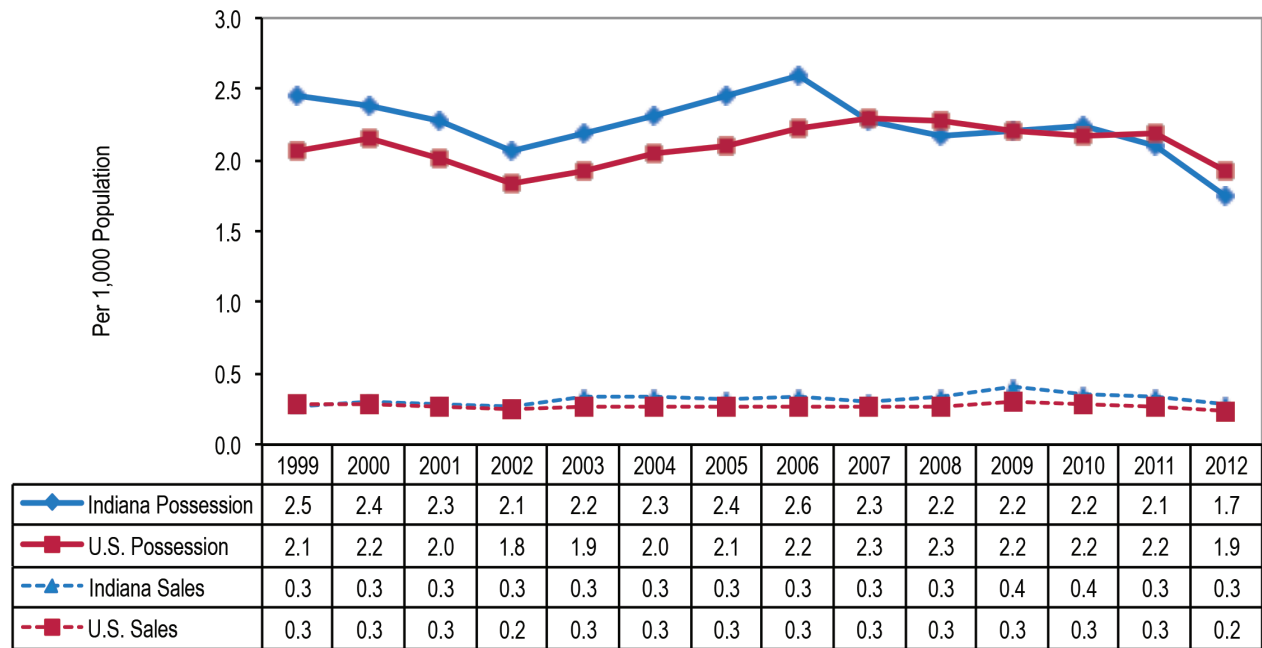
Source: FBI, 2012

Number of Treatment Episodes with Marijuana Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Treatment Episodes Total	Marijuana Use Number	Marijuana Use %	Marijuana Dependence Number	Marijuana Dependence %	County	Treatment Episodes Total	Marijuana Use Number	Marijuana Use %	Marijuana Dependence Number	Marijuana Dependence %
Adams	176	128	72.7%	56	31.8%	Madison	1,193	602	50.5%	347	29.1%
Allen	1,715	1,114	65.0%	541	31.5%	Marion	4,457	2,024	45.4%	1,027	23.0%
Bartholomew	577	307	53.2%	75	13.0%	Marshall	190	104	54.7%	52	27.4%
Benton	49	38	77.6%	15	30.6%	Martin	46	20	43.5%	10	21.7%
Blackford	76	33	43.4%	13	17.1%	Miami	268	145	54.1%	60	22.4%
Boone	191	73	38.2%	43	22.5%	Monroe	1,214	587	48.4%	233	19.2%
Brown	107	49	45.8%	19	17.8%	Montgomery	341	212	62.2%	102	29.9%
Carroll	107	64	59.8%	32	29.9%	Morgan	469	224	47.8%	101	21.5%
Cass	235	132	56.2%	44	18.7%	Newton	40	20	50.0%	<5	N/A
Clark	408	58	14.2%	50	12.3%	Noble	235	147	62.6%	52	22.1%
Clay	185	77	41.6%	41	22.2%	Ohio	33	17	51.5%	7	21.2%
Clinton	171	75	43.9%	31	18.1%	Orange	135	67	49.6%	17	12.6%
Crawford	37	21	56.8%	9	24.3%	Owen	184	95	51.6%	34	18.5%
Daviess	252	111	44.0%	50	19.8%	Parke	105	48	45.7%	24	22.9%
Dearborn	493	250	50.7%	79	16.0%	Perry	121	61	50.4%	21	17.4%
Decatur	199	95	47.7%	34	17.1%	Pike	38	18	47.4%	6	15.8%
DeKalb	274	157	57.3%	58	21.2%	Porter	679	274	40.4%	118	17.4%
Delaware	1,067	430	40.3%	173	16.2%	Posey	132	61	46.2%	26	19.7%
Dubois	277	147	53.1%	67	24.2%	Pulaski	122	56	45.9%	12	9.8%
Elkhart	672	353	52.5%	218	32.4%	Putnam	208	99	47.6%	57	27.4%
Fayette	223	95	42.6%	32	14.3%	Randolph	156	82	52.6%	31	19.9%
Floyd	171	13	7.6%	10	5.8%	Ripley	217	102	47.0%	33	15.2%
Fountain	43	27	62.8%	7	16.3%	Rush	143	83	58.0%	23	16.1%
Franklin	145	69	47.6%	19	13.1%	Saint Joseph	1,518	751	49.5%	380	25.0%
Fulton	160	88	55.0%	28	17.5%	Scott	144	26	18.1%	10	6.9%
Gibson	245	120	49.0%	47	19.2%	Shelby	142	62	43.7%	25	17.6%
Grant	526	334	63.5%	113	21.5%	Spencer	174	109	62.6%	43	24.7%
Greene	183	90	49.2%	38	20.8%	Starke	255	105	41.2%	31	12.2%
Hamilton	972	490	50.4%	240	24.7%	Steuben	262	141	53.8%	63	24.0%
Hancock	226	126	55.8%	60	26.5%	Sullivan	58	28	48.3%	7	12.1%
Harrison	31	<5	N/A	<5	N/A	Switzerland	69	28	40.6%	8	11.6%
Hendricks	346	150	43.4%	79	22.8%	Tippecanoe	461	259	56.2%	102	22.1%
Henry	347	145	41.8%	65	18.7%	Tipton	61	34	55.7%	14	23.0%
Howard	596	264	44.3%	77	12.9%	Union	31	20	64.5%	5	16.1%
Huntington	130	75	57.7%	32	24.6%	Vanderburgh	1,333	634	47.6%	306	23.0%
Jackson	347	163	47.0%	50	14.4%	Vermillion	128	57	44.5%	22	17.2%
Jasper	127	41	32.3%	10	7.9%	Vigo	652	367	56.3%	208	31.9%
Jay	159	93	58.5%	44	27.7%	Wabash	281	159	56.6%	61	21.7%
Jefferson	375	160	42.7%	61	16.3%	Warren	17	9	52.9%	<5	N/A
Jennings	265	114	43.0%	33	12.5%	Warrick	253	122	48.2%	43	17.0%
Johnson	237	122	51.5%	44	18.6%	Washington	98	13	13.3%	6	6.1%
Knox	273	108	39.6%	39	14.3%	Wayne	386	195	50.5%	63	16.3%
Kosciusko	309	173	56.0%	67	21.7%	Wells	119	78	65.5%	33	27.7%
LaGrange	166	96	57.8%	40	24.1%	White	133	76	57.1%	19	14.3%
Lake	2,344	1,002	42.7%	466	19.9%	Whitley	102	70	68.6%	19	18.6%
LaPorte	451	160	35.5%	61	13.5%	County Info Missing	61	24	39.3%	8	13.1%
Lawrence	467	199	42.6%	69	14.8%	**Indiana**	**34,596**	**16,746**	**48.4%**	**7,354**	**21.3%**

Note: We defined marijuana dependence as "individuals in substance abuse treatment listing marijuana as their primary substance at admission."

We calculated the percentages by dividing the number of reported marijuana use/dependence by the number of treatment episodes.

Information on treatment episodes <5 was suppressed due to confidentiality constraints.

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 5B

Percentage of Indiana Students Reporting Monthly Marijuana Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	1.3	0.9	1.3	2.2*	0.5	2.2*	1.7	0.5*	0.8*
7th Grade	3.3	3.6	3.5	4.2	2.8	4.6*	4.0	1.4*	2.6
8th Grade	7.1	8.9*	8.2	9.7*	4.8*	6.4*	9.4*	4.1*	6.7
9th Grade	9.9	10.5	12.4*	10.3	6.4*	8.8*	14.5*	7.4*	8.4*
10th Grade	14.0	18.1*	12.1*	17.5*	11.8*	13.5*	16.3	12.6*	13.4*
11th Grade	16.6	19.0	19.8	17.0	16.0	17.8	17.8	12.6*	13.4*
12th Grade	18.8	25.1*	15.9*	21.4	16.6*	17.9*	21.1	14.8*	16.9*

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).

Source: Gassman, et al., 2015

APPENDIX 5C

Number and Rate, per 1,000 Population, of Arrests for Marijuana Possession and Sale/Manufacture in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	40	1.2	5	*0.1
Allen	578	1.6	31	0.1
Bartholomew	152	2.0	16	*0.2
Benton	7	*0.8	1	*0.1
Blackford	21	1.7	1	*0.1
Boone	49	0.8	9	*0.2
Brown	12	*0.8	0	*0.0
Carroll	35	1.7	2	*0.1
Cass	59	1.5	9	*0.2
Clark	276	2.5	40	0.4
Clay	33	1.2	4	*0.1
Clinton	35	1.1	3	*0.1
Crawford	16	*1.5	5	*0.5
Daviess	65	2.0	3	*0.1
Dearborn	44	0.9	7	*0.1
Decatur	33	1.3	6	*0.2
DeKalb	50	1.2	17	*0.4
Delaware	157	1.3	2	*0.0
Dubois	43	1.0	3	*0.1
Elkhart	299	1.5	10	*0.0
Fayette	49	2.0	8	*0.3
Floyd	184	2.4	21	0.3
Fountain	25	1.4	7	*0.4
Franklin	1	*0.0	13	*0.6
Fulton	41	2.0	4	*0.2
Gibson	46	1.4	2	*0.1
Grant	146	2.1	6	*0.1
Greene	42	1.3	3	*0.1
Hamilton	684	2.4	22	0.1
Hancock	124	1.7	17	*0.2
Harrison	13	*0.3	3	*0.1
Hendricks	334	2.3	26	0.2
Henry	11	*0.2	52	1.1
Howard	183	2.2	20	0.2
Huntington	40	1.1	1	*0.0
Jackson	131	3.0	11	*0.3
Jasper	30	0.9	22	0.7
Jay	66	3.1	4	*0.2
Jefferson	56	1.7	9	*0.3
Jennings	1	*0.0	24	0.8
Johnson	325	2.3	16	*0.1
Knox	56	1.4	51	1.3
Kosciusko	148	1.9	39	0.5
LaGrange	46	1.2	3	*0.1
Lake	1,134	2.3	436	0.9
LaPorte	250	2.2	89	0.8
Lawrence	63	1.4	4	*0.1
Madison	148	1.1	28	0.2
Marion	1,009	1.1	189	0.2

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County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	136	2.9	1	*0.0
Martin	14	*1.4	6	*0.6
Miami	13	*0.4	6	*0.2
Monroe	342	2.4	27	0.2
Montgomery	94	2.4	10	*0.3
Morgan	122	1.8	69	1.0
Newton	29	2.0	2	*0.1
Noble	88	1.8	10	*0.2
Ohio	6	*1.0	1	*0.2
Orange	33	1.6	10	*0.5
Owen	22	1.0	3	*0.1
Parke	49	2.8	3	*0.2
Perry	38	2.0	9	*0.5
Pike	18	*1.4	3	*0.2
Porter	394	2.4	22	0.1
Posey	31	1.2	2	*0.1
Pulaski	8	*0.6	2	*0.1
Putnam	48	1.3	13	*0.3
Randolph	33	1.3	2	*0.1
Ripley	28	0.9	3	*0.1
Rush	71	4.1	66	3.8
Saint Joseph	464	1.7	29	0.1
Scott	26	1.1	4	*0.2
Shelby	19	*0.4	3	*0.1
Spencer	24	1.1	3	*0.1
Starke	38	1.6	13	*0.6
Steuben	64	1.9	5	*0.1
Sullivan	16	*0.7	4	*0.2
Switzerland	12	*1.1	2	*0.2
Tippecanoe	481	2.7	55	0.3
Tipton	21	1.3	1	*0.1
Union	8	*1.1	1	*0.1
Vanderburgh	632	3.5	67	0.4
Vermillion	11	*0.7	3	*0.2
Vigo	164	1.5	16	*0.1
Wabash	47	1.4	11	*0.3
Warren	10	*1.2	1	*0.1
Warrick	111	1.8	18	*0.3
Washington	29	1.0	3	*0.1
Wayne	96	1.4	18	*0.3
Wells	14	*0.5	0	*0.0
White	52	2.1	4	*0.2
Whitley	39	1.2	4	*0.1
Indiana	**11,385**	**1.7**	**1,839**	**0.3**

* Rates based on arrest numbers lower than 20 are unreliable.
Source: FBI, 2012

Map 5.1 Marijuana Possession Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Rate
Lake	2.28
Porter	2.37
LaPorte	2.24
St. Joseph	1.73
Elkhart	1.49
LaGrange	1.23
Steuben	1.87
Starke	1.63
Marshall	2.88
Kosciusko	1.92
Noble	1.84
DeKalb	1.17
Newton	2.04
Jasper	0.89
Pulaski	0.6
Fulton	1.96
Whitley	1.16
Allen	1.61
White	2.1
Cass	1.51
Miami	0.35
Wabash	1.44
Huntington	1.07
Wells	0.5
Adams	1.16
Benton	0.79
Carroll	1.74
Howard	2.2
Grant	2.09
Blackford	1.68
Jay	3.07
Warren	1.18
Tippecanoe	2.74
Clinton	1.05
Tipton	1.33
Delaware	1.33
Randolph	1.26
Fountain	1.45
Montgomery	2.44
Boone	0.85
Hamilton	2.41
Madison	1.12
Henry	0.22
Wayne	1.39
Vermillion	0.68
Parke	2.83
Putnam	1.26
Hendricks	2.25
Marion	1.11
Hancock	1.69
Rush	4.09
Fayette	2.01
Union	1.06
Vigo	1.51
Clay	1.22
Owen	1.02
Morgan	1.75
Johnson	2.28
Shelby	0.43
Franklin	0.05
Decatur	1.27
Sullivan	0.75
Greene	1.27
Monroe	2.44
Brown	0.79
Bartholomew	1.96
Ripley	0.92
Dearborn	0.88
Jennings	0.04
Ohio	0.99
Jackson	3.04
Jefferson	1.73
Switzerland	1.13
Lawrence	1.36
Knox	1.45
Daviess	2.03
Martin	1.35
Washington	1.03
Scott	1.08
Orange	1.65
Clark	2.47
Pike	1.41
Dubois	1.02
Crawford	1.5
Floyd	2.45
Gibson	1.37
Harrison	0.33
Posey	1.2
Vanderburgh	3.49
Warrick	1.84
Spencer	1.14
Perry	1.96

Rate per 1,000

- 0.00 - 1.07
- 1.07 - 1.41
- 1.41 - 1.96
- > 1.96

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 5C (pages 92-93) for additional information.
Source: FBI, 2012

Map 5.2 Marijuana Sale/Manufacture Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)

Rate per 1,000	
	0.00 - 0.10
	0.10 - 0.17
	0.16 - 0.30
	> 0.30

County rates shown on map:

LaGrange 0.08, Steuben 0.15, St. Joseph 0.11, Elkhart 0.05, LaPorte 0.8, Porter 0.13, Lake 0.88, Noble 0.21, DeKalb 0.4, Marshall 0.02, Kosciusko 0.51, Starke 0.56, Whitley 0.12, Allen 0.09, Jasper 0.66, Pulaski 0.15, Fulton 0.19, Newton 0.14, Wabash 0.34, Huntington 0.03, Wells 0, Adams 0.15, White 0.16, Cass 0.23, Miami 0.16, Benton 0.11, Carroll 0.1, Grant 0.09, Blackford 0.08, Jay 0.19, Howard 0.24, Warren 0.12, Tippecanoe 0.31, Clinton 0.09, Tipton 0.06, Delaware 0.02, Randolph 0.08, Fountain 0.41, Montgomery 0.26, Boone 0.16, Hamilton 0.08, Madison 0.21, Vermillion 0.18, Henry 1.05, Wayne 0.26, Parke 0.17, Hendricks 0.18, Marion 0.21, Hancock 0.23, Putnam 0.34, Rush 3.81, Fayette 0.33, Union 0.13, Vigo 0.15, Clay 0.15, Owen 0.14, Morgan 0.99, Johnson 0.11, Shelby 0.07, Franklin 0.61, Monroe 0.19, Brown 0, Bartholomew 0.21, Decatur 0.23, Ripley 0.1, Dearborn 0.14, Sullivan 0.19, Greene 0.09, Jennings 0.85, Ohio 0.16, Jackson 0.26, Jefferson 0.28, Switzerland 0.19, Lawrence 0.09, Scott 0.17, Knox 1.32, Daviess 0.09, Martin 0.58, Washington 0.11, Orange 0.5, Clark 0.36, Pike 0.23, Dubois 0.07, Crawford 0.47, Floyd 0.28, Gibson 0.06, Harrison 0.08, Posey 0.08, Vanderburgh 0.37, Warrick 0.3, Spencer 0.14, Perry 0.46

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 5C (pages 92-93) for additional information.
Source: FBI, 2012

REFERENCES, CHAPTER 5

Bolla, K. I., Brown, K., Eldreth, D., Tate, K., & Cadet, J. L. (2002). Dose-related neurocognitive effects of marijuana use. *Neurology, 59*, 1337-1343.

Caspi, A., Moffitt, T. E,, Cannon, M., McClay, J., Murray, R., Harrington, H., … Craig, I. W. (2005). Moderation of the effect of adolescent-onset cannabis use on adult psychosis by a functional polymorphism in the catechol-O-methyltransferase gene: longitudinal evidence of a gene X environment interaction. *Biological Psychiatry, 57,* 1117-1127.

Centers for Disease Control and Prevention.(2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991–2013.* Retrieved from http://nccd.cdc.gov/youthonline

Crean, R. D., Crane, N.A., & Mason, B. J. (2011). An evidence based review of acute and long-term effects of cannabis use on executive cognitive functions. Journal of Addiction Medicine, 5, 1-8.

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Hall, W. & Solowij, N. (1998). Adverse effects of cannabis. *The Lancet, 352*, 1611-1616.

Indiana Family and Social Services Administration. (2015). *Substance abuse population by county/TEDS, 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

Johnston, L.D., O'Malley, P.M., Bachman, J.G., Schulenberg, J. E. & Miech, R.A. (2015). National survey results on drug use 1975-2014, volume 2: College students & adults ages 19-55. *Monitoring the Future, Institute for Social Research, The University of Michigan.* Retrieved from http://www.monitoringthefuture.org/pubs/monographs/mtf-overview2014.pdf

King, K. M. & Chassin, L. (2007). A prospective study of the effects of age of initiation of alcohol and drug use on young adult substance dependence. *Journal of Studies on Alcohol and Drugs, 68*, 256-265.

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Lynskey, M. T., Heath, A. C., Bucholz, K. K., Slutske, W. S., Madden, P. A., Nelson, E. C., … Martin, N. G. (2003). Escalation of drug use in early-onset cannabis users vs. co-twin controls. *Journal of the American Medical Association, 289,* 427-433.

National Institute on Drug Abuse. (2014). *Monitoring the Future Survey: Overview of findings 2014.* National Institutes of Health, United States Department of Health and Human Services. Retrieved from http://www.drugabuse.gov/related-topics/trends-statistics/monitoring-future/monitoring-future-survey-overview-findings-2014

National Institute on Drug Abuse. (2015). *DrugFacts: Marijuana.* National Institutes of Health, United States Department of Health and Human Services. Retrieved from http://www.drugabuse.gov/publications/drugfacts/marijuana

Patton, G. C., Coffey, C., Carlin, J. B., Degenhardt, L., Lynskey, M., & Hall, W. (2002). Cannabis use and mental health in young people: cohort study. *British Medical Journal, 325*, 1195-1198.

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

Volkow, N. D., Baler, R. D., Compton, W. M., & Weiss, S. R. B. (2014). Adverse health effects of marijuana use. *The New England Journal of Medicine, 370*, 2219-2227.

Cocaine Use in Indiana:
Consumption Patterns and Consequences

COCAINE CONSUMPTION

Cocaine is a highly addictive stimulant of natural origin made from the leaves of the coca plant. It can be snorted, smoked, or injected. When snorted, cocaine powder is inhaled through the nose where it is absorbed into the bloodstream through the nasal tissues resulting in a high that may last 15 to 30 minutes. When injected, a needle is used to release the drug directly into the bloodstream. Smoking involves inhaling cocaine vapor or smoke into the lungs where absorption into the bloodstream results in a high that may last 5 to 10 minutes (National Institute on Drug Abuse (NIDA), 2013). Due to the short duration of desired effects, individuals who use cocaine will often take the drug repeatedly in order to increase the duration and intensity of the high.

Crack is a form of cocaine that has not been neutralized by an acid to make hydrochloride salt. This form of cocaine comes in a rock crystal that is heated to produce vapors, which are smoked. The term "crack" refers to the crackling sound produced by the rock as it is heated (NIDA, 2013).

General Consumption Patterns

The National Survey on Drug Use and Health (NSDUH) provides national and state-level estimates of alcohol, tobacco, and other drug use (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014). According to 2013-2014 data, the most recent estimates available, 1.2% (95% Confidence Interval [CI]: 0.8-1.7) of Indiana's population ages 12 and older used cocaine in the past year, representing a rate similar to the nation's (1.7%; 95% CI: 1.6–1.8) (see Figure 6.1).

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, 2014)

	Total	12-17	18-25	26 and older
■ Indiana	1.2%	0.5%	3.8%	0.8%
■ U.S.	1.7%	0.6%	4.5%	1.3%
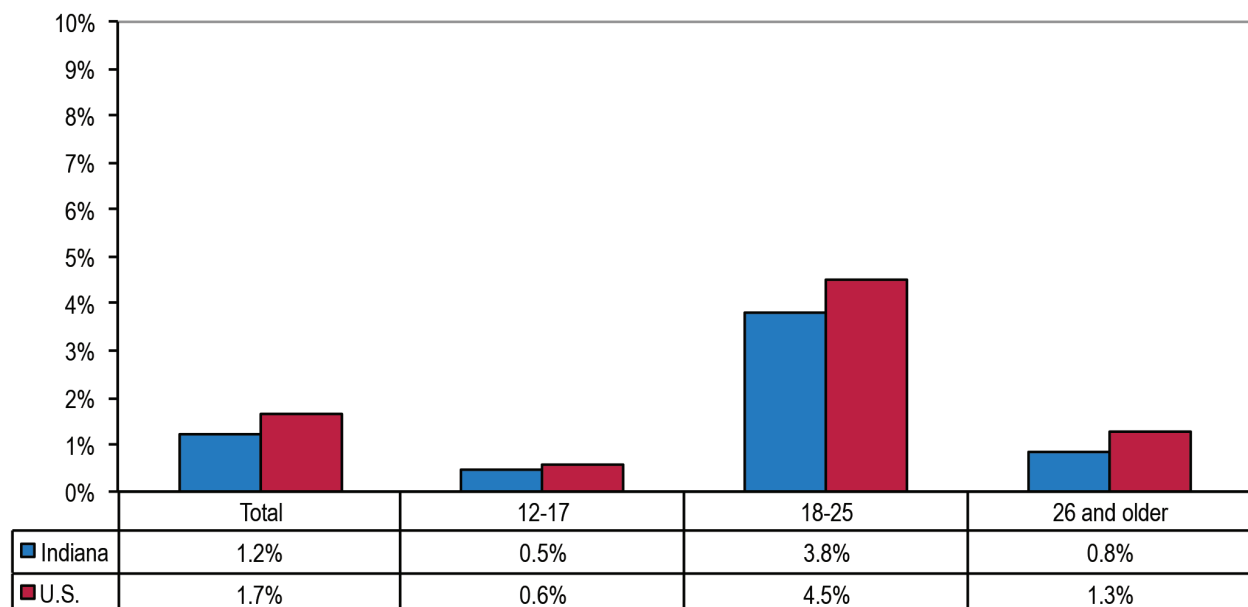
Source: SAMHSA, 2014

NSDUH data from 2001 through 2014 show that past-year cocaine use remained relatively stable in Indiana from 1.5% (95% CI: 1.1–2.0) in 2001 to 1.2% (95% CI: 0.8-1.7) in 2014, mirroring national rates (see Figure 6.2).

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, 2001–2014)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	1.5%	2.6%	2.6%	2.4%	2.3%	2.2%	2.2%	2.2%	1.7%	1.2%	1.0%	1.2%	1.4%	1.2%
U.S.	1.7%	2.5%	2.5%	2.4%	2.3%	2.4%	2.4%	2.2%	2.0%	1.9%	1.6%	1.7%	1.7%	1.7%
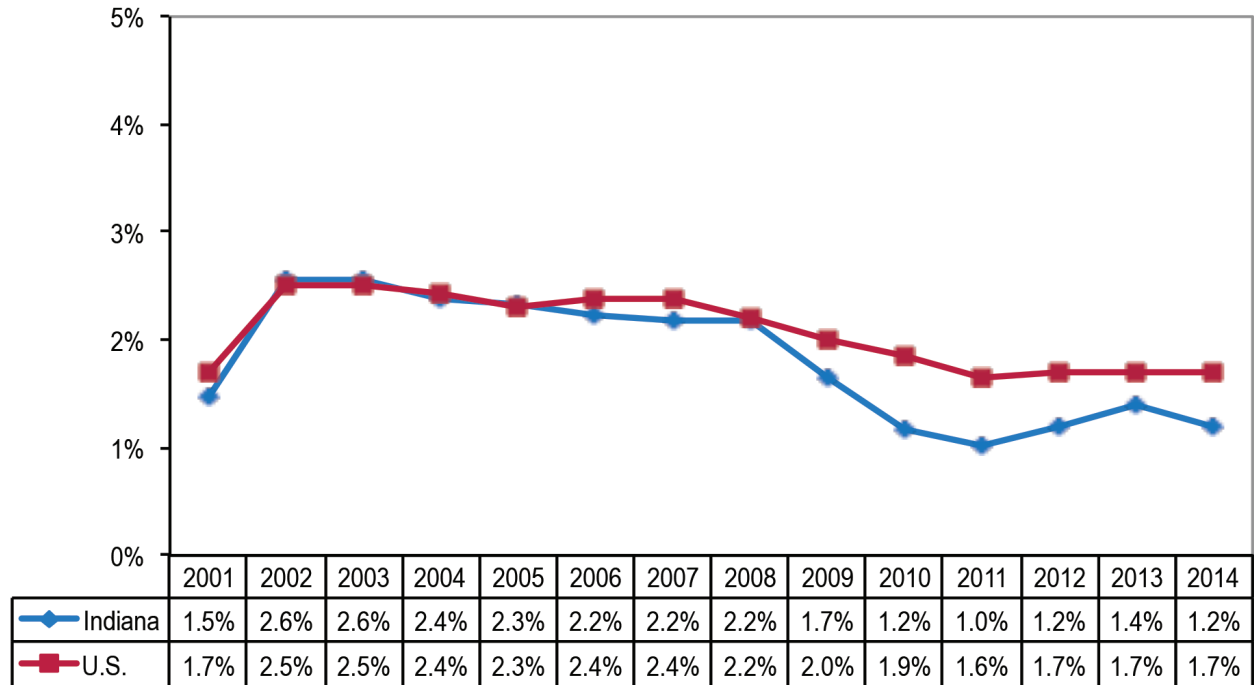
Source: SAMHSA, 2014

Adult Consumption Patterns

According to 2013-2014 NSDUH estimates, the prevalence rate for cocaine use was highest among 18- to 25-year-olds; 3.8% (95% CI: 2.7-5.3) of Hoosiers in that age group reported using cocaine in the past year (U.S.: 4.5%; 95% CI: 4.2–4.8). The rate of cocaine use was significantly lower among those ages 26 and older in Indiana (0.8%; 95% CI: 0.5-1.4) and the nation (1.3%; 95% CI: 1.2–1.4) (see Figure 6.1). Indiana and U.S. rates were statistically similar (SAMHSA, 2014).

The Indiana College Substance Use Survey provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to findings from the 2015 survey, which were based on eight participating colleges and universities, 2.5% of Indiana college students used cocaine in the past year (U.S.: 4.4%), and 0.5% currently use it (U.S.: 1.8%). Rates were higher for males (past-year use: 3.2%; current use: 0.6%) than for females (past-year use: 2.2%; current use: 0.4%), but not significantly different for those attending public institutions

Figure 6.3   Percentage of Indiana and U.S. Treatment Episodes with Cocaine Use Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	25.5%	22.3%	22.0%	22.7%	22.8%	23.8%	25.0%	23.9%	21.4%	18.3%	14.8%	15.2%	15.8%	12.2%
U.S.	31.2%	30.2%	30.1%	30.9%	30.9%	31.2%	31.7%	30.5%	27.9%	24.3%	22.6%	22.1%	20.8%	19.0%
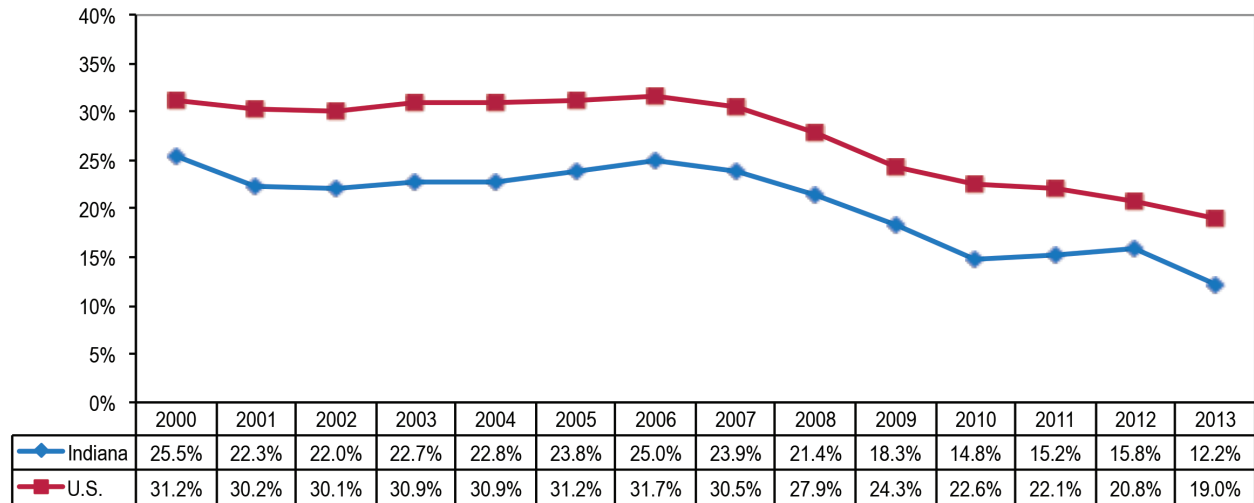
Source: SAMHSA, 2013

of higher education (past-year use: 2.4%; past-month use: 0.9%) than for those who attended private institutions (past-year use: 2.6%; past-month use: 0.3%) (King & Jun, 2015).[1]

The 2013 Treatment Episode Data Set (TEDS) shows that cocaine use was reported in 12.2% of treatment episodes in Indiana; the U.S. percentage was significantly higher at 19.0% (*P* < 0.001) (see Figure 6.3) (SAMHSA, 2013).

Gender, age, and race differences in the Indiana treatment population were statistically significant (P < 0.001). More women (14.5%) than men (10.8%) reported cocaine use; blacks displayed significantly higher percentages (26.6%) than whites (9.3%) and other races (16.4%); and adults ages 35 and older were more likely to report cocaine use than any of the younger age groups in treatment (see Table 6.1). (For county-level information on cocaine use, see Appendix 6A, page 105.)

Table 6.1   Percentage of Indiana Treatment Episodes with Cocaine Use Reported at Treatment Admission (Treatment Episode Data Set, 2013)

		Cocaine Use
Gender	Male	10.8%
	Female	14.5%
Race	White	9.3%
	Black	26.6%
	Other	16.4%
Age Group	Under 18	2.1%
	18-24	5.0%
	25-34	10.8%
	35-44	18.3%
	45-54	20.0%
	55 and over	17.2%
Total		**12.2%**

Source: SAMHSA, 2013

[1]Eight colleges participated in the 2015 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

Youth Consumption Patterns

Findings from the 2013-2014 NSDUH survey show that 0.5% (95% CI: 0.3-0.8) of 12- to 17-year-old Hoosiers used cocaine in the past year (see Figure 6.1). The national rate was similar (0.6%; 95% CI: 0.5–0.7) (SAMHSA, 2014).

According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 5.6% (95% CI: 4.1–7.7) of Indiana high school students (grades 9 through 12) reported that they had used a form of cocaine, including powder, crack, or freebase, at least once in their life; 2.3%

(95% CI: 1.7–3.2) stated that they currently use cocaine (Centers for Disease Control and Prevention (CDC), 2016). National rates for lifetime use and current use were similar, at 6.8% (95% CI: 6.2–7.5) and 3.0% (95% CI: 2.6–3.5), respectively. Indiana prevalence rates did not differ statistically by gender, race/ethnicity, or grade level (see Table 6.2).

Overall prevalence of lifetime and current cocaine use among Indiana's high school students remained stable from 2003 through 2011 (CDC, 2016).

According to the annual Indiana Youth Survey, rates

Table 6.2 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Lifetime and Current Cocaine Use, by Gender, Race/Ethnicity, and Grade (Youth Risk Behavior Surveillance System, 2011)

		Indiana		U.S.	
		Lifetime Use (95% CI)	Current Use (95% CI)	Lifetime Use (95% CI)	Current Use (95% CI)
Gender	Male	6.4% (3.9–10.1)	2.9% (1.7–4.7)	7.9% (7.0–8.9)	4.1% (3.5–4.9)
	Female	4.9% (3.6–6.6)	1.7% (0.9–3.1)	5.7% (4.9–6.5)	1.8% (1.5–2.3)
Race/Ethnicity	White	5.5% (3.9–7.7)	2.4% (1.7–3.4)	6.7% (6.0–7.5)	2.5% (2.2–2.9)
	Black	6.2% (2.3–15.3)	1.9% (0.5–7.0)	2.6% (1.8–3.8)	1.1% (0.7–1.7)
	Hispanic	5.7% (2.4–12.9)	2.6% (1.1–6.3)	10.2% (8.8–11.9)	5.4% (4.5–6.5)
Grade	9	4.1% (2.6–6.4)	2.2% (1.2–4.0)	5.0% 4.2–6.1)	2.8% (2.2–3.4)
	10	5.3% (3.4–8.0)	1.6% (0.9–2.7)	6.5% (5.4–7.8)	3.0% (2.3–4.0)
	11	4.7% (2.5–8.8)	2.9% (1.2–6.7)	7.5% (6.4–8.9)	3.0% (2.3–4.0)
	12	8.7% (4.8–15.1)	2.4% (1.1–5.3)	8.5% (7.5–9.6)	3.0% (2.4–3.9)
Total		5.6% (4.1–7.7)	2.3% (1.7–3.2)	6.8% (6.2–7.5)	3.0% (2.6–3.5)

Source: CDC, 2016

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of current cocaine and crack use among Indiana 8th, 10th, and 12th grade students have declined from 2000 through 2015 (see Figure 6.4) (Gassman, Jun, Samuel, Agley, King, & Lee, 2015). For 2015 data on current cocaine and crack use among students in grades 6 through 12, by Indiana region, see Appendix 6B, page 106.

Figure 6.4 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Cocaine/Crack Use (Indiana Youth Survey, 2000–2015)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th Grade	1.1%	1.3%	1.2%	1.3%	1.2%	1.4%	1.1%	1.1%	0.9%	0.9%	1.1%	1.0%	0.8%	0.5%	0.5%	0.4%
10th Grade	1.7%	2.4%	2.4%	2.3%	2.4%	2.2%	2.1%	1.9%	1.7%	1.4%	1.6%	1.6%	1.3%	1.0%	0.9%	0.7%
12th Grade	2.7%	2.8%	2.9%	2.5%	2.9%	2.9%	3.1%	2.4%	2.0%	1.6%	1.9%	2.0%	1.6%	1.2%	1.3%	1.0%
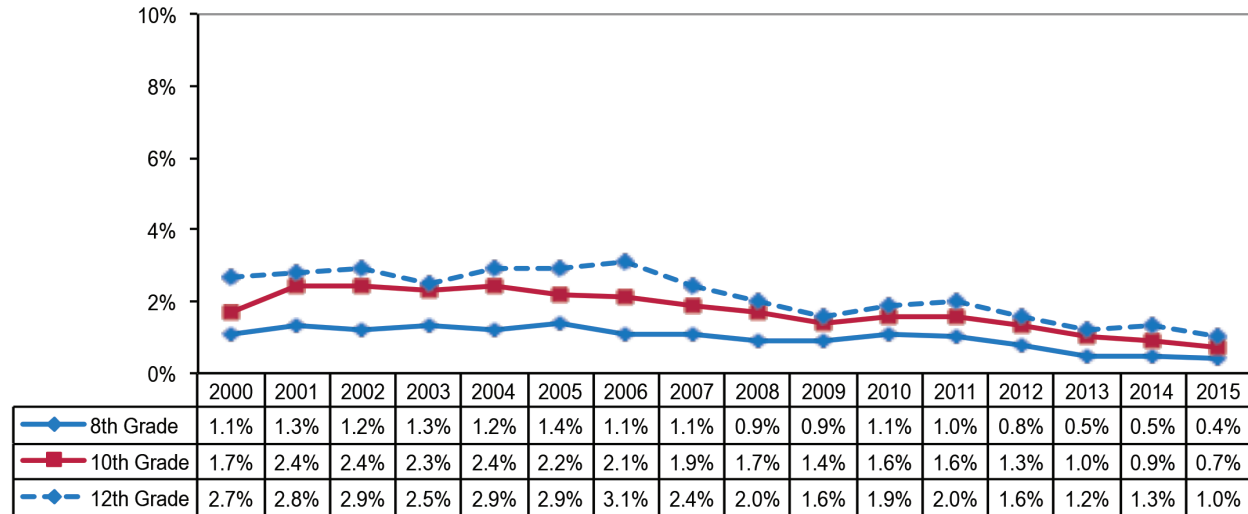
Source: Gassman, et al., 2015

CONSEQUENCES

Health Consequences

Cocaine is an addictive drug and powerful stimulant. The effects of cocaine depend on the amount of the drug taken and the route of administration, such as snorting, ingesting, or injecting. For example, regular snorting of cocaine can lead to loss of the sense of smell, nosebleeds, problems with swallowing, and hoarseness. Ingesting cocaine can cause reduced blood flow leading to severe bowel gangrene. Injecting cocaine can bring about severe allergic reactions. Taken in small amounts, it can make the user feel euphoric, energetic, talkative, and mentally alert; it might temporarily decrease the need for food and sleep. Short-term physiological effects of cocaine include constricted blood vessels; dilated pupils; and increased temperature, heart rate, and blood pressure. Large amounts might lead to bizarre, erratic, and violent behavior as well as tremors, vertigo, muscle twitches, and paranoia. Use of crack/cocaine might result in feelings of restlessness, irritability, and anxiety. Individuals who use cocaine can suffer heart attacks or strokes, which may cause sudden death. Long-term effects of cocaine use include dependence, irritability, mood disturbances, restlessness, paranoia, and auditory hallucinations (NIDA, 2013).

The medical consequences of cocaine abuse are primarily cardiovascular problems (such as disturbances in heart rhythm and heart attacks), respiratory difficulties (such as chest pain and respiratory failure), neurological effects (such as strokes, seizures, and headaches), and gastrointestinal complications (such as abdominal pain and nausea). Babies born to mothers who abuse cocaine during pregnancy are often prematurely delivered, have low birth weights and smaller head circumferences, and are often shorter in length. Additionally, users who inject cocaine intravenously are at higher risk for acquiring and/or transmitting HIV/AIDS and hepatitis C (HCV), if needles or other injection equipment are shared. However, even drug abusers who do not inject drugs are at a high risk of contracting HIV, which highlights the importance of sexual transmission in this population (NIDA, 2013).

Figure 6.5   Percentage of Indiana and U.S. Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	13.6%	11.0%	10.8%	11.5%	11.6%	12.1%	12.6%	11.8%	9.3%	8.0%	6.1%	6.3%	6.6%	4.5%
U.S.	13.5%	12.9%	12.9%	13.6%	13.7%	13.9%	13.9%	12.9%	11.3%	9.4%	8.2%	7.8%	6.9%	6.1%

Source: SAMHSA, 2013

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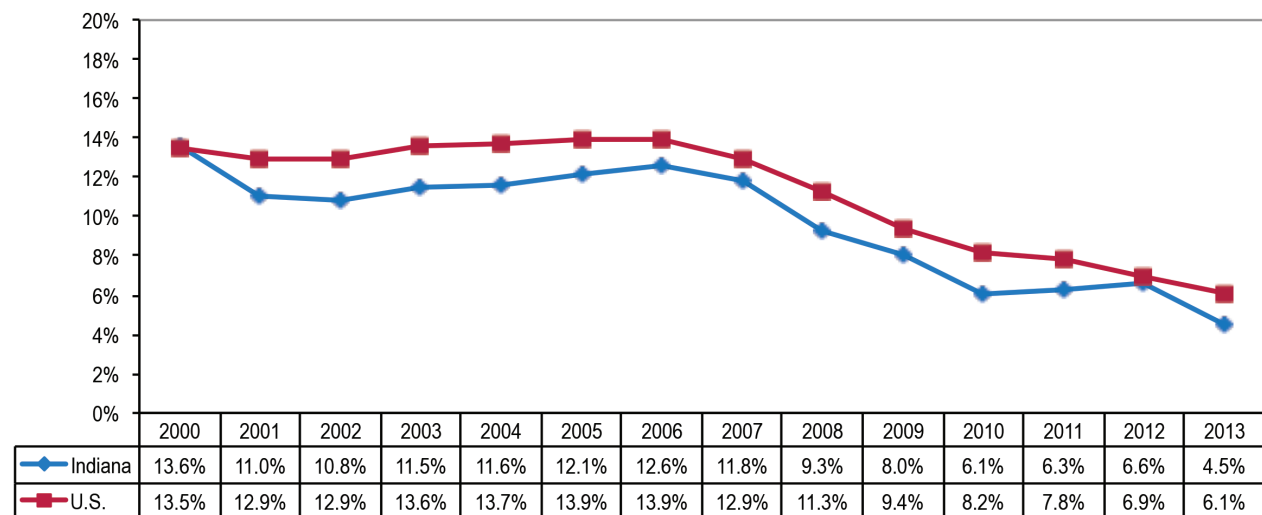
Cocaine Dependence

Results from the Treatment Episode Data Set (TEDS) show that the percentages of treatment admissions for cocaine dependence[2] in 2013 were lower in Indiana (4.5%) compared to the nation (6.1%), and have continued to decrease significantly since 2000 (IN: 13.6%; U.S.: 13.5) (see Figure 6.5) (SAMHSA, 2013).

According to 2013 TEDS data, gender, race, and age were associated with cocaine dependence in Indiana ($P < 0.001$). Higher rates were found among women (5.7%) than men (3.7%); among blacks (13.9%) than among whites (2.6%) or other races (6.9%); and among adults ages 35 and older (see Table 6.3) (SAMHSA, 2013). (For county-level information, see Appendix 6A, page 105.)

Legal and Criminal Consequences

Legal consequences associated with cocaine use include arrests for possession and sale or manufacture of the substance. The Uniform Crime Reporting (UCR) Program provides the number of arrests for offenses regarding cocaine and opiates combined; data on either drug category individually are currently not available (Federal Bureau of Investigation (FBI), 2012). According to 2012 results, nearly 1,600 arrests were made in Indiana for possession of cocaine/opiates. However, Indiana's arrest rate, 0.2 (95% CI: 0.2–0.3) per 1,000 population, was below the nation's rate of 0.7 (95% CI: 0.7–0.7) per 1,000 population.

In 2012, a little over 1,500 arrests were made for the sale and manufacture of cocaine/opiates in Indiana, representing an arrest rate of 0.2 per 1,000 population (95% CI: 0.2–0.3); the U.S. rate was the same with 0.2 per 1,000 population (95% CI: 0.2–0.2).

The number of arrests for both possession and sale has steadily decreased since 2006 (see Figures 6.6 and 6.7). Maps 6.1 and 6.2 (pages 109-110) and Appendix 6C (pages 107-108) show Indiana's cocaine/opiates possession and sale/manufacture arrests by county for 2012.

Table 6.3 Percentage of Indiana Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2013)

		Cocaine Dependence
Gender	Male	3.7%
	Female	5.7%
Race	White	2.6%
	Black	13.9%
	Other	6.9%
Age Group	Under 18	0.6%
	18-24	0.8%
	25-34	3.4%
	35-44	7.3%
	45-54	9.1%
	55 and over	8.0%
Total		**4.5%**

Source: SAMHSA, 2013

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[2]We defined cocaine dependence as "individuals in substance abuse treatment listing cocaine as their primary substance at admission."

Figure 6.6 Number of Arrests for Cocaine and Opiates Possession and Sale/Manufacture in Indiana (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Possession	3,185	3,410	3,964	3,856	4,317	5,020	5,608	3,937	3,301	2,617	2,397	2,004	1,599
Sale	1,885	1,803	1,977	2,207	2,464	2,617	3,227	2,668	2,336	2,425	2,028	2,368	1,510
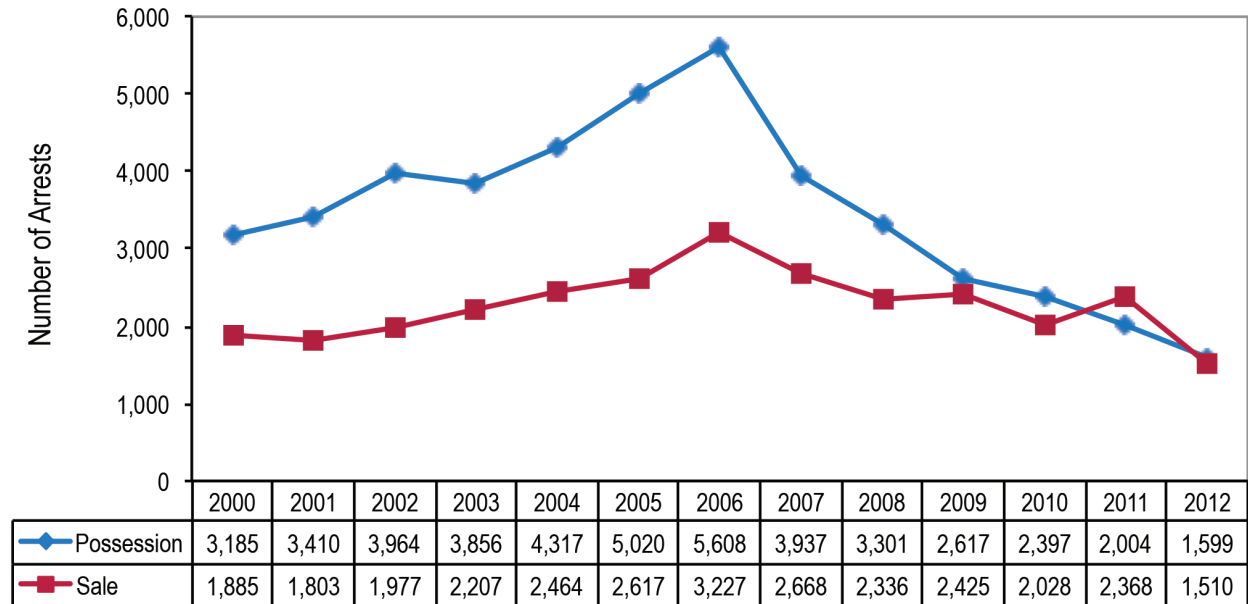
Source: FBI, 2012

Figure 6.7 Indiana and U.S. Arrest Rates, per 1,000 Population, for Cocaine and Opiates Possession and Sale/Manufacture (Uniform Crime Reporting Program, 2000–2012)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
IN Possession	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.6	0.5	0.4	0.4	0.3	0.2
U.S. Possession	1.1	1.0	1.0	1.0	1.1	1.2	1.2	1.1	1.0	0.8	0.7	0.8	0.7
IN Sale	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.4	0.2
U.S. Sale	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2

Source: FBI, 2012

Number of Treatment Episodes with Cocaine Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)
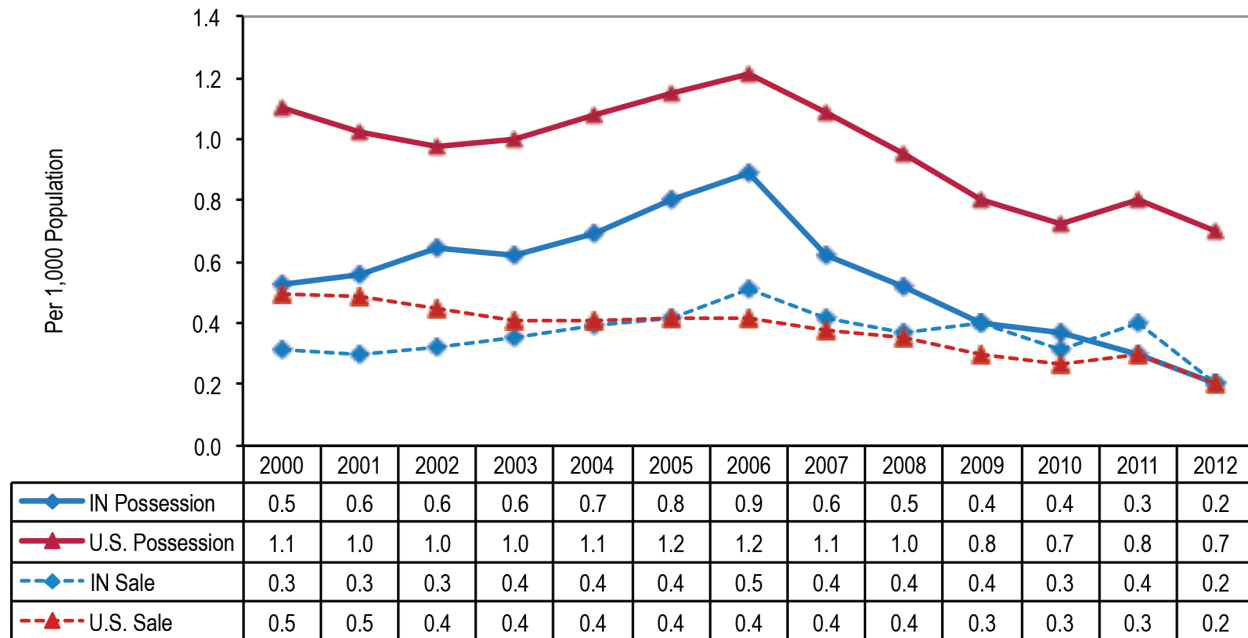
County	Treatment Episodes Total	Cocaine Use Number	%	Cocaine Dependence Number	%	County	Treatment Episodes Total	Cocaine Use Number	%	Cocaine Dependence Number	%
Adams	176	21	11.9%	<5	N/A	Madison	1,193	108	9.1%	34	2.8%
Allen	1,715	345	20.1%	110	6.4%	Marion	4,457	836	18.8%	306	6.9%
Bartholomew	577	42	7.3%	8	1.4%	Marshall	190	15	7.9%	<5	N/A
Benton	49	7	14.3%	<5	N/A	Martin	46	0	0.0%	<5	N/A
Blackford	76	3	3.9%	<5	N/A	Miami	268	11	4.1%	<5	N/A
Boone	191	5	2.6%	<5	N/A	Monroe	1,214	82	6.8%	30	2.5%
Brown	107	10	9.3%	<5	N/A	Montgomery	341	24	7.0%	<5	N/A
Carroll	107	6	5.6%	<5	N/A	Morgan	469	18	3.8%	<5	N/A
Cass	235	11	4.7%	<5	N/A	Newton	40	5	12.5%	<5	N/A
Clark	408	17	4.2%	15	3.7%	Noble	235	18	7.7%	7	3.0%
Clay	185	4	2.2%	<5	N/A	Ohio	33	4	12.1%	<5	N/A
Clinton	171	12	7.0%	<5	N/A	Orange	135	4	3.0%	<5	N/A
Crawford	37	0	0.0%	<5	N/A	Owen	184	5	2.7%	<5	N/A
Daviess	252	9	3.6%	<5	N/A	Parke	105	7	6.7%	<5	N/A
Dearborn	493	52	10.5%	6	1.2%	Perry	121	7	5.8%	<5	N/A
Decatur	199	14	7.0%	5	2.5%	Pike	38	1	2.6%	<5	N/A
DeKalb	274	27	9.9%	<5	N/A	Porter	679	86	12.7%	24	3.5%
Delaware	1,067	118	11.1%	35	3.3%	Posey	132	6	4.5%	<5	N/A
Dubois	277	7	2.5%	<5	N/A	Pulaski	122	5	4.1%	<5	N/A
Elkhart	672	69	10.3%	34	5.1%	Putnam	208	5	2.4%	<5	N/A
Fayette	223	24	10.8%	7	3.1%	Randolph	156	12	7.7%	<5	N/A
Floyd	171	5	2.9%	<5	N/A	Ripley	217	14	6.5%	<5	N/A
Fountain	43	5	11.6%	<5	N/A	Rush	143	16	11.2%	<5	N/A
Franklin	145	7	4.8%	<5	N/A	Saint Joseph	1,518	359	23.6%	177	11.7%
Fulton	160	10	6.3%	<5	N/A	Scott	144	3	2.1%	<5	N/A
Gibson	245	4	1.6%	<5	N/A	Shelby	142	17	12.0%	<5	N/A
Grant	526	51	9.7%	12	2.3%	Spencer	174	6	3.4%	<5	N/A
Greene	183	3	1.6%	<5	N/A	Starke	255	16	6.3%	<5	N/A
Hamilton	972	75	7.7%	27	2.8%	Steuben	262	12	4.6%	<5	N/A
Hancock	226	24	10.6%	7	3.1%	Sullivan	58	1	1.7%	<5	N/A
Harrison	31	1	3.2%	<5	N/A	Switzerland	69	3	4.3%	<5	N/A
Hendricks	346	16	4.6%	<5	N/A	Tippecanoe	461	44	9.5%	5	1.1%
Henry	347	26	7.5%	4	1.2%	Tipton	61	4	6.6%	<5	N/A
Howard	596	79	13.3%	27	4.5%	Union	31	2	6.5%	<5	N/A
Huntington	130	7	5.4%	<5	N/A	Vanderburgh	1,333	63	4.7%	24	1.8%
Jackson	347	21	6.1%	<5	N/A	Vermillion	128	1	0.8%	<5	N/A
Jasper	127	11	8.7%	<5	N/A	Vigo	652	22	3.4%	6	0.9%
Jay	159	10	6.3%	<5	N/A	Wabash	281	8	2.8%	<5	N/A
Jefferson	375	27	7.2%	<5	N/A	Warren	17	0	0.0%	<5	N/A
Jennings	265	14	5.3%	<5	N/A	Warrick	253	9	3.6%	<5	N/A
Johnson	237	16	6.8%	<5	N/A	Washington	98	3	3.1%	<5	N/A
Knox	273	1	0.4%	<5	N/A	Wayne	386	79	20.5%	<5	N/A
Kosciusko	309	23	7.4%	<5	N/A	Wells	119	16	13.4%	<5	N/A
LaGrange	166	7	4.2%	<5	N/A	White	133	4	3.0%	<5	N/A
Lake	2,344	388	16.6%	163	7.0%	Whitley	102	8	7.8%	<5	N/A
LaPorte	451	67	14.9%	21	4.7%	County Info Missing	61	8	13.1%	<5	N/A
Lawrence	467	12	2.6%	<5	N/A	**Indiana**	**34,596**	**3,690**	**10.7%**	**1,192**	**3.4%**

Note: We defined cocaine dependence as "individuals in substance abuse treatment listing cocaine as their primary substance at admission."
We calculated the percentages by dividing the number of reported cocaine use/dependence by the number of treatment episodes.
Information on treatment episodes <5 was suppressed due to confidentiality constraints.
Source: Indiana Family and Social Services Administration, 2015

APPENDIX 6B

Percentage of Indiana Students Reporting Monthly Crack/Cocaine Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7th Grade	0.2	0.2	0.3	0.4	0.0	0.4	0.3	0.3	0.0
8th Grade	0.4	0.5	0.4	0.3	0.2	0.4	0.6	0.6	0.5
9th Grade	0.6	0.6	0.7	0.5	0.5	*1.0	0.4	0.5	0.6
10th Grade	0.7	0.9	0.5	0.8	0.6	0.5	1.0	0.4	0.7
11th Grade	0.9	0.6	1.3	1.1	0.6	1.2	0.8	0.5	0.7
12th Grade	1.0	1.5	1.1	1.0	0.9	1.5	1.0	*0.5	0.9

Notes: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Beginning in 2015, the Indiana Youth Survey combined crack/cocaine use into a single category and stopped asking 6th grade students about crack/cocaine use; also, lifetime prevalence is no longer available by region.
Source: Gassman et al., 2015

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APPENDIX 6C

Number and Rate, per 1,000 Population, of Arrests for Cocaine/Opiates Possession and Sale/Manufacture in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	5	*0.1	3	*0.1
Allen	85	0.2	42	0.1
Bartholomew	4	*0.1	1	*0.0
Benton	1	*0.1	1	*0.1
Blackford	5	*0.4	3	*0.2
Boone	6	*0.1	5	*0.1
Brown	0	*0.0	0	*0.0
Carroll	0	*0.0	1	*0.0
Cass	0	*0.0	9	*0.2
Clark	91	0.8	84	0.8
Clay	2	*0.1	3	*0.1
Clinton	8	*0.2	1	*0.0
Crawford	0	*0.0	0	*0.0
Daviess	5	*0.2	5	*0.2
Dearborn	0	*0.0	1	*0.0
Decatur	6	*0.2	4	*0.2
DeKalb	4	*0.1	3	*0.1
Delaware	18	*0.2	17	*0.1
Dubois	6	*0.1	3	*0.1
Elkhart	40	0.2	58	0.3
Fayette	7	*0.3	6	*0.2
Floyd	2	*0.0	55	0.7
Fountain	3	*0.2	2	*0.1
Franklin	1	*0.0	1	*0.0
Fulton	8	*0.4	2	*0.1
Gibson	0	*0.0	0	*0.0
Grant	37	0.5	24	0.3
Greene	1	*0.0	4	*0.1
Hamilton	25	0.1	44	0.2
Hancock	18	*0.2	15	*0.2
Harrison	3	*0.1	1	*0.0
Hendricks	41	0.3	17	*0.1
Henry	1	*0.0	1	*0.0
Howard	78	0.9	72	0.9
Huntington	0	*0.0	0	*0.0
Jackson	12	*0.3	14	*0.3
Jasper	3	*0.1	8	*0.2
Jay	14	*0.7	3	*0.1
Jefferson	8	*0.2	7	*0.2
Jennings	0	*0.0	0	*0.0
Johnson	33	0.2	22	0.2
Knox	11	*0.3	14	*0.4
Kosciusko	20	0.3	16	*0.2
LaGrange	13	*0.3	70	1.9
Lake	134	0.3	215	0.4
LaPorte	43	0.4	119	1.1
Lawrence	3	*0.1	1	*0.0
Madison	40	0.3	15	*0.1
Marion	222	0.2	170	0.2

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	34	0.7	20	0.4
Martin	1	*0.1	1	*0.1
Miami	8	*0.2	40	1.1
Monroe	39	0.3	14	0.1
Montgomery	23	0.6	31	0.8
Morgan	34	0.5	22	0.3
Newton	11	*0.8	0	*0.0
Noble	9	*0.2	8	*0.2
Ohio	1	*0.2	1	*0.2
Orange	0	*0.0	0	*0.0
Owen	3	*0.1	3	*0.1
Parke	5	*0.3	5	*0.3
Perry	4	*0.2	2	*0.1
Pike	3	*0.2	2	*0.2
Porter	44	0.3	9	*0.1
Posey	2	*0.1	3	*0.1
Pulaski	1	*0.1	0	*0.0
Putnam	7	*0.2	11	*0.3
Randolph	4	*0.2	8	*0.3
Ripley	5	*0.2	3	*0.1
Rush	14	*0.8	1	*0.1
Saint Joseph	66	0.2	27	0.1
Scott	2	*0.1	1	*0.0
Shelby	6	*0.1	1	*0.0
Spencer	4	*0.2	3	*0.1
Starke	16	*0.7	10	*0.4
Steuben	19	*0.6	12	*0.4
Sullivan	3	*0.1	3	*0.1
Switzerland	2	*0.2	1	*0.1
Tippecanoe	67	0.4	26	0.1
Tipton	0	*0.0	2	*0.1
Union	1	*0.1	1	*0.1
Vanderburgh	32	0.2	36	0.2
Vermillion	0	*0.0	0	*0.0
Vigo	10	*0.1	4	*0.0
Wabash	7	*0.2	6	*0.2
Warren	2	*0.2	1	*0.1
Warrick	2	*0.0	0	*0.0
Washington	3	*0.1	3	*0.1
Wayne	29	0.4	21	0.3
Wells	2	*0.1	3	*0.1
White	1	*0.0	0	*0.0
Whitley	6	*0.2	3	*0.1
Indiana	**1,599**	**0.2**	**1,510**	**0.2**

* Rates based on arrest numbers lower than 20 are unreliable.
Source: FBI, 2012

Map 6.1 Cocaine/Opiate Possession Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 6C (pages 107-108) for additional information.
Source: FBI, 2012

Map 6.2 Cocaine/Opiate Sales Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Rate
Lake	6.24
Porter	0.26
LaPorte	3.45
St. Joseph	0.78
Elkhart	1.68
LaGrange	2.03
Steuben	0.35
Newton	0
Jasper	0.23
Starke	0.29
Marshall	0.58
Kosciusko	0.46
Noble	0.23
DeKalb	0.09
Whitley	0.09
Allen	1.22
Pulaski	0
Fulton	0.06
Wabash	0.17
Huntington	0
White	0
Cass	0.26
Miami	1.16
Wells	0.09
Adams	0.09
Benton	0.03
Carroll	0.03
Howard	2.09
Grant	0.7
Blackford	0.09
Jay	0.09
Warren	0.03
Tippecanoe	0.75
Clinton	0.03
Tipton	0.06
Madison	0.44
Delaware	0.49
Randolph	0.23
Fountain	0.06
Montgomery	0.9
Boone	0.15
Hamilton	1.28
Henry	0.03
Wayne	0.61
Vermillion	0
Parke	0.15
Putnam	0.32
Hendricks	0.49
Marion	4.93
Hancock	0.44
Rush	0.03
Fayette	0.17
Union	0.03
Vigo	0.12
Clay	0.09
Owen	0.09
Morgan	0.64
Johnson	0.64
Shelby	0.03
Franklin	0.03
Sullivan	0.09
Greene	0.12
Monroe	0.41
Brown	0
Bartholomew	0.03
Decatur	0.12
Ripley	0.09
Dearborn	0.03
Jennings	0
Ohio	0.03
Jackson	0.41
Jefferson	0.2
Switzerland	0.03
Knox	0.41
Daviess	0.15
Martin	0.03
Lawrence	0.03
Washington	0.09
Scott	0.03
Orange	0
Clark	2.44
Gibson	0
Pike	0.06
Dubois	0.09
Crawford	0
Floyd	1.6
Harrison	0.03
Posey	0.09
Vanderburgh	1.04
Warrick	0
Spencer	0.09
Perry	0.06

Rate per 1,000

- 0.00 - 0.03
- 0.03 - 0.12
- 0.12 - 0.49
- > 0.49

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 6C (pages 107-108) for additional information.
Source: FBI, 2012

REFERENCES, CHAPTER 6

Centers for Disease Control and Prevention. (2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

National Institute on Drug Abuse. (2013). *Cocaine: Abuse and addiction.* Retrieved from http://www.drugabuse.gov/publications/drugfacts/cocaine

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

Indiana University Center for Health Policy

HEROIN USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

HEROIN CONSUMPTION

Heroin is an illegal, highly addictive drug. It is processed from morphine, a naturally occurring substance extracted from the seed pod of the Asian opium poppy plant. Heroin can be injected or inhaled by smoking, sniffing or snorting. Regardless of the route of administration the drug is delivered to the brain rapidly. When heroin reaches the brain it converts back to its original state of morphine and binds to receptors that are located in the part of the brain that controls physiological processes critical to sustain life, such as breathing and blood pressure. (National Institute on Drug Abuse (NIDA), 2014).

General Consumption Patterns

No Indiana-level estimates on heroin use within the general population are currently available. According to the 2014 National Survey on Drug Use and Health (NSDUH), 1.8% of all U.S. residents ages 12 or older had tried heroin at least once in their lifetime; 0.3% had used

it in the past year; and 0.2% were current (past month) users (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014).

Adult Consumption Patterns

Heroin use in the general population is very low. The Indiana College Substance Use Survey[1] provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to 2015 results, which are based on eight participating colleges and universities, 0.4% of Indiana college students had used heroin in the past year (U.S.: 0.3%) and 0.2% had used it in the past month (U.S.: 0.2%); Indiana and U.S. rates were not significantly different from one another. Among Indiana college students, past-year prevalence rates were higher for males (0.6%) than for females (0.2%), but there were no significant gender differences for current use (males: 0.3%; females: 0.2%). No significant differences were detected by age group (under 21 vs. 21

Figure 7.1 Percentage of Indiana and U.S. Treatment Episodes with Heroin Use Reported at Treatment Admission (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	2.6%	2.8%	2.6%	3.0%	3.3%	3.2%	2.9%	4.1%	5.5%	6.6%	9.0%	11.1%	12.0%
U.S.	18.5%	18.1%	17.7%	16.8%	16.4%	16.6%	16.5%	17.0%	17.3%	17.4%	18.5%	19.8%	22.4%
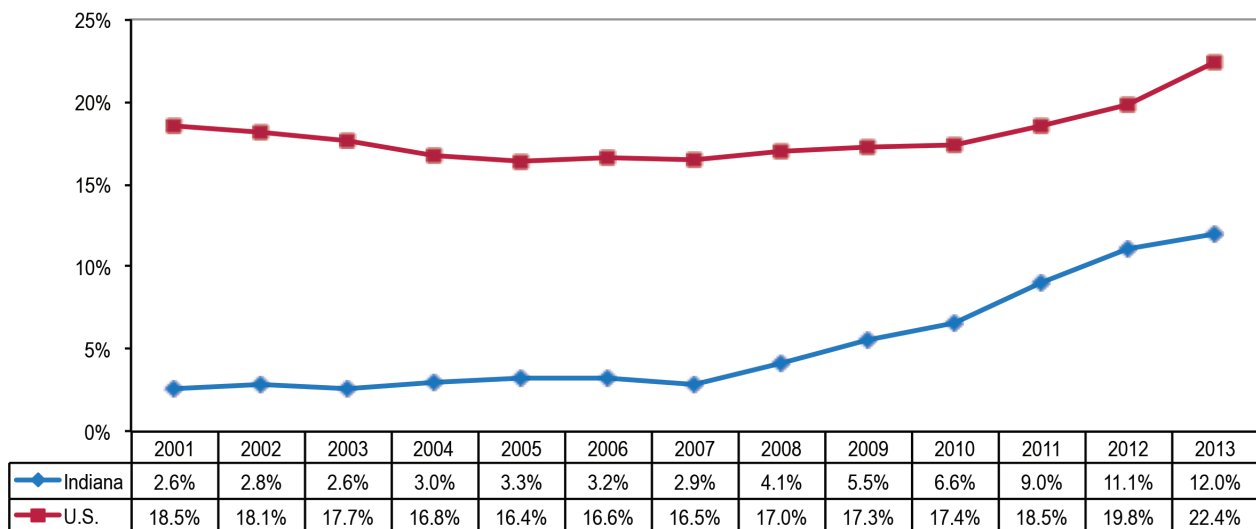
Source: SAMHSA, 2013

[1]Eight Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

or over) or type of academic institution (private vs. public) (King & Jun, 2015).

Data from the Treatment Episode Data Set (TEDS) spanning 2001 through 2013 show that the percentage of treatment episodes in which heroin use was reported at admission was significantly lower in Indiana than the United States ($P < 0.001$). In 2013, 12.0% of Hoosiers in treatment reported heroin use, as compared to 22.4% of Americans. Reported heroin use, however, continued to increase in Indiana from 2.6% in 2001 to 12.0% in 2013 (see Figure 7.1) (SAMHSA, 2013). For county-level information on treatment admissions with reported heroin use in Indiana, see Appendix 7A, page 122.

Reported heroin use differed significantly by gender, race, and age group among Indiana's treatment population:

- **Gender**—From 2001 through 2013, the percentage of females reporting use of the drug was significantly higher than the percentage of males (see Figure 7.2).

- **Race**—Reported heroin use also differed significantly by race. Until 2007, blacks had higher percentages of reported use than whites or other races. Since 2008, however, the percentage of whites reporting heroin use has seen a sharp increase and has remained the highest (see Figure 7.3).

- **Age**—Up until 2007, heroin use within Indiana's treatment population was primarily associated with older adults ages 45 and above. However, this has changed dramatically. The percentage of young adults ages 18 to 34 who reported heroin use rose significantly in the past 12 years. The percentage of youth under the age of 18 reporting heroin abuse saw a sharp increase from less than 1.0% up until 2009 to 11.5% in 2012. However, according to 2013 TEDS data, there has been a drastic decrease in heroin use in this age group to 1.8% (see Figure 7.4) (SAMHSA, 2013).

Figure 7.2 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	2.3%	2.6%	2.3%	2.7%	3.0%	2.7%	2.4%	3.6%	5.1%	6.0%	8.3%	10.0%	10.4%
Female	3.3%	3.2%	3.2%	3.6%	3.8%	4.0%	3.9%	5.0%	6.1%	7.7%	10.3%	12.8%	14.8%

Source: SAMHSA, 2013

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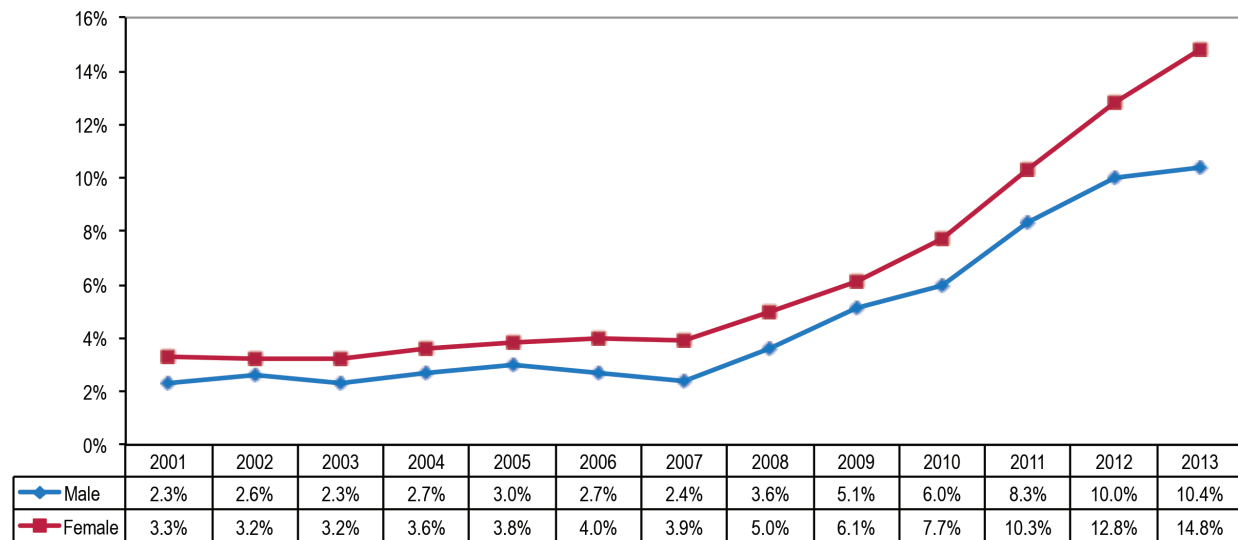
Figure 7.3 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	4.6%	5.8%	4.1%	5.8%	5.8%	4.8%	3.3%	3.4%	3.9%	4.1%	4.7%	4.9%	4.5%
White	2.1%	2.1%	2.3%	2.4%	2.6%	2.7%	2.9%	4.3%	5.4%	6.7%	9.6%	12.3%	13.5%
Other	3.1%	2.0%	2.7%	3.5%	2.8%	4.2%	2.1%	2.2%	6.1%	3.3%	5.7%	8.7%	10.0%
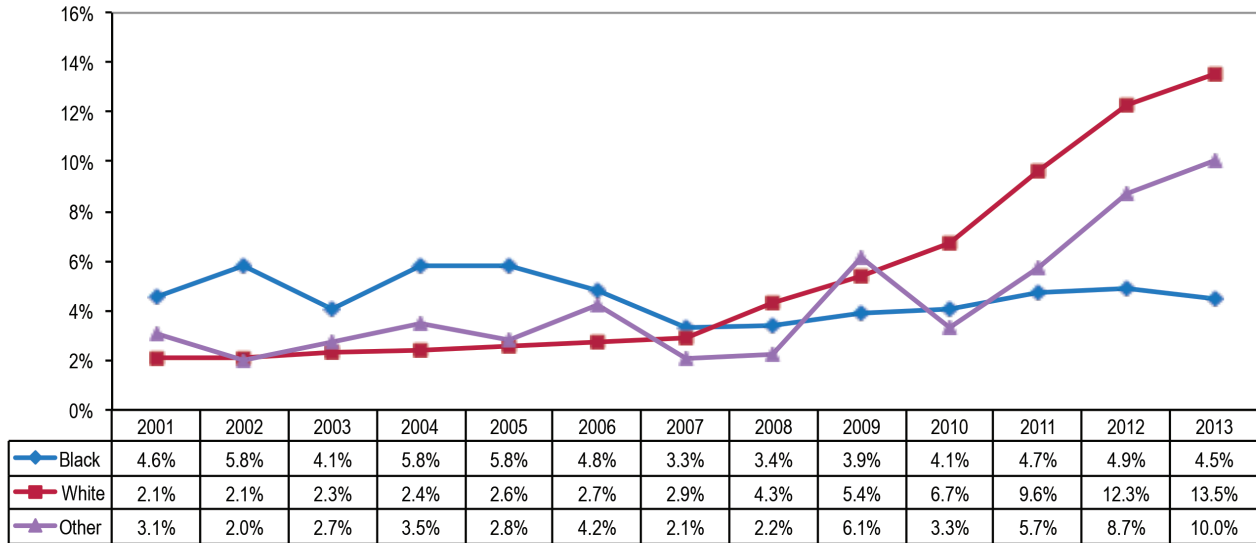
Source: SAMHSA, 2013

Figure 7.4 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 18	0.1%	0.2%	0.3%	0.4%	0.3%	0.2%	0.1%	0.4%	0.2%	1.1%	9.1%	11.5%	1.8%
18 to 24	2.0%	1.6%	2.1%	2.1%	2.2%	2.4%	2.3%	3.8%	6.9%	7.8%	11.2%	15.1%	15.6%
25 to 34	1.8%	2.3%	2.5%	2.8%	2.9%	3.2%	3.6%	5.5%	6.6%	8.7%	11.6%	13.9%	16.6%
35 to 44	2.6%	2.5%	2.2%	2.6%	2.8%	2.4%	2.5%	2.9%	3.6%	4.4%	5.9%	7.7%	8.4%
45 to 54	7.6%	8.1%	5.7%	6.3%	6.2%	5.0%	3.3%	3.9%	3.7%	3.6%	4.5%	3.9%	4.9%
55 and over	3.7%	5.1%	2.9%	7.1%	10.2%	9.3%	5.8%	5.2%	6.9%	8.0%	6.6%	5.1%	7.0%

Source: SAMHSA, 2013

Youth Consumption Patterns

According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 2.8% (95% Confidence Interval [CI]: 1.7–4.5) of high school students (grades 9 through 12) in Indiana tried heroin at least once in their life. Indiana's rate was statistically similar to the national YRBSS rate (2.9%; 95% CI: 2.5–3.3) (see Figure 7.5). No statistical differences by gender, race, or grade level were observed in 2011. Prevalence of lifetime heroin use has remained stable among Indiana high school students from 2003 through 2011 (Centers for Disease Control and Prevention (CDC), 2016b).

As noted previously, a common method for heroin usage is by needle injection. According to the 2011 YRBSS, the percentage of students who used a needle to inject any illegal drug into their body one or more times during their lifetime was statistically similar in Indiana (2.1%; 95% CI: 1.3–3.2) and the nation (2.3%; 95% CI: 1.9–2.7). Indiana's rate remained stable from 2003 through 2011 (CDC, 2016b).

Based on results from the 2015 Indiana Youth Survey, past-month heroin use among 7th through 12th grade students ranged from 0.2% to 0.4% (see Figure 7.6). Heroin use among Indiana and U.S. 12th graders remained stable from 2000 through 2013 (see Figure 7.7) (Gassman, Jun, Samuel, Agley, King, & Lee, 2015; Inter-university Consortium for Political and Social Research (ICPSR), 2015). For monthly heroin use rates in Indiana by region and grade level, see Appendix 7B, page 123.

Figure 7.5 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, 2003–2011)

	2003	2005	2007	2009	2011
Indiana	2.4%	2.3%	3.6%	2.6%	2.8%
U.S.	3.3%	2.4%	2.3%	2.5%	2.9%

Source: CDC, 2016b

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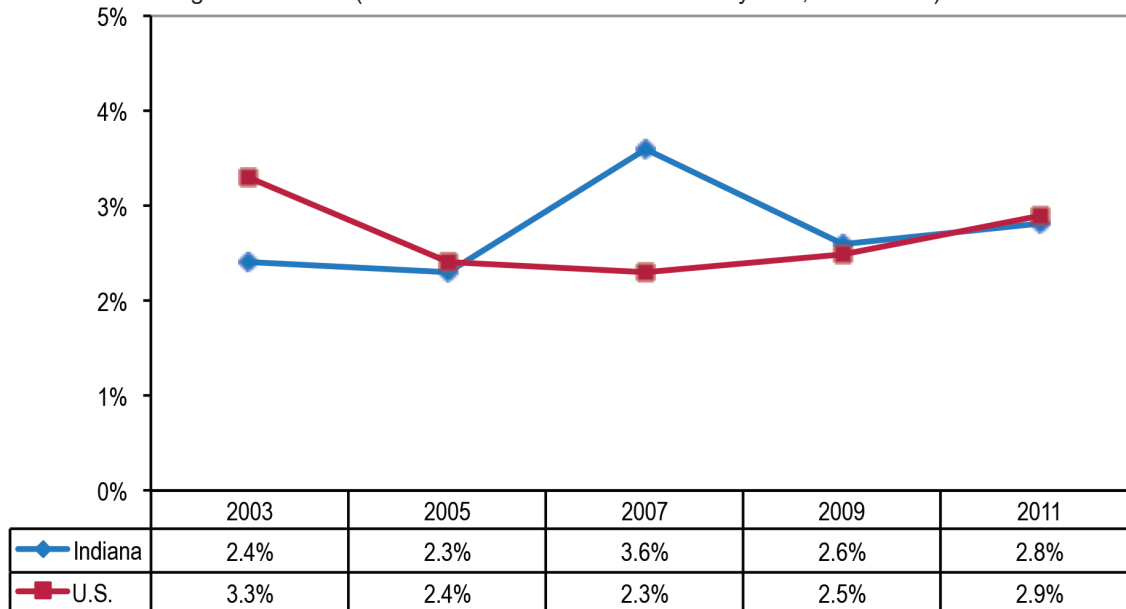
Figure 7.6 Percentage of Indiana 7th through 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey, 2015)

Grade	7th	8th	9th	10th	11th	12th
	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%
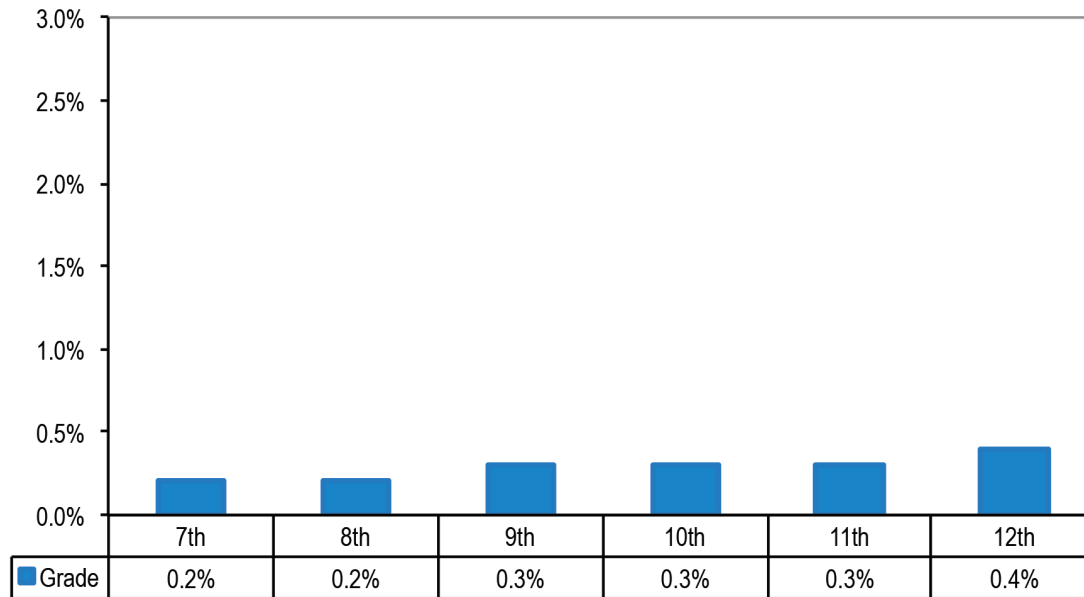
Source: Gassman, et al., 2015

Figure 7.7 Percentage of Indiana and U.S. 12th Grade Students Reporting Monthly Heroin Use (Indiana Youth Survey and Monitoring the Future Survey, 2000–2015)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Indiana	0.9%	0.8%	0.6%	0.6%	0.8%	0.7%	1.0%	0.8%	0.8%	0.8%	1.1%	1.2%	1.0%	0.8%	0.7%	0.4%
U.S.	0.7%	0.4%	0.5%	0.4%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%	0.3%
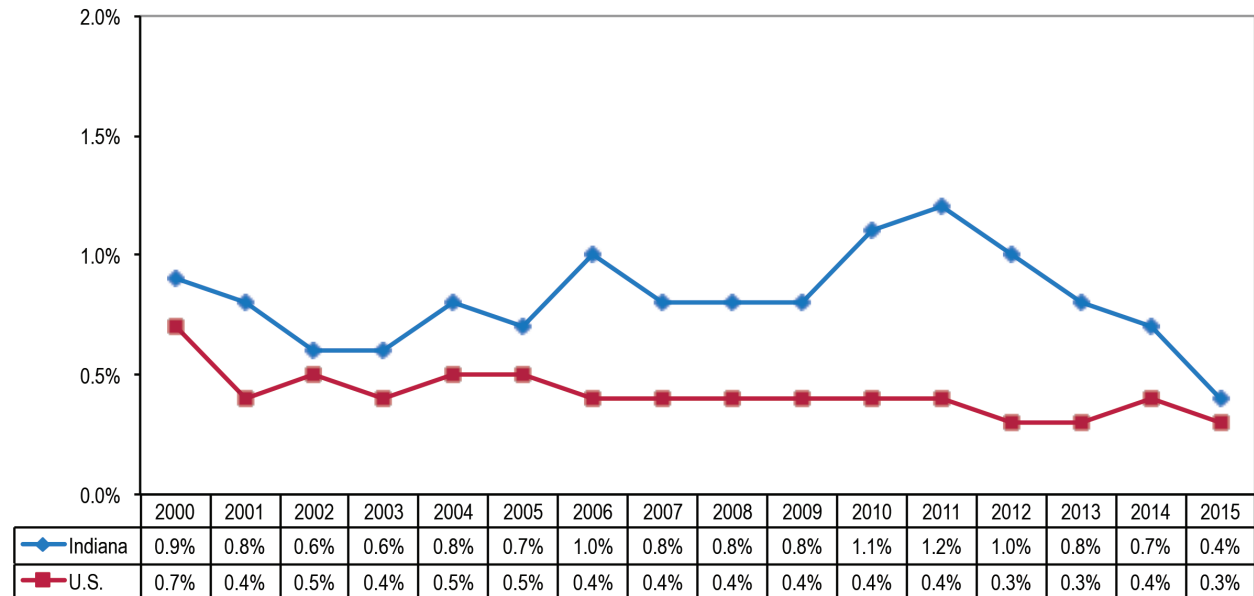
Source: Gassman, et al., 2015; ICPSR, 2015

Figure 7.8 Percentage of Indiana and U.S. Treatment Episodes with Heroin Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	1.8%	1.9%	1.7%	2.2%	2.4%	2.3%	2.0%	2.9%	4.5%	5.3%	6.7%	7.9%	9.2%
U.S.	15.5%	15.1%	14.8%	14.2%	13.8%	13.9%	13.8%	14.2%	14.5%	14.2%	15.2%	16.4%	19.0%
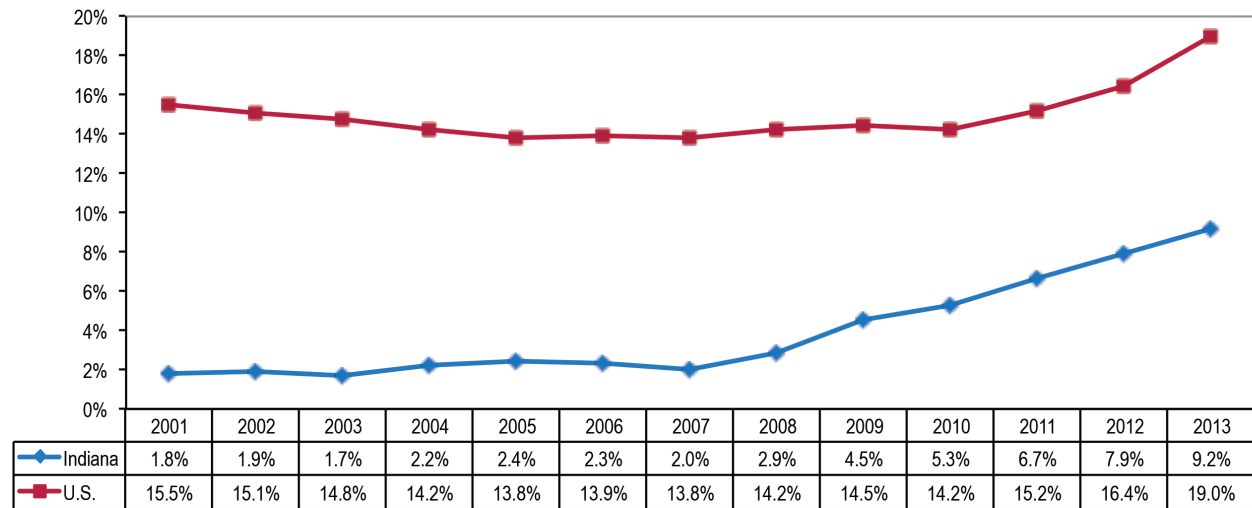
Source: SAMHSA, 2013

CONSEQUENCES

Heroin abuse is associated with serious health conditions, including heroin dependence, fatal overdose, spontaneous abortion, and collapsed veins. In addition, particularly in users who inject the drug, serious health effects include infectious diseases, such as HIV/AIDS and hepatitis C (HCV). Some studies have shown deterioration of the brain's white matter due to heroin use. Heroin's effect on white matter may affect behaviors such as decision making. Other health problems reported in heroin abusers are infections of the heart lining and valves, abscesses, liver disease, and pulmonary complications (NIDA, 2014).

Because street heroin often contains toxic additives that do not easily dissolve, blood vessels leading to the heart, lungs, liver, kidneys, or brain can become clogged. Clogs of this nature can lead to infection or death of small patches of cells in vital organs (NIDA, 2014). The Drug Abuse Warning Network reported that nationwide, approximately 258,482 visits to Emergency Departments (ED) in 2011 involved heroin use; the ED visit rate involving heroin was 83.0 per 100,000 population (Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2013).

Heroin Dependence

A comparison of data from the Treatment Episode Data Set (TEDS) from 2001 through 2013 shows that the percentage of drug treatment admissions for heroin dependence[2] has consistently been lower in Indiana than the rest of the United States ($P < 0.001$). In addition, heroin dependence in Indiana has increased considerably, from 1.8% in 2001 to 9.2% in 2013 (see Figure 7.8).

Statistically significant differences in treatment admissions for heroin dependence were observed in Indiana by gender, race, and age group (SAMHSA, 2013):

- **Gender**—The percentage of women with heroin dependence was greater than the percentage of men, at 11.3% and 7.9%, respectively (see Figure 7.9).
- **Race**—From 2001 through 2007, the percentage of whites with heroin dependence was relatively low. Since 2008, however, the percentage within this racial group has risen steeply; whites now make up the highest percentage of heroin dependence in Indiana's treatment admissions (13.5%). The percentage of blacks with heroin dependence has remained relatively stable over the years. Heroin dependence in those who identify as other races has significantly risen to 10.0% in 2013 (see Figure 7.10).

[2]We defined heroin dependence as "individuals in substance abuse treatment listing heroin as their primary substance at admission."

- **Age**—Heroin dependence was reported predominantly by young adults under 34 years of age. The percentage of heroin dependence in those under 18 jumped from 6.9% in 2011 to 9.3% in 2012 but has decreased significantly in 2013 to 0.8% (see Figure 7.11). For county-level information on heroin dependence, see Appendix 7A, page 122.

Figure 7.9 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	1.5%	1.7%	1.5%	2.0%	2.1%	2.0%	1.7%	2.6%	4.2%	4.9%	6.2%	7.1%	7.9%
Female	2.3%	2.3%	2.2%	2.7%	2.9%	3.0%	2.8%	3.7%	5.0%	6.1%	7.6%	9.3%	11.3%
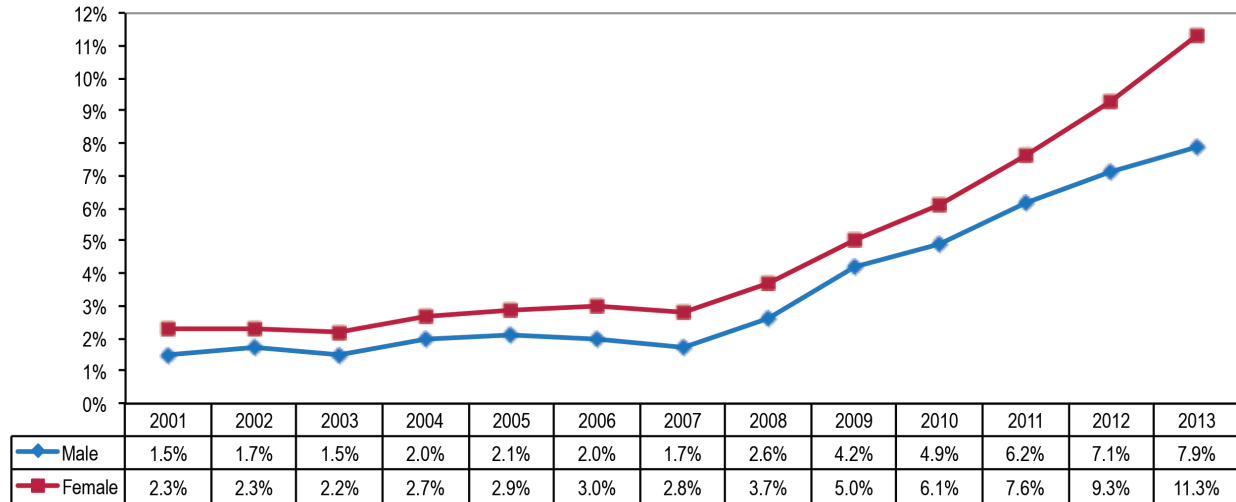
Source: SAMHSA, 2013

Figure 7.10 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2013)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	3.6%	4.3%	2.6%	4.8%	4.8%	4.1%	2.5%	2.6%	3.3%	3.2%	3.8%	3.7%	4.5%
White	1.3%	1.4%	1.6%	1.6%	1.8%	1.9%	2.0%	3.1%	4.4%	5.4%	7.0%	8.8%	13.5%
Other	2.1%	1.0%	1.7%	2.4%	1.8%	2.7%	1.2%	1.4%	5.2%	2.8%	3.8%	6.2%	10.0%
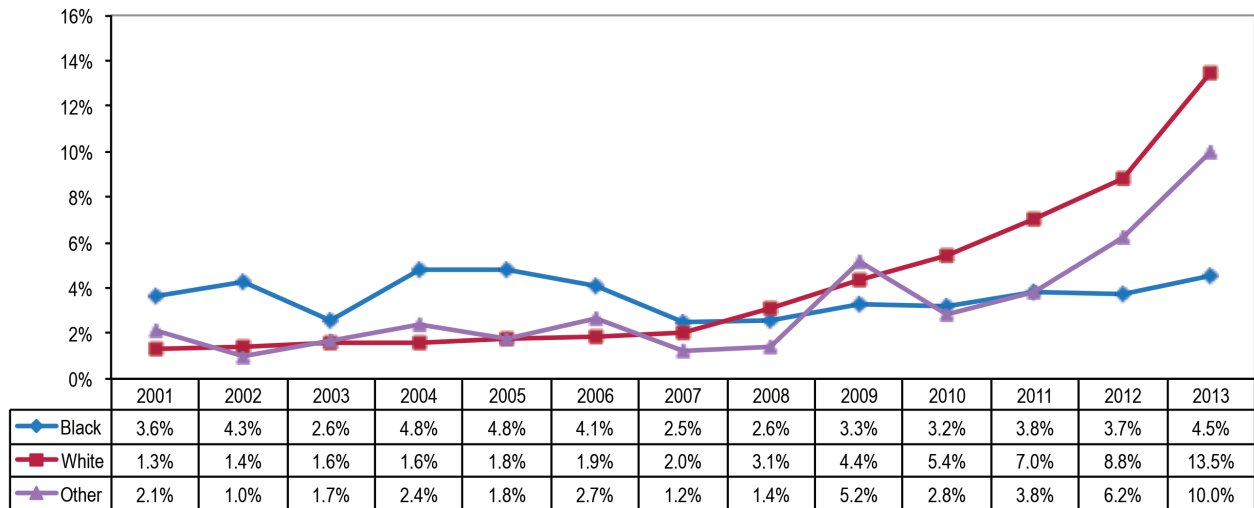
Source: SAMHSA, 2013

Figure 7.11 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2013)
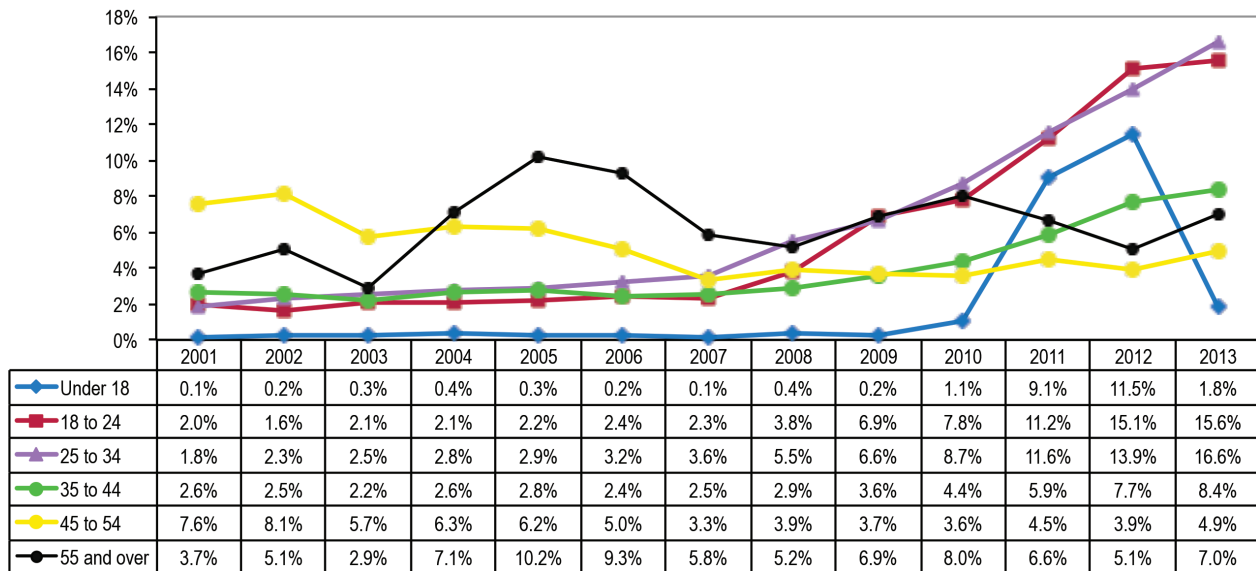

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 18	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.0%	0.1%	0.2%	0.9%	6.9%	9.3%	0.8%
18 to 24	1.5%	1.3%	1.7%	1.6%	1.5%	1.7%	1.6%	2.8%	6.1%	6.5%	8.7%	11.2%	12.2%
25 to 34	1.0%	1.5%	1.7%	1.9%	1.9%	2.4%	2.6%	4.0%	5.4%	7.0%	8.6%	10.1%	13.0%
35 to 44	1.5%	1.5%	1.1%	1.7%	1.9%	1.6%	1.6%	2.0%	2.7%	3.5%	4.3%	4.9%	6.0%
45 to 54	5.5%	5.7%	3.9%	4.9%	4.9%	3.9%	2.1%	2.9%	2.6%	2.8%	2.7%	2.7%	3.3%
55 and over	3.5%	4.0%	2.6%	6.2%	9.3%	8.1%	5.0%	3.8%	5.7%	6.2%	5.2%	3.0%	4.8%

Source: SAMHSA, 2013

Indiana University Center for Health Policy
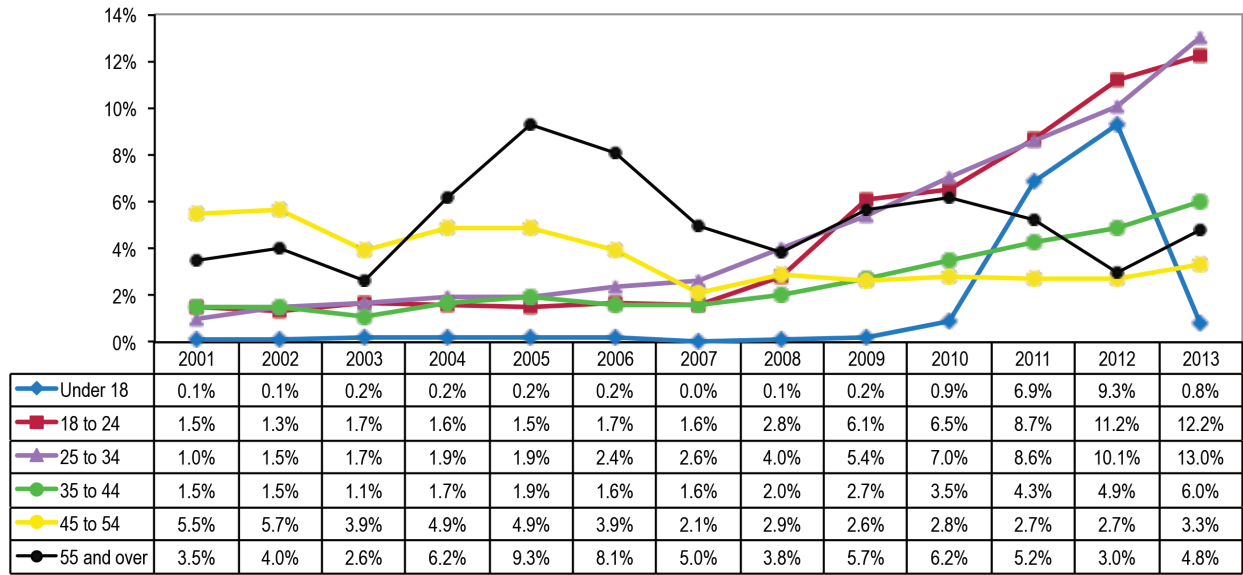
HIV/AIDS

One of the most serious consequences of heroin abuse is contraction of human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) from contaminated needles. Injection drug use (IDU) remains a significant risk factor for HIV/AIDS. In 2014, 421 new HIV infections and 94 new AIDS cases were reported in Indiana. As of December 31, 2014, a total of 11,547 persons were living with HIV or AIDS in Indiana compared to In 11,087 individuals in 2013 (Indiana State Department of Health, 2015a). The estimated annual rate of AIDS diagnoses in Indiana adults and adolescents was 4.9 per 100,000 population in 2014 (U.S.: 7.8)[3] (The Kaiser Family Foundation, 2015). In February of 2015, the Indiana State Department of Health announced a spreading outbreak of HIV in southeastern Indiana. Originally, 26 cases were confirmed within a two-month time period; by December of 2015 the number grew to 184 confirmed cases of HIV. It is believed that intravenous drug use is the main reason for the outbreak (Indiana State Department of Health, 2015b). Indiana's age-adjusted HIV/AIDS mortality rate for 2014 was 1.2 per 100,000 population (95% CI: 1.0–1.5), which was significantly lower than the U.S. rate of 2.0 per 100,000 population (95% CI: 1.9-2.0) (CDC, 2016a).[4]

Hepatitis

Hepatitis is a liver disease that is caused by viral infection. The most common types are hepatitis A, B, and C. The hepatitis B virus (HBV) and hepatitis C virus (HCV) are transmitted when blood of an infected person enters the body of a person who is not infected. The disease is frequently spread via unprotected sex and among injection drug users (IDUs). IDUs are at a high risk of both acquiring and transmitting HBV and HCV (CDC, 2015). It is estimated that 50% to 80% of IDUs become infected with these viruses within five years after initiating injection drug use (CDC, 2014).

In 2013, 101 acute cases of hepatitis B and 175 acute cases of hepatitis C occurred in Indiana, representing rates of 1.5 for HBV (U.S.: 1.0) and 2.7 for HCV (U.S.: 0.6), per 100,000 population (CDC, 2015). HCV has seen a steady increase in Indiana, from 0.3% per 100,000 in 2009 to 2.7 in 2013 which is significantly higher than the national rate.

The 2014 age-adjusted mortality rate attributable to HBV and HCV[5] was 1.2 per 100,000 population (95% CI: 1.0–1.5) in Indiana, which was significantly lower than the national rate of 2.0 per 100,000 population (95% CI: 2.0–2.1) (CDC, 2016a).

Legal Consequences

The Uniform Crime Reporting (UCR) Program collects information on arrests for possession and sale/manufacture of opiates and cocaine combined; data on either drug category individually are currently not available (Federal Bureau of Investigation (FBI), 2012). According to the 2012 dataset, law enforcement made just under 1,600 arrests for possession and more than 1,500 arrests for sale/manufacture of opiates and cocaine in Indiana in that year. This represents arrest rates of 0.2 per 1,000 population (95% CI: 0.2–0.3) for possession and 0.2 per 1,000 population (95% CI: 0.2–0.3) for sale/manufacture. For trend information and comparisons with the United States, refer to Chapter 6, Cocaine, starting on page 97; for county-level data, see Maps 6.1 and 6.2 (pages 109 and 110) and Appendix 6C (pages 107-108).

[3]U.S. Rate does not include the territories
[4]Mortality rates for HIV/AIDS are based on ICD-10 codes B20-B24 (Human immunodeficiency virus [HIV] disease).
[5]Mortality rates for hepatitis B and C infections are based on the following ICD-10 codes: B16 (Acute hepatitis B), B17.0 (Acute delta-[super]infection of hepatitis B carrier), B17.1 (Acute hepatitis C), B18.0 (Chronic viral hepatitis B with delta-agent), B18.1 (Chronic viral hepatitis B without delta-agent), B18.2 (Chronic viral hepatitis C).

APPENDIX 7A

Number and Percentage of Treatment Episodes with Heroin Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Treatment Episodes Total	Heroin Use Number	%	Heroin Dependence Number	%	County	Treatment Episodes Total	Heroin Use Number	%	Heroin Dependence Number	%
Adams	176	19	10.8%	12	6.8%	Madison	1,193	109	9.1%	71	6.0%
Allen	1,715	169	9.9%	123	7.2%	Marion	4,457	1,100	24.7%	941	21.1%
Bartholomew	577	82	14.2%	41	7.1%	Marshall	190	13	6.8%	10	5.3%
Benton	49	<5	N/A	<5	N/A	Martin	46	<5	N/A	<5	N/A
Blackford	76	26	34.2%	18	23.7%	Miami	268	38	14.2%	27	10.1%
Boone	191	36	18.8%	31	16.2%	Monroe	1,214	190	15.7%	106	8.7%
Brown	107	21	19.6%	12	11.2%	Montgomery	341	76	22.3%	51	15.0%
Carroll	107	11	10.3%	<5	N/A	Morgan	469	90	19.2%	62	13.2%
Cass	235	18	7.7%	15	6.4%	Newton	40	15	37.5%	11	27.5%
Clark	408	63	15.4%	62	15.2%	Noble	235	6	2.6%	<5	N/A
Clay	185	7	3.8%	<5	N/A	Ohio	33	6	18.2%	<5	N/A
Clinton	171	30	17.5%	20	11.7%	Orange	135	10	7.4%	6	4.4%
Crawford	37	<5	N/A	<5	N/A	Owen	184	16	8.7%	8	4.3%
Daviess	252	24	9.5%	18	7.1%	Parke	105	8	7.6%	<5	N/A
Dearborn	493	161	32.7%	113	22.9%	Perry	121	<5	N/A	<5	N/A
Decatur	199	16	8.0%	<5	N/A	Pike	38	<5	N/A	<5	N/A
DeKalb	274	15	5.5%	6	2.2%	Porter	679	199	29.3%	178	26.2%
Delaware	1,067	201	18.8%	148	13.9%	Posey	132	<5	N/A	<5	N/A
Dubois	277	6	2.2%	<5	N/A	Pulaski	122	14	11.5%	11	9.0%
Elkhart	672	33	4.9%	25	3.7%	Putnam	208	16	7.7%	8	3.8%
Fayette	223	73	32.7%	40	17.9%	Randolph	156	36	23.1%	19	12.2%
Floyd	171	33	19.3%	33	19.3%	Ripley	217	47	21.7%	33	15.2%
Fountain	43	10	23.3%	<5	N/A	Rush	143	17	11.9%	12	8.4%
Franklin	145	37	25.5%	24	16.6%	Saint Joseph	1,518	235	15.5%	204	13.4%
Fulton	160	12	7.5%	8	5.0%	Scott	144	11	7.6%	10	6.9%
Gibson	245	<5	N/A	<5	N/A	Shelby	142	32	22.5%	28	19.7%
Grant	526	70	13.3%	61	11.6%	Spencer	174	<5	N/A	<5	N/A
Greene	183	20	10.9%	14	7.7%	Starke	255	71	27.8%	54	21.2%
Hamilton	972	166	17.1%	147	15.1%	Steuben	262	11	4.2%	7	2.7%
Hancock	226	35	15.5%	31	13.7%	Sullivan	58	<5	N/A	<5	N/A
Harrison	31	<5	N/A	<5	N/A	Switzerland	69	11	15.9%	6	8.7%
Hendricks	346	84	24.3%	75	21.7%	Tippecanoe	461	71	15.4%	50	10.8%
Henry	347	31	8.9%	21	6.1%	Tipton	61	9	14.8%	6	9.8%
Howard	596	161	27.0%	124	20.8%	Union	31	14	45.2%	10	32.3%
Huntington	130	11	8.5%	<5	N/A	Vanderburgh	1,333	29	2.2%	14	1.1%
Jackson	347	55	15.9%	24	6.9%	Vermillion	128	7	5.5%	7	5.5%
Jasper	127	52	40.9%	41	32.3%	Vigo	652	18	2.8%	13	2.0%
Jay	159	51	32.1%	39	24.5%	Wabash	281	44	15.7%	30	10.7%
Jefferson	375	47	12.5%	18	4.8%	Warren	17	<5	N/A	<5	N/A
Jennings	265	30	11.3%	15	5.7%	Warrick	253	8	3.2%	<5	N/A
Johnson	237	54	22.8%	47	19.8%	Washington	98	17	17.3%	17	17.3%
Knox	273	10	3.7%	8	2.9%	Wayne	386	139	36.0%	88	22.8%
Kosciusko	309	30	9.7%	20	6.5%	Wells	119	22	18.5%	13	10.9%
LaGrange	166	<5	N/A	<5	N/A	White	133	7	5.3%	<5	N/A
Lake	2,344	434	18.5%	378	16.1%	Whitley	102	<5	N/A	<5	N/A
LaPorte	451	132	29.3%	119	26.4%	County Info Missing	61	16	26.2%	15	24.6%
Lawrence	467	32	6.9%	20	4.3%	**Indiana**	**34,596**	**5,420**	**15.7%**	**4,137**	**12.0%**

Note: We defined heroin dependence as "individuals in substance abuse treatment listing heroin as their primary substance at admission."

We calculated the percentages by dividing the number of reported heroin use/dependence by the number of treatment episodes.

Information on treatment episodes <5 was suppressed due to confidentiality constraints.

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 7B

Percentage of Indiana Students Reporting Monthly Heroin Use in Indiana, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
7th Grade	0.2	0.3	0.1	0.4	0.2	0.4	0.3	0.2	0.0
8th Grade	0.2	0.3	0.2	0.2	0.1	0.1	0.3	0.3	0.3
9th Grade	0.3	0.4	0.5	0.1	0.2	0.4	0.3	0.3	0.2
10th Grade	0.3	0.3	0.2	0.2	0.2	0.3	0.7*	0.1	0.5
11th Grade	0.3	0.5	0.6	0.4	0.5	0.2	0.2	0.2	0.4
12th Grade	0.4	0.5	0.2	0.3	0.2	0.4	0.7	0.3	0.3

Notes: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Beginning in 2015, the Indiana Youth Survey stopped asking 6th grade students about heroin use; also, lifetime prevalence is no longer available by region.
Source: Gassman et al., 2015

REFERENCES, CHAPTER 7

Centers for Disease Control and Prevention. (2014). *Viral hepatitis integration for HIV prevention community planners.* Retrieved from http://www.cdc.gov/hepatitis/Resources/PDFs/hiv_comm_planners.pdf

Centers for Disease Control and Prevention. (2015). *Surveillance for Viral Hepatitis – United States, 2012.* Retrieved from http://www.cdc.gov/hepatitis/Statistics/2012Surveillance/index.htm

Centers for Disease Control and Prevention. (2016a). *CDC WONDER underlying cause of death (compressed mortality).* Retrieved from http://wonder.cdc.gov/

Centers for Disease Control and Prevention. (2016b). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

King, R.A., & Jun, M.K. (2015). *Indiana College Substance Use Survey, 2015.* Bloomington, IN: Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Indiana State Department of Health. (2015a). *Spotlight on HIV/STD/viral hepatitis – December 2014.* Retrieved from https://secure.in.gov/isdh/files/At_A_Glance%287%29.pdf

Indiana State Department of Health. (2015b). *HIV Outbreak in Southeastern Indiana* Retrieved from http://www.in.gov/isdh/26649.htm

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

National Institute on Drug Abuse. (2014). *Heroin: Abuse and addiction.* Retrieved from http://www.drugabuse.gov/publications/drugfacts/heroin

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *The DAWN Report: Highlights of the 2011 Drug Abuse Warning Network (DAWN) Findings on Drug-Related Emergency Department Visits.* Retrieved from http://www.samhsa.gov/data/2k13/DAWN2k11ED/DAWN2k11ED.htm#high1

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

The Kaiser Family Foundation. (2015). *Indiana: HIV/AIDS.* Data Source: Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention-Surveillance and Epidemiology. Retrieved from http://kff.org/state-category/hivaids/

METHAMPHETAMINE USE IN INDIANA: CONSUMPTION PATTERNS AND CONSEQUENCES

METHAMPHETAMINE CONSUMPTION

Methamphetamine (meth) – a derivative of amphetamine - is a potent and highly addictive stimulant. Similar to its parent compound, meth – also known as "crystal" or "ice" – affects the central nervous system, but its effects are more pronounced and longer-lasting. It can be injected, snorted, smoked, or ingested orally (Halkitis, Parsons, & Stirratt, 2001). Methamphetamine users feel a short, yet intense euphoria or "rush" when the drug is initially administered, followed by an extended high that can last up to 12 hours due to the long half-life of this drug (Centers for Disease Control and Prevention (CDC), 2007). The immediate effects of methamphetamine include increased physical activity, wakefulness, and decreased appetite (National Institute on Drug Abuse (NIDA), 2014). The intensity of meth stimulation is linked to the mode of use. Oral ingestion or snorting gives a longer-lasting, but less intense effect, while smoking or injecting intravenously results in a brief, but more intense effect (Homer et al., 2008).

General Consumption Patterns

Methamphetamine use in the general population is comparably low and currently no state-level prevalence estimates exist. However, the National Survey on Drug Use and Health (NSDUH) measures lifetime, past year, and past month (current) use of methamphetamine in the U.S. population. Based on 2014 NSDUH findings, 4.9% of Americans ages 12 and older used meth at least once in their lifetime; 0.5% used it in the past year; and 0.2%

reported past-month use (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014).

Adult Consumption Patterns

As mentioned before, no state-level prevalence rates on meth use within the general population are available. National estimates, however, show that lifetime use was highest among adults aged 26 and older (5.7%), while past-year use occurred mostly among 18- to 25-year-olds (1.0%); past-month use was the same among all age categories (0.2%) (SAMHSA, 2014).

The Indiana College Substance Use Survey provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to 2015 survey results, which were based on eight participating colleges and universities, 0.5% of Indiana college students reported using meth in the past year (U.S.: 0.1%) while 0.2% had used it in the past month (U.S.: 0.1%). Past-year meth use was higher in male than female students (1.0% and 0.2%, respectively); however, no statistically significant difference between the genders was evident for past-month use (King & Jun, 2015).[1]

The Treatment Episode Data Set (TEDS) includes information gathered from patients at the time of substance abuse treatment admission (SAMHSA, 2013). Indiana TEDS data show an increase in the percentage of patients reporting meth use at admission, from 4.0% in 2000 to 13.4% in 2013. The percentage of treatment admissions with reported meth use has been significantly higher in Indiana than in the United States since 2009 (see Figure 8.1).

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[1]Eight Indiana colleges participated in the 2015 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

Figure 8.1 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	4.0%	5.3%	7.1%	8.2%	9.2%	10.9%	10.5%	9.2%	9.2%	9.4%	9.3%	11.2%	12.1%	13.4%
U.S.	6.5%	7.4%	8.5%	9.3%	10.2%	11.8%	12.0%	11.1%	9.3%	8.5%	8.9%	8.8%	10.5%	12.2%
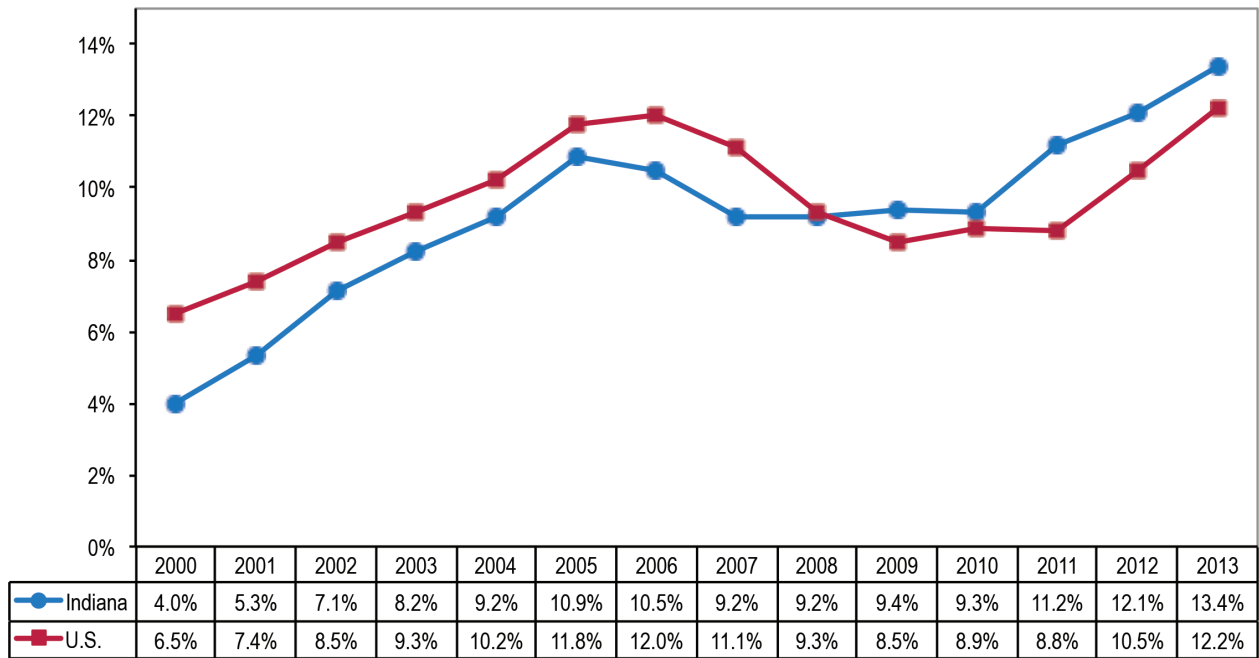
Source: SAMHSA, 2013

Figure 8.2 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	3.5%	4.6%	6.0%	7.1%	7.8%	9.2%	8.7%	7.8%	8.3%	7.8%	7.9%	9.4%	8.6%	11.5%
Female	4.9%	7.0%	9.5%	10.6%	12.0%	14.2%	14.0%	11.9%	11.1%	12.6%	11.8%	14.4%	14.5%	16.4%

Source: SAMHSA, 2013

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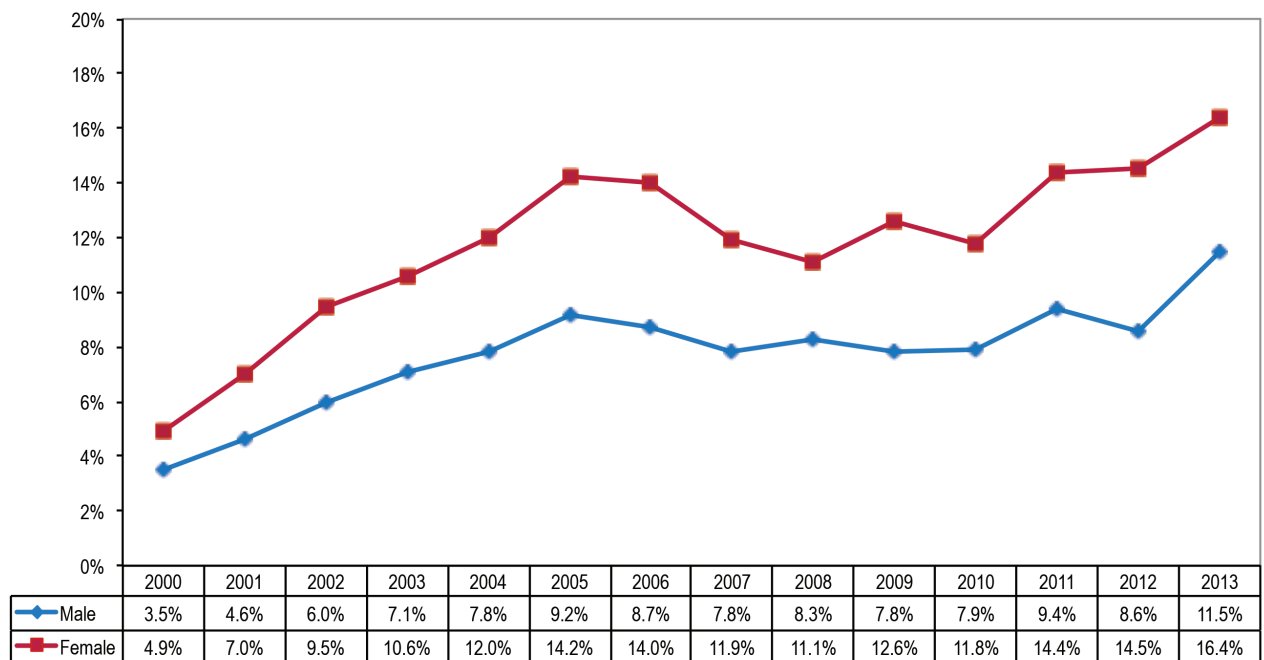
In Indiana, statistically significant differences in meth use were observed by gender, race, and age, as follows ($P < 0.001$):

- **Gender**—Across all data points, the percentage of female clients reporting meth use at admission was significantly greater than the percentage of male clients (see Figure 8.2).
- **Race**—Meth use was significantly higher among white patients than black or other minority patients. Reported use for whites nearly tripled from 5.2% in 2000 to 15.5% in 2013. Even though blacks consistently had the lowest percentage, reported use increased significantly from 0.3% to 1.9% during that time period; however, the greatest increase was found among other races, whose percentage rose more than 15-fold from 0.7% to 11.0% (see Figure 8.3).
- **Age**—Adults ages 25 to 44 reported the highest percentage of meth use, significantly more than older or younger Hoosiers in treatment (see Figure 8.4) (SAMHSA, 2013).

For county-level treatment data, see Appendix 8A, page 136.

Figure 8.3 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	0.3%	0.4%	0.5%	0.4%	0.4%	0.5%	0.7%	0.6%	0.8%	1.7%	1.5%	1.6%	2.6%	1.9%
White	5.2%	6.6%	8.8%	10.2%	11.5%	13.3%	12.6%	10.9%	11.1%	11.2%	11.3%	13.3%	14.0%	15.5%
Other	0.7%	1.9%	3.0%	2.5%	3.0%	7.2%	10.0%	8.4%	6.9%	6.6%	6.5%	7.1%	7.8%	11.0%
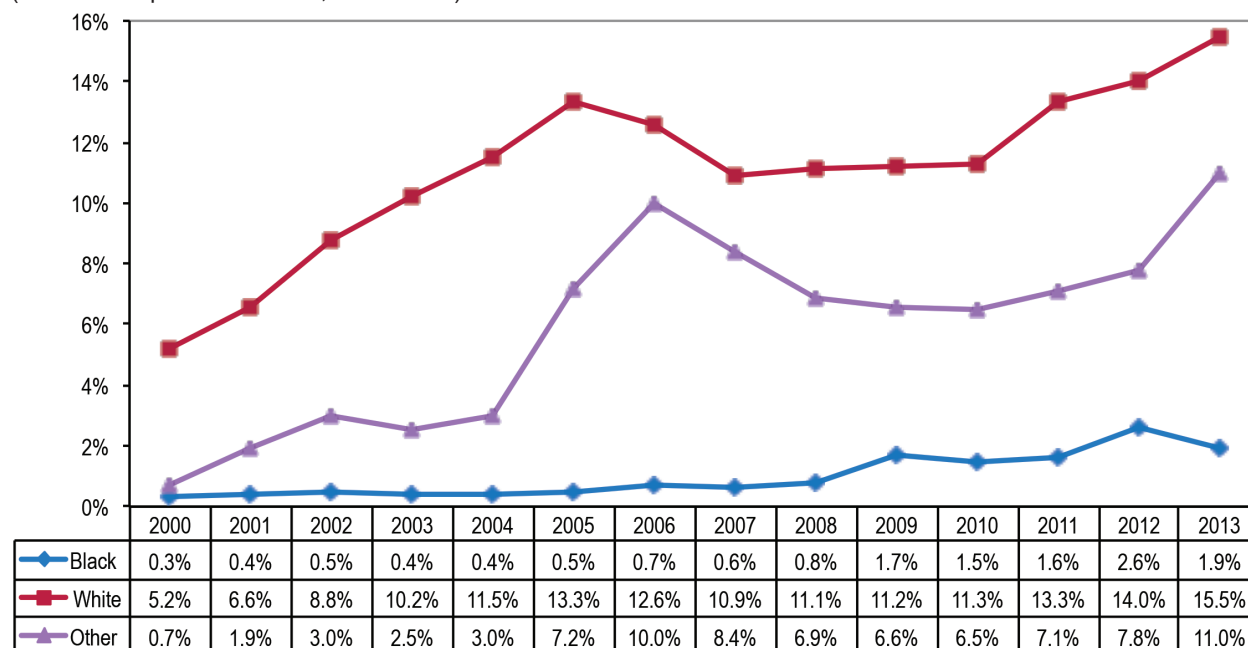
Source: SAMHSA, 2013

Figure 8.4 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 18	1.9%	2.9%	3.9%	3.8%	3.4%	7.0%	4.3%	2.8%	2.2%	1.0%	1.7%	3.1%	1.6%	2.9%
18 to 24	5.3%	6.4%	8.3%	8.9%	10.3%	12.4%	11.1%	8.1%	8.2%	7.8%	7.7%	9.4%	10.3%	11.8%
25 to 34	5.1%	7.4%	9.6%	11.0%	12.9%	14.7%	13.7%	12.5%	11.9%	12.5%	12.0%	14.1%	14.6%	16.4%
35 to 44	3.5%	4.6%	6.4%	8.1%	8.4%	9.6%	10.9%	10.3%	10.4%	11.9%	11.6%	13.8%	15.9%	16.5%
45 to 54	1.9%	1.7%	3.1%	3.3%	4.3%	5.3%	5.3%	4.9%	6.6%	5.4%	6.4%	8.6%	8.8%	10.4%
55 and over	0.4%	0.9%	0.4%	0.9%	0.8%	0.8%	2.1%	2.5%	2.8%	2.7%	2.9%	2.5%	3.7%	3.9%

Source: SAMHSA, 2013

Figure 8.5 Percentage of Indiana and U.S. High School Students (9th–12th Grade) Reporting Lifetime Methamphetamine Use (Youth Risk Behavior Surveillance System, 2003–2013)

	2003	2005	2007	2009	2011	2013
Indiana	8.2%	7.0%	6.2%	4.1%	3.9%	N/A
U.S.	7.6%	6.2%	4.4%	4.1%	3.8%	3.2%
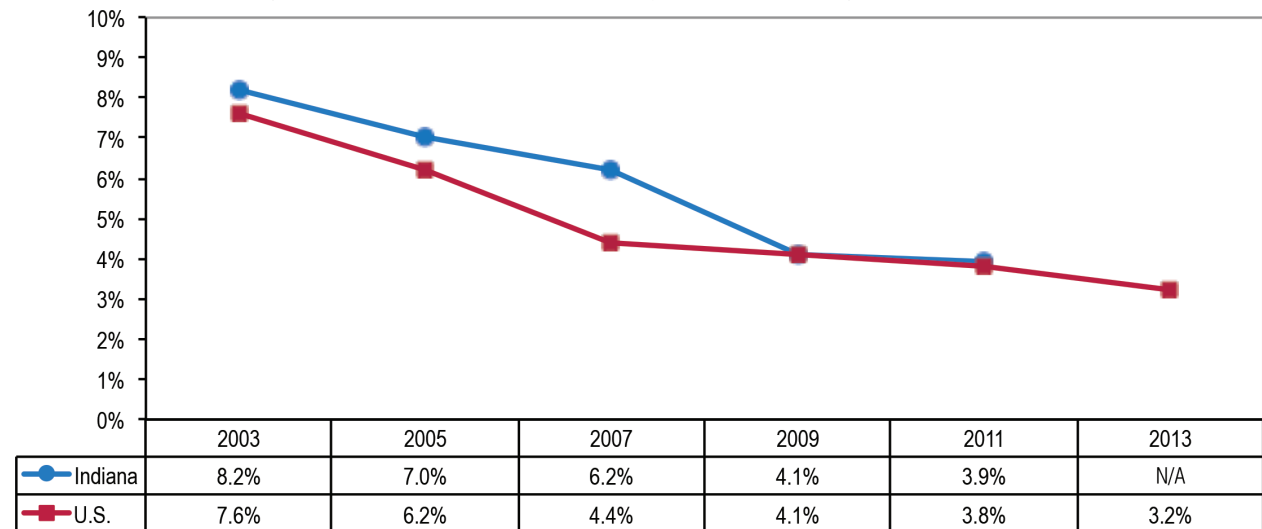
Note: 2013 YRBSS data not available for Indiana due to insufficient response rate.
Source: CDC, 2016

Youth Consumption Patterns

According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 3.9% (95% Confidence Interval [CI]: 2.3–6.5) of Indiana high school students reported having used meth once or more in their lifetimes; the national rate was virtually the same (3.8%; 95% CI: 3.4–4.3). This represents a significant drop from Indiana's 2003 level of 8.2% (95% CI: 6.5–10.3) (see Figure 8.5). Rate differences by gender, race, and grade level were not significant in Indiana (see Table 8.1) (CDC, 2016).

Two other surveys of young people that include questions about lifetime and current methamphetamine use are the Indiana Youth Survey, conducted among Indiana students in grades 6 through 12 (Gassman et al., 2015), and the Monitoring the Future (MTF) survey, administered nationally among 8th, 10th, and 12th graders (Inter-university Consortium for Political and Social Research (ICPSR), 2015).

Table 8.1 Percentage of Indiana and U.S. High School Students Reporting Lifetime Methamphetamine Use, by Gender, Race/Ethnicity, and Grade (Youth Risk Behavior Surveillance System, 2011)

		Indiana Prevalence % (95% CI)	U.S. Prevalence % (95% CI)
Gender	Male	4.5% (2.3–8.5)	4.5% (3.9–5.2)
	Female	3.4% (2.2–5.1)	3.0% (2.5–3.6)
Race/Ethnicity	Black	3.9% (1.0–14.2)	2.6% (1.9–3.6)
	White	3.8% (2.4–6.0)	3.7% (3.1–4.3)
	Hispanic	4.8% (2.0–11.2)	4.6% (3.7–5.8)
Grade	9th	3.7% (2.6–5.1)	3.2% (2.6–4.1)
	10th	4.0% (2.6–5.9)	3.7% (2.9–4.7)
	11th	3.0% (1.3–7.0)	4.1% (3.3–5.0)
	12th	5.1%(1.6–14.8)	4.1% (3.4–4.9)
Total		**3.9% (2.3–6.5)**	**3.8% (3.4–4.3)**

Source: CDC, 2016

Figure 8.6 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current (Past Month) Methamphetamine Use, by Grade (Indiana Youth Survey, 2005–2015)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th Grade	1.1%	0.9%	0.7%	0.7%	0.6%	0.8%	0.9%	0.5%	0.3%	0.4%	0.3%
10th Grade	1.6%	1.2%	1.0%	1.0%	0.9%	1.0%	0.9%	0.9%	0.7%	0.7%	0.5%
12th Grade	1.7%	1.5%	1.0%	0.9%	0.9%	1.0%	1.3%	1.1%	0.9%	0.7%	0.5%
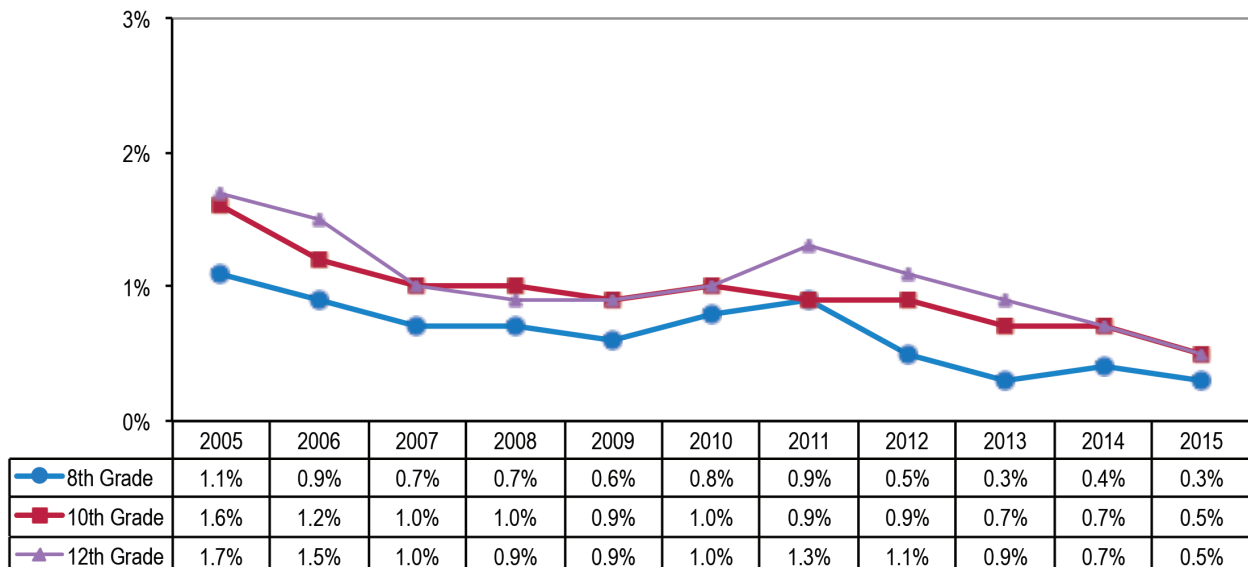
Source: Gassman et al., 2015

In Indiana, current (past month) rates of meth use among 8th, 10th, and 12th grade students seemed to have decreased from 2005 to 2015, (see Figure 8.6). For monthly meth use in Indiana, by region and grade, see Appendix 8B, page 137.

Figure 8.7   Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	1.5%	2.4%	3.5%	4.2%	5.0%	5.9%	5.6%	4.8%	5.0%	5.0%	4.7%	5.8%	6.5%	7.5%
U.S.	3.8%	4.5%	5.5%	6.2%	6.9%	8.2%	8.4%	7.6%	6.1%	5.5%	5.7%	5.5%	6.6%	7.7%
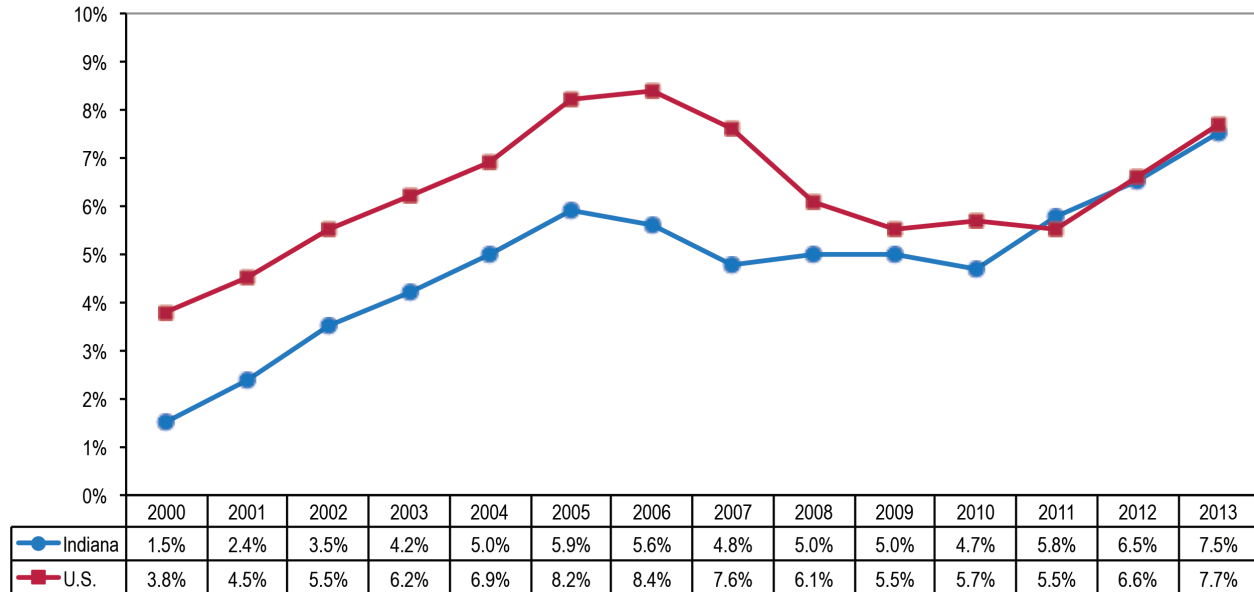
Source: SAMHSA, 2013

CONSEQUENCES

Health-Related Consequences

Methamphetamine use has both short-term and chronic health consequences. Immediate effects include increased wakefulness, physical activity, decreased appetite, cardiac problems, and hyperthermia (elevated body temperature). With chronic use, meth causes physiological changes such as impaired memory, mood alterations, and diminished motor coordination. Also long-term use can lead to insomnia, violent behavior, hallucinations, confusion, weight loss, stroke, and psychiatric problems (NIDA, 2014). Certain psychiatric conditions, such as paranoid psychosis, can be both a short-term and long-term result of meth use, and may persist for a long period even after meth consumption has ceased. Also, clinical observations show a link between meth use and long-lasting brain injury (Ernst, Chang, Leonido-Yee, & Speck, 2000). Other health consequences of prolonged meth use include cardiovascular collapse; brain, liver, and kidney damage; severe tooth decay (or "meth mouth"); hepatitis; extreme weight loss; mental illness; increased risk of unsafe sex and risky sexual behavior; increased risk of STD/HIV transmission (especially associated with injection drug use); unwanted pregnancy; and death (NIDA, 2014).

Meth labs and parental addiction pose serious risks to children, including chemical contamination; fires and explosions; physical, emotional, and sexual abuse; and abuse-related deaths (Messina, Marinelli-Casey, West, & Rawson, 2007; Petit & Curtis, 1997). Children living in meth labs may be exposed to highly toxic fumes generated from meth production or the second-hand smoke of adults using the drug. Also, there is a high risk of accidental ingestion of chemicals used for meth production, which may be fatal (Perez, Arsura, & Strategos, 1999). Low-level exposure to some of the meth ingredients may lead to headache, nausea, dizziness, and fatigue. At higher levels, exposure can

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produce lung irritation, coughing, chest pain, dizziness, chemical burns (to the skin, eyes, mouth, and nose), damage to the brain, and even death (Office of Justice Programs, 2003; Irvin & Chin, 1997)

Meth Dependence

Because meth is highly addictive, its consumption can easily result in drug dependence.[2] TEDS data demonstrate that the percentage of treatment admissions in which meth was indicated as the primary drug was significantly lower in Indiana than in the rest of the nation from 2000 through 2010. However, this trend changed in 2011, with Indiana and U.S. percentages now being statistically similar (SAMHSA, 2013).

Between 2000 and 2013, the percentage of treatment admissions in Indiana in which meth dependence was indicated increased significantly from 1.5% to 7.5% (see Figure 8.7).

According to 2013 TEDS data, methamphetamine dependence in Indiana's treatment population differed significantly by gender, race, and age group, as follows ($P < 0.001$):

- **Gender**—More women (9.2%) than men (6.4%) listed meth as their primary drug at treatment admission (see Figure 8.8).
- **Race**—The highest and lowest percentages of meth dependence were reported by white patients (8.9%) and black patients (0.6%), respectively (see Figure 8.9).
- **Age**—Meth dependence was indicated primarily among patients ages 25 to 44; Hoosiers under 18 (1.4%) and those ages 55 and older had the lowest percentages (2.1%) (see Figure 8.10) (SAMHSA, 2013).

For county-level treatment data, see Appendix 8A, page 136.

Figure 8.8 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Male	1.2%	1.8%	2.7%	3.5%	4.1%	4.5%	4.2%	3.8%	4.2%	3.9%	3.8%	4.7%	5.3%	6.4%
Female	2.2%	3.7%	5.4%	5.8%	6.7%	8.6%	8.3%	6.7%	6.6%	7.1%	6.3%	7.8%	8.5%	9.2%
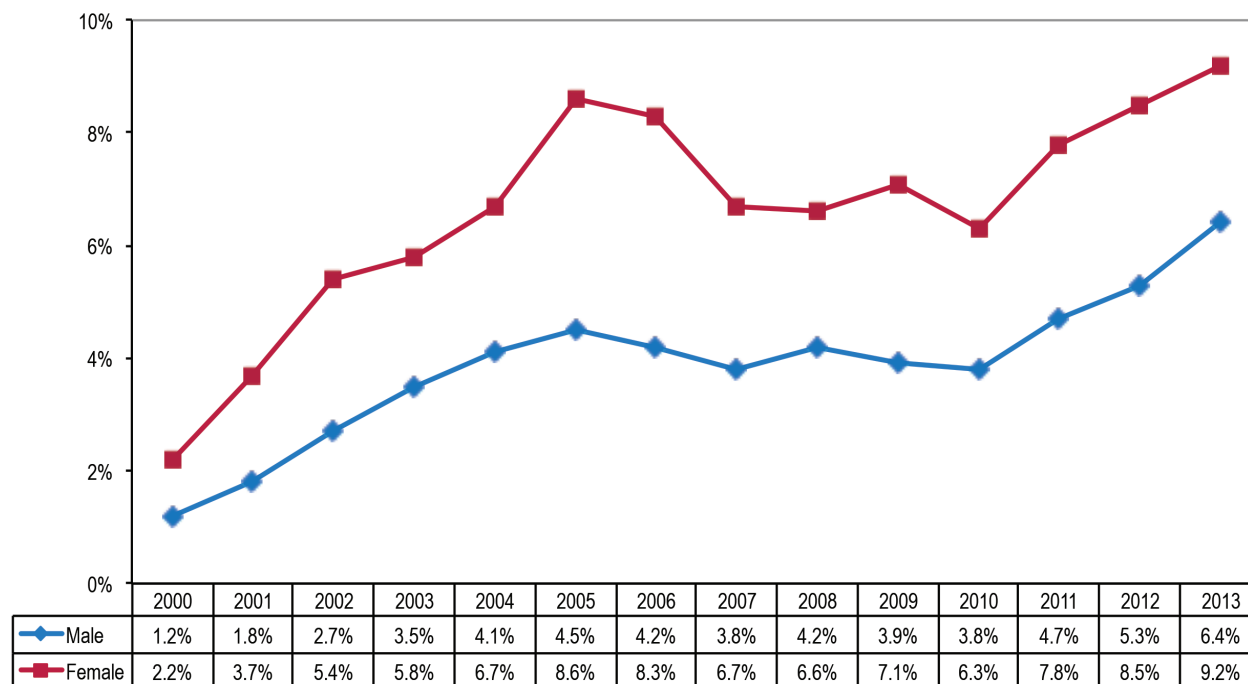
Source: SAMHSA, 2013

[2]We defined methamphetamine dependence as "individuals in substance abuse treatment listing methamphetamine as their primary substance at admission."

Figure 8.9 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2013)

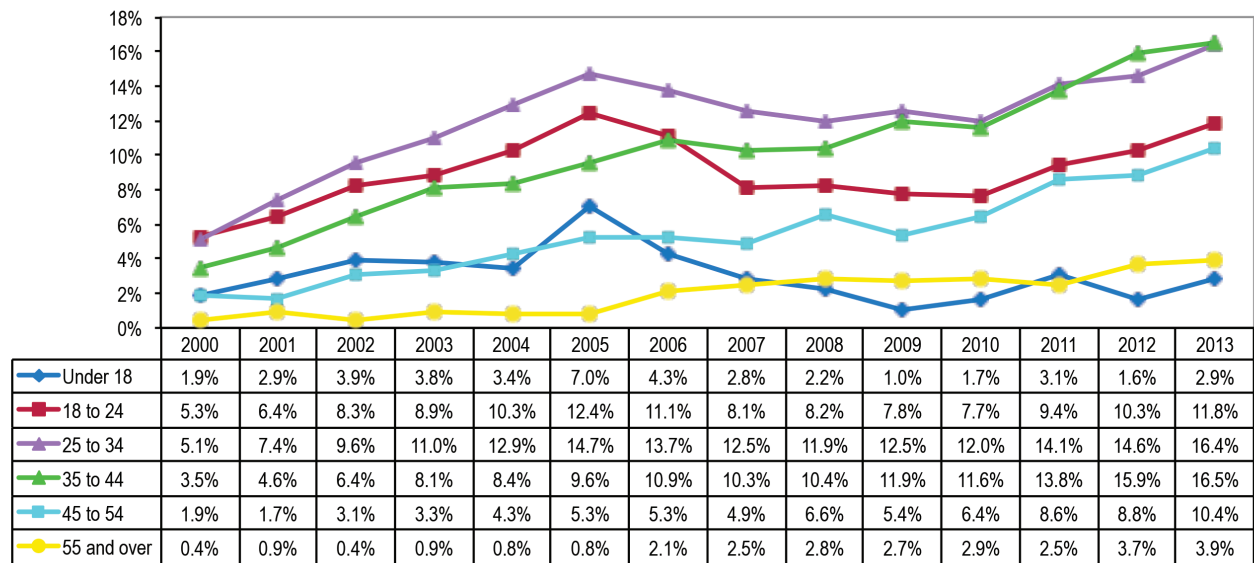|	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%	0.2%	0.3%	0.2%	0.4%	0.5%	0.5%	1.0%	0.6%
White	2.0%	3.0%	4.4%	5.3%	6.2%	7.1%	6.7%	5.7%	6.0%	6.0%	5.8%	6.9%	7.7%	8.9%
Other	0.4%	1.2%	1.1%	1.3%	1.3%	3.9%	4.6%	4.6%	4.0%	3.7%	2.8%	4.0%	3.4%	5.1%
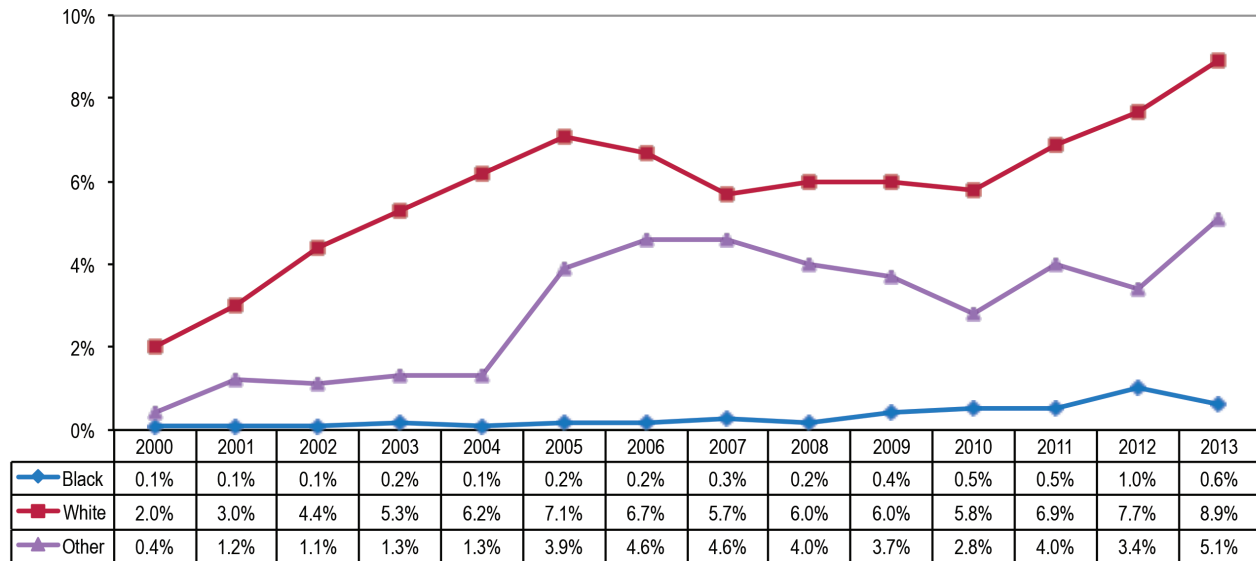
Source: SAMHSA, 2013

Figure 8.10 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 18	0.5%	1.0%	1.5%	1.7%	1.4%	2.1%	1.3%	0.6%	1.2%	0.3%	0.8%	1.7%	1.2%	1.4%
18 to 24	1.9%	3.0%	3.9%	4.2%	5.0%	6.1%	5.3%	4.1%	3.9%	3.6%	3.5%	4.3%	5.8%	6.3%
25 to 34	1.9%	3.4%	4.9%	6.0%	7.2%	8.3%	7.7%	6.8%	6.6%	7.0%	6.0%	7.4%	8.0%	9.3%
35 to 44	1.4%	2.2%	3.4%	4.2%	5.0%	5.6%	6.0%	5.4%	5.9%	6.7%	6.3%	7.7%	8.7%	9.5%
45 to 54	0.8%	0.5%	1.4%	1.7%	2.1%	2.9%	2.4%	2.7%	3.7%	2.6%	3.5%	4.6%	4.2%	5.9%
55 and over	0.4%	0.4%	0.1%	0.3%	0.4%	0.6%	1.8%	1.2%	1.7%	1.1%	1.7%	0.7%	1.2%	2.1%

Source: SAMHSA, 2013

Figure 8.11 Number of Clandestine Methamphetamine Labs Seized and Number of Arrests Made at Methamphetamine Labs by the Indiana State Police (Indiana Meth Lab Statistics, 2003–2015)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of Lab Seizures	1,011	1,115	992	766	820	1,059	1,343	1,346	1,363	1,663	1,721	1,466	1,452
Number of Arrests	860	885	674	530	534	739	1,031	1,212	1,328	1,448	1,507	1,263	1,087
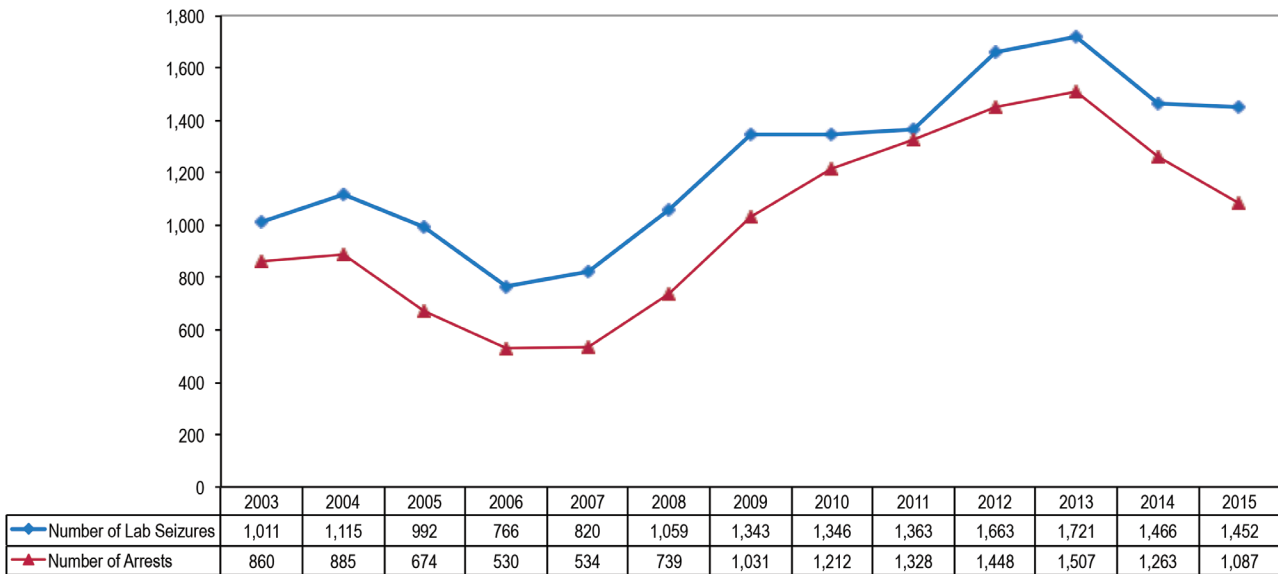
Source: ISP, 2016

Criminal Consequences

From January 1 to December 31, 2015, the Indiana State Police (ISP) seized 1,452 clandestine methamphetamine labs and made 1,087 meth lab arrests in the state. These numbers were a decrease in both lab seizures and arrests from the previous year (see Figure 8.11) (ISP, 2016). However, not all seizures involved the "traditional" clandestine lab. A popular technique to produce meth is the one-pot or "shake and bake" method, which entails combining all the ingredients in one container (often a 2-liter or 20-ounce plastic soda bottle) and shaking. This can be done almost anywhere, even in a moving vehicle, and waste disposal is often along roadsides, in discarded plastic bottles (Blostein et al., 2009; Greene, Williams, & Wright, 2010). The number of ISP meth lab seizures included all meth incidents, such as labs, "dump sites," and "chemical and glassware" seizures. In 2015, a total of 1,353 seized labs (93% of all meth labs seized by ISP), were using the one-pot method, which was a major increase from 2010 (493 seizures, or 37%) (ISP, 2016). Map 8.1 (page 140) shows the number of meth labs seized by ISP in each county in 2015.

Figure 8.12 Number of Arrests for Synthetic Drug Possession and Sale/Manufacture in Indiana (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Possession	337	658	901	859	1,328	1,795	2,034	1,683	1,511	1,671	1,824	2,058	2,458	2,122
Sale	62	248	590	361	675	740	581	529	649	628	777	908	1,008	896
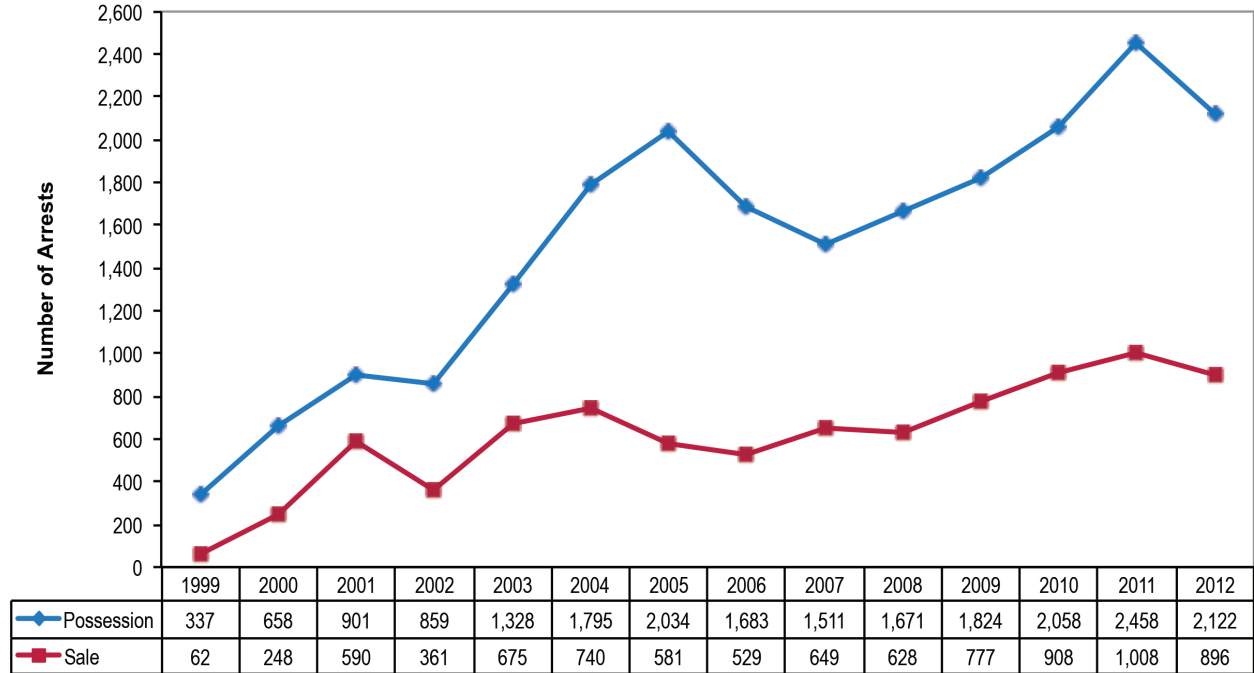
Source: FBI, 2012

Figure 8.13 Arrest Rates for Synthetic Drug Possession and Sale/Manufacture per 1,000 Population, Indiana and United States (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
IN Possession	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3
U.S. Possession	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IN Sale	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
U.S. Sale	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Source: FBI, 2012

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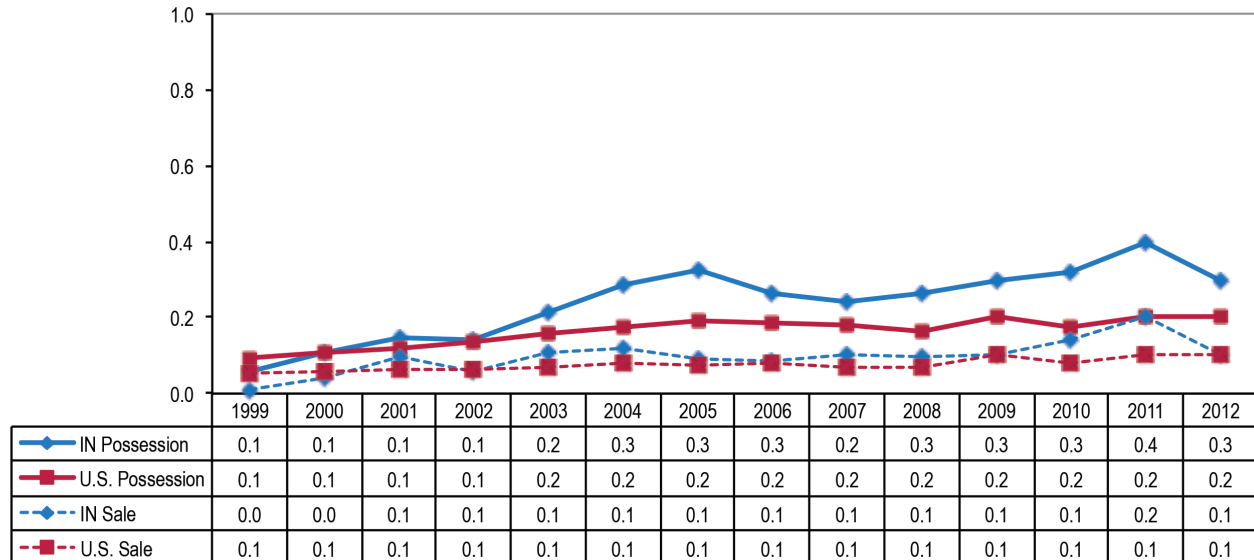
Methamphetamine is classified as a synthetic stimulant. The Uniform Crime Reporting (UCR) Program describes crimes associated with synthetic drug possession and sale/manufacture. Substances defined as "synthetic" include a number of drugs in addition to methamphetamine, such as Demerol and methadone (Federal Bureau of Investigation (FBI), 2012). According to 2012 results, 2,122 Hoosiers were arrested for possession of synthetic drugs. This represents an arrest rate of 0.3 (95% CI: 0.3–0.3) per 1,000 population, a rate statistically higher than the nation's, at 0.2 (95% CI: 0.2–0.2). Additionally, 896 arrests were made in Indiana for the sale and manufacture of synthetic drugs; Indiana's arrest rate of 0.1 (95% CI: 0.1–0.1) per 1,000 population was the same as the U.S. rate of 0.1 (95% CI: 0.1-0.1) (see Figures 8.12 and 8.13).

Maps 8.2 and 8.3 (pages 141 and 142), and Appendix 8C (pages 138–139) show arrest data for synthetic drug possession and sale/manufacture by county. Caution should be exercised when interpreting these data due to variations in reporting procedures and a lack of data to identify meth-specific arrests. In Indiana, reporting by county and local law enforcement jurisdictions is sometimes incomplete; therefore, a portion of these data is based on estimates. (For more details, see the discussion of UCR data in Chapter 2, Methods.)

Social Consequences

In addition to the health-related and criminal consequences, meth use and abuse can have serious social impacts, affecting children and families in ways similar to other forms of substance abuse, such as contributing to increased interpersonal conflicts, violence, financial problems, and poor parenting (Sommers, Baskin, & Baskin-Sommers, 2006). Other social impacts of meth use include incarceration of parents and placement of children in protective custody. According to data from the ISP, the number of children who were taken from meth lab homes in Indiana rose from 125 in 2003 to 291 in 2015 (see Figure 8.14) (ISP, 2016).

Figure 8.14 Number of Indiana Children Taken by the Indiana State Police from Methamphetamine Lab Homes (Indiana Meth Lab Statistics, 2003–2015)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of Children	125	172	171	150	124	148	185	270	362	372	440	362	291
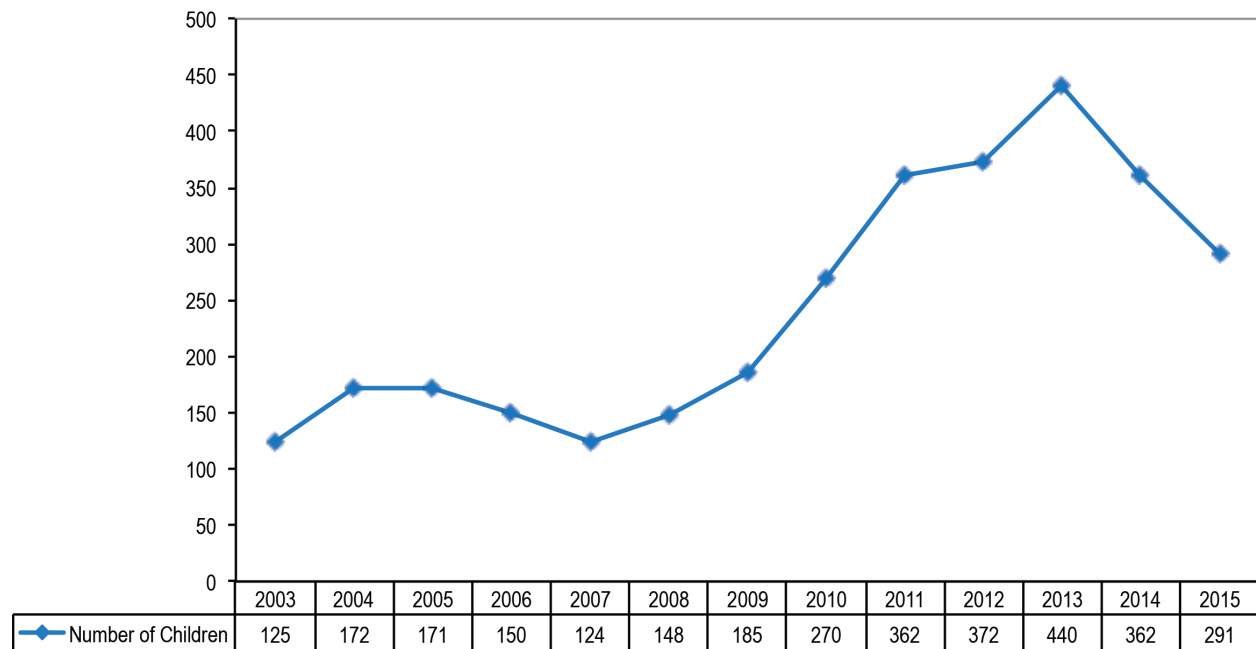
Source: ISP, 2016

APPENDIX 8A

Number of Treatment Episodes with Methamphetamine Use and Dependence Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

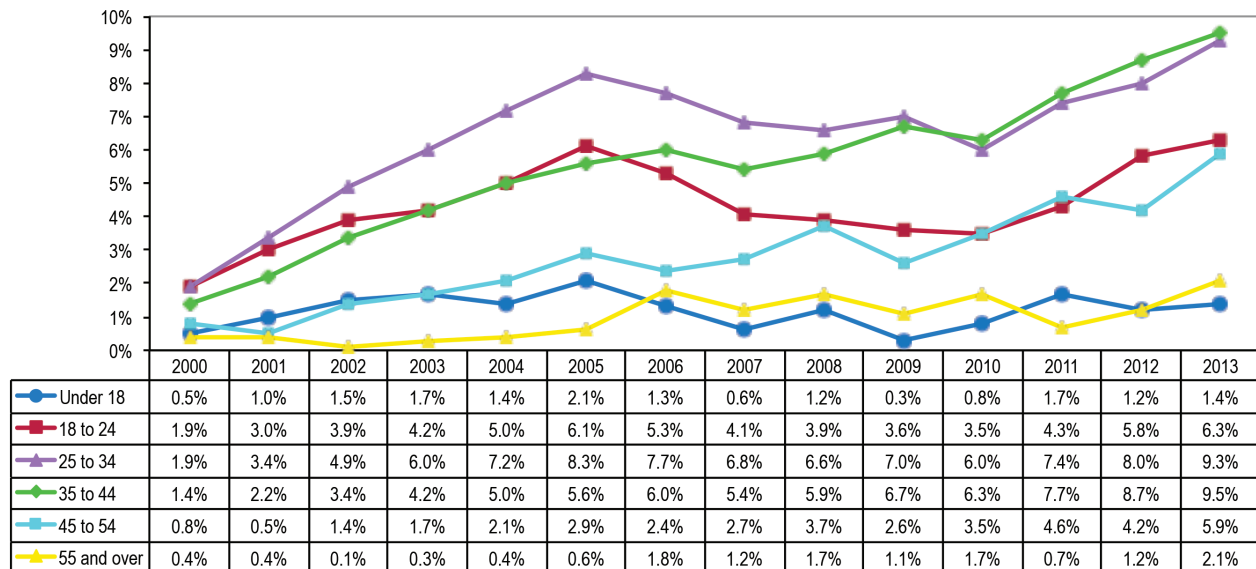| County	Treatment Episodes Total	Meth Use Number	%	Meth Dependence Number	%	County	Treatment Episodes Total	Meth Use Number	%	Meth Dependence Number	%
Adams	176	18	10.2%	<5	N/A	Madison	1,193	99	8.3%	38	3.2%
Allen	1,715	128	7.5%	65	3.8%	Marion	4,457	281	6.3%	124	2.8%
Bartholomew	577	269	46.6%	220	38.1%	Marshall	190	37	19.5%	17	8.9%
Benton	49	5	10.2%	<5	N/A	Martin	46	18	39.1%	12	26.1%
Blackford	76	9	11.8%	<5	N/A	Miami	268	68	25.4%	32	11.9%
Boone	191	12	6.3%	5	2.6%	Monroe	1,214	205	16.9%	140	11.5%
Brown	107	26	24.3%	19	17.8%	Montgomery	341	73	21.4%	35	10.3%
Carroll	107	25	23.4%	11	10.3%	Morgan	469	153	32.6%	124	26.4%
Cass	235	50	21.3%	13	5.5%	Newton	40	7	17.5%	<5	N/A
Clark	408	17	4.2%	16	3.9%	Noble	235	105	44.7%	59	25.1%
Clay	185	72	38.9%	40	21.6%	Ohio	33	<5	N/A	<5	N/A
Clinton	171	18	10.5%	10	5.8%	Orange	135	39	28.9%	21	17.4%
Crawford	37	13	35.1%	6	16.2%	Owen	184	59	32.1%	43	23.4%
Daviess	252	119	47.2%	74	29.4%	Parke	105	20	19.0%	9	8.6%
Dearborn	493	16	3.2%	6	1.2%	Perry	121	42	34.7%	21	17.4%
Decatur	199	52	26.1%	40	20.1%	Pike	38	9	23.7%	6	15.8%
DeKalb	274	83	30.3%	57	20.8%	Porter	679	10	1.5%	<5	N/A
Delaware	1,067	184	17.2%	89	8.3%	Posey	132	40	30.3%	27	20.5%
Dubois	277	45	16.2%	14	5.1%	Pulaski	122	15	12.3%	8	6.6%
Elkhart	672	97	14.4%	61	9.1%	Putnam	208	60	28.8%	31	14.9%
Fayette	223	13	5.8%	6	2.7%	Randolph	156	11	7.1%	10	6.4%
Floyd	171	14	8.2%	13	7.6%	Ripley	217	26	12.0%	22	10.1%
Fountain	43	8	18.6%	<5	N/A	Rush	143	31	21.7%	24	16.8%
Franklin	145	15	10.3%	8	5.5%	Saint Joseph	1,518	138	9.1%	67	4.4%
Fulton	160	40	25.0%	21	13.1%	Scott	144	27	18.8%	20	13.9%
Gibson	245	76	31.0%	41	16.7%	Shelby	142	28	19.7%	13	9.2%
Grant	526	20	3.8%	14	2.7%	Spencer	174	76	43.7%	41	23.6%
Greene	183	50	27.3%	21	11.5%	Starke	255	76	29.8%	33	12.9%
Hamilton	972	20	2.1%	6	0.6	Steuben	262	67	25.6%	41	15.6%
Hancock	226	13	5.8%	<5	N/A	Sullivan	58	23	39.7%	10	17.2%
Harrison	31	<5	N/A	<5	N/A	Switzerland	69	<5	N/A	<5	N/A
Hendricks	346	34	9.8%	20	5.8%	Tippecanoe	461	86	18.7%	44	9.5%
Henry	347	23	6.6%	10	2.9%	Tipton	61	<5	N/A	<5	N/A
Howard	586	93	15.6%	40	6.7%	Union	31	<5	N/A	<5	N/A
Huntington	130	19	14.6%	8	6.2%	Vanderburgh	1,333	420	31.5%	243	18.2%
Jackson	347	149	42.9%	120	34.6%	Vermillion	128	45	35.2%	28	21.9%
Jasper	127	26	20.5%	11	8.7%	Vigo	652	253	38.8%	143	21.9%
Jay	159	23	14.5%	9	5.7%	Wabash	281	40	14.2%	16	5.7%
Jefferson	375	106	28.3%	85	22.7%	Warren	17	5	29.4%	5	29.4%
Jennings	265	111	41.9%	95	35.8%	Warrick	253	99	39.1%	57	22.5%
Johnson	237	35	14.8%	25	10.5%	Washington	98	14	14.3%	7	7.1%
Knox	273	108	39.6%	80	29.3%	Wayne	386	10	2.6%	5	1.3%
Kosciusko	309	66	21.4%	36	11.7%	Wells	119	22	18.5	11	9.2%
LaGrange	166	65	39.2%	36	21.7%	White	133	34	25.6%	21	15.8%
Lake	2,344	18	0.8%	11	0.5%	Whitley	102	25	24.5%	15	14.7%
LaPorte	451	7	1.6%	<5	N/A	County Info Missing	61	13	21.3%	7	11.5%
Lawrence	467	152	32.5%	122	26.1%	**Indiana**	**34,596**	**5,484**	**15.9%**	**3,247**	**9.4%**

Note: We defined methamphetamine dependence as "individuals in substance abuse treatment listing methamphetamine as their primary substance at admission."
We calculated the percentages by dividing the number of reported methamphetamine use/dependence by the number of treatment episodes.
Information on treatment episodes <5 was suppressed due to confidentiality constraints.
Source: Indiana Family and Social Services Administration, 2015

APPENDIX 8B

Percentage of Indiana Students Reporting Monthly Methamphetamine Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	Central	North Northeast	West	Central	East	Southwest	Southeast
6th Grade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7th Grade	0.2	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.1
8th Grade	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.4	0.3
9th Grade	0.4	*0.7	0.6	0.1	0.2	0.5	0.1	0.3	0.4
10th Grade	0.5	0.4	0.4	0.5	0.2	0.4	*1.0	0.2	0.7
11th Grade	0.5	0.6	0.5	0.3	0.6	0.4	0.6	0.3	0.6
12th Grade	0.5	0.4	0.2	0.1	0.3	0.7	0.9	0.3	0.6

Notes: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Beginning in 2015, the Indiana Youth Survey stopped asking 6th grade students about methamphetamine use; also, lifetime prevalence is no longer available by region.
Source: Gassman et al., 2015

APPENDIX 8C

Number and Rate, per 1,000 Population, of Arrests for Synthetic Drug Possession and Sale/Manufacture in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	14	*0.4	6	*0.2
Allen	0	*0.0	0	*0.0
Bartholomew	110	1.4	8	*0.1
Benton	2	*0.2	1	*0.1
Blackford	19	*1.5	12	*1.0
Boone	7	*0.1	3	*0.1
Brown	6	*0.4	7	*0.5
Carroll	2	*0.1	0	*0.0
Cass	4	*0.1	0	*0.0
Clark	201	1.8	33	0.3
Clay	13	*0.5	8	*0.3
Clinton	1	*0.0	2	*0.1
Crawford	6	*0.6	2	*0.2
Daviess	29	0.9	16	*0.5
Dearborn	1	*0.0	3	*0.1
Decatur	13	*0.5	6	*0.2
DeKalb	15	*0.4	22	0.5
Delaware	63	0.5	0	*0.0
Dubois	31	0.7	9	*0.2
Elkhart	17	*0.1	8	*0.0
Fayette	10	*0.4	5	*0.2
Floyd	23	0.3	2	*0.0
Fountain	10	*0.6	5	*0.3
Franklin	0	*0.0	0	*0.0
Fulton	10	*0.5	4	*0.2
Gibson	34	1.0	19	*0.6
Grant	23	0.3	5	*0.1
Greene	12	*0.4	17	*0.5
Hamilton	88	0.3	10	*0.0
Hancock	22	0.3	9	*0.1
Harrison	7	*0.2	4	*0.1
Hendricks	56	0.4	16	*0.1
Henry	0	*0.0	0	*0.0
Howard	1	*0.0	6	*0.1
Huntington	0	*0.0	0	*0.0
Jackson	17	*0.4	6	*0.1
Jasper	7	*0.2	10	*0.3
Jay	24	1.1	20	0.9
Jefferson	13	*0.4	7	*0.2
Jennings	0	*0.0	0	*0.0
Johnson	8	*0.1	2	*0.0
Knox	28	0.7	9	*0.2
Kosciusko	34	0.4	23	0.3
LaGrange	7	*0.2	2	*0.1
Lake	42	0.1	13	*0.0
LaPorte	19	*0.2	3	*0.0
Lawrence	20	0.4	10	*0.2
Madison	10	*0.1	15	*0.1
Marion	176	0.2	49	0.1

(continued on next page)

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County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	64	1.4	8	*0.2
Martin	16	*1.5	2	*0.2
Miami	4	*0.1	16	*0.4
Monroe	16	*0.1	17	*0.1
Montgomery	9	*0.2	6	*0.2
Morgan	12	*0.2	6	*0.1
Newton	2	*0.1	0	*0.0
Noble	31	0.6	11	*0.2
Ohio	1	*0.2	1	*0.2
Orange	39	1.9	14	*0.7
Owen	5	*0.2	2	*0.1
Parke	23	1.3	19	*1.1
Perry	18	*0.9	6	*0.3
Pike	5	*0.4	3	*0.2
Porter	12	*0.1	2	*0.0
Posey	11	*0.4	3	*0.1
Pulaski	11	*0.8	2	*0.1
Putnam	20	0.5	16	*0.4
Randolph	5	*0.2	1	*0.0
Ripley	11	*0.4	6	*0.2
Rush	2	*0.1	0	*0.0
Saint Joseph	70	0.3	2	*0.0
Scott	28	1.2	6	*0.2
Shelby	8	*0.2	6	*0.1
Spencer	9	*0.4	5	*0.2
Starke	13	*0.6	14	*0.9
Steuben	1	*0.0	6	*0.2
Sullivan	3	*0.1	1	*0.0
Switzerland	4	*0.4	3	*0.3
Tippecanoe	142	0.8	29	0.2
Tipton	13	*0.8	14	*0.9
Union	2	*0.3	1	*0.1
Vanderburgh	76	0.4	99	0.5
Vermillion	0	*0.0	0	*0.0
Vigo	61	0.6	81	0.7
Wabash	11	*0.3	6	*0.2
Warren	3	*0.4	2	*0.2
Warrick	70	1.2	54	0.9
Washington	5	*0.2	3	*0.1
Wayne	13	*0.2	3	*0.0
Wells	0	*0.0	0	*0.0
White	6	*0.2	1	*0.0
Whitley	12	*0.4	3	*0.1
Indiana	**2,122**	**0.3**	**896**	**0.1**

Rates based on arrest numbers lower than 20 are unreliable.
Source: FBI, 2012

Map 8.1 Number of Clandestine Methamphetamine Labs Seized by the Indiana State Police (ISP) and Other Law Enforcement Agencies in Indiana, by County, (Indiana Meth Lab Statistics, 2015)

Note: The map includes clandestine meth lab seizures from ISP (1,452) and from other law enforcement agencies (78).
Source: ISP, 2016

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Map 8.2 Arrest Rates for Synthetic Drug Possession, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2012)

Rate per 1,000

- 0.00 - 0.14
- 0.14 - 0.34
- 0.34 - 0.53
- > 0.53

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 138–139) for additional information.
Source: FBI, 2012

Map 8.3 Arrest Rates for Synthetic Drug Sale/Manufacture, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2012)

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 138–139) for additional information.
Source: FBI, 2012

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REFERENCES, CHAPTER 8

Blostein, P., Plaisier, B. R., Maltz, S. B., Davidson, S. B., Wideman, E. W., Feucht, E. C., & VandenBerg, S. L. (2009). Methamphetamine production is hazardous to your health. *The Journal of Trauma,* 66, 1712.

Centers for Disease Control and Prevention. (2007). *Methamphetamine use and risk for HIV/AIDS.* Retrieved from http://www.cdc.gov/hiv/resources/factsheets/pdf/meth.pdf

Centers for Disease Control and Prevention. (2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Ernst, T., Chang, L., Leonido-Yee, M., & Speck, O. (2000). Evidence for long-term neurotoxicity associated with methamphetamine abuse: A 1H MRS study. *Neurology, 54,* 1344-1349.

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Greene, M. S., Williams, M. J., & Wright, E. R. (2010). *What's cooking? Meth use in Indiana.* Indianapolis, IN: Center for Health Policy, Department of Public Health, Indiana University School of Medicine.

Halkitis, P. N., Parsons, J. T., & Stirratt, M. J. (2001). A double epidemic: Crystal methamphetamine drug use in relation to HIV transmission among gay men. *Journal of Homosexuality, 41*, 17-35.

Homer, B. D., Solomon, T. M., Moeller, R. W., Mascia, A., DeRaleau, L., & Halkitis, P. N. (2008). Methamphetamine abuse and impairment of social functioning: A review of the underlying neurophysiological causes and behavioral implications. *Psychological Bulletin, 134*, 301-310.

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Indiana State Police, Methamphetamine Suppression Section. (2016). *Indiana meth lab statistics, 2015.* Data received on January 14, 2016, from Sergeant Katrina Smith.

Inter-university Consortium for Political and Social Research, University of Michigan. (2015). *Monitoring the Future (MTF), 2015.* Retrieved from http://www.monitoringthefuture.org/data/data.html

Irvine, G. D. & Chin, L. (1997). The environmental impact and adverse health effects of the clandestine manufacture of methamphetamine. *Substance Use and Misuse, 32*, 1811-1812.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national survey results on drug use, 1975–2010: Volume II, College students and adults ages 19-50.* Ann Arbor: Institute for Social Research, University of Michigan.

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Messina, N., Marinelli-Casey, P., West, K., & Rawson, R. (2007). Children exposed to methamphetamine use and manufacture. *Child Abuse & Neglect, 38,* 1872-1883.

National Institute on Drug Abuse. (2014). *NIDA DrugFacts: Methamphetamine.* National Institutes of Health, U.S. Department of Health and Human Services. Retrieved from http://www.drugabuse.gov/publications/drugfacts/methamphetamine

Office of Justice Programs. (2003). *Dangers to children living at meth labs.* United States Department of Justice. Retrieved from http://ojp.gov/ovc/publications/bulletins/children/pg5.html

Petit, M. & Curtis, P. (1999). *Child abuse and neglect: A look at the states.* Washington, DC: Children Welfare League of America.

Sommers, I., Baskin, D., & Baskin-Sommers, A. (2006). Methamphetamine use among young adults: Health and social consequences. *Addictive Behaviors, 31*, 1469-1476.

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

PRESCRIPTION DRUG ABUSE IN INDIANA:
CONSUMPTION PATTERNS AND CONSEQUENCES

Abuse of prescription drugs[1] is a serious and growing public health problem in the United States. According to the National Survey on Drug Use and Health (NSDUH), in 2014, over 54 million Americans (20.5%) ages 12 years and older reported nonmedical use[2] of prescription-type psychotherapeutics at some point during their lifetime, including pain relievers, sedatives, tranquilizers, and stimulants (Substance Abuse and Mental Health Services Administration (SAMHSA), 2014). The National Institute on Drug Abuse (NIDA) lists the three most commonly abused types of prescription medicine as:

- *Opioids*, which are primarily prescribed to treat pain—examples include oxycodone (e.g., OxyContin®, Percocet®), hydrocodone (e.g., Vicodin®), codeine, and morphine;
- *Central nervous system (CNS) depressants*, such as sedatives and tranquilizers to treat sleep and anxiety disorders—examples include barbiturates (e.g., Mebaral®, Nembutal®) and benzodiazepines (e.g., Valium®, Xanax®); and

- *Stimulants,* which are often prescribed to treat narcolepsy and attention-deficit hyperactivity disorder (ADHD)—examples include dextroamphetamine (Dexedrine® and Adderall®) and methylphenidate (Ritalin® and Concerta®) (National Institute on Drug Abuse, 2014).

INSPECT is Indiana's prescription drug monitoring program, collecting information on all controlled substance (DEA Schedules II through V) dispensations within the state. In 2015, more than 13 million controlled prescription drugs were dispensed in Indiana, nearly half of which were opioids (Indiana Professional Licensing Agency (IPLA), 2016). However, it is important to note that these results describe the legal dispensation of prescription pharmaceuticals; they infer use of the drugs but do not estimate misuse. (For trend information from 2010 through 2015, see Figure 9.1.)

Figure 9.1 Dispensation of All Prescribed Controlled Substances (Prescription Opioids and Other) (INSPECT, 2010-2015)

	2010	2011	2012	2013	2014	2015
Other Rx	6,614,479	6,709,850	7,163,382	7,204,873	6,988,052	6,758,261
Opioids	6,519,421	6,351,750	6,728,298	6,450,899	6,083,240	6,458,471
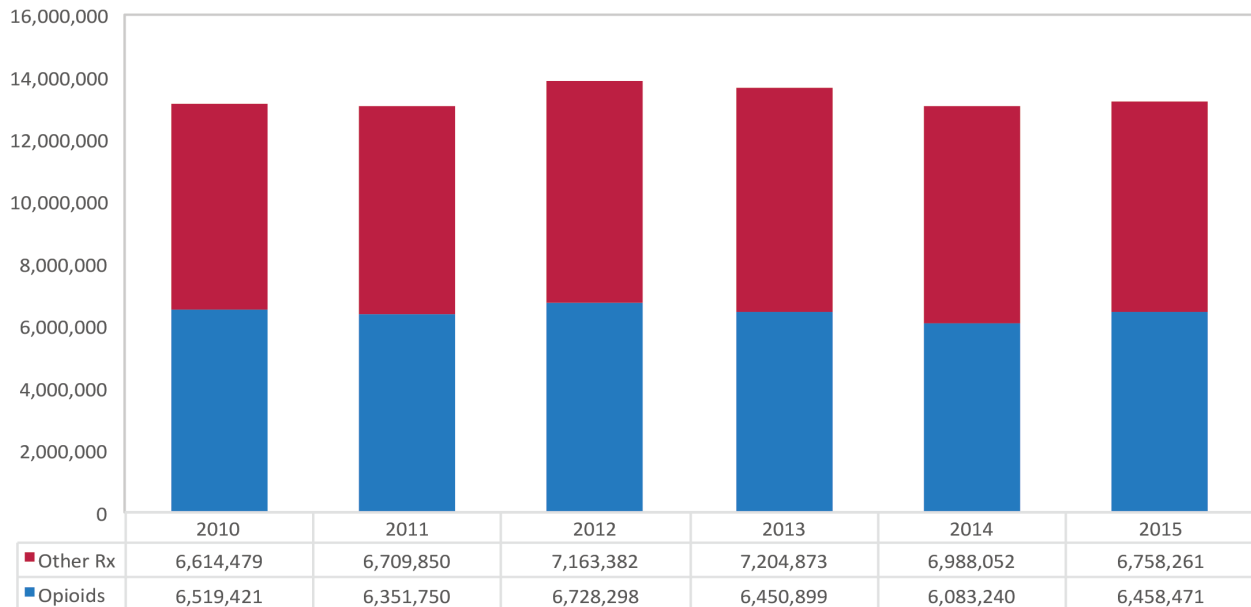
Source: IPLA, 2016

[1]Throughout the report, the term "prescription drugs" refers to controlled substances (Schedules II-V) that are being prescribed by a healthcare professional. Other non-controlled prescriptions, such as blood pressure medication, cholesterol-lowering drugs, etc., are not included.
[2]The terms nonmedical use, misuse, and abuse of prescription drugs are used interchangeably throughout this report and refer to any type of use other than that prescribed by a healthcare professional.

General Consumption Patterns

Based on results from the 2014 National Survey on Drug Use and Health (NSDUH), an estimated 4.4% (95% Confidence Interval [CI]: 3.6–5.3) of the Indiana population ages 12 and older reported nonmedical use of pain relievers in the past year, representing 240,244 Hoosiers. Indiana's prevalence rate was similar to the nation's, at 4.1% (95% CI: 3.9–4.2) (SAMHSA, 2014). For trend information, see Figure 9.2.

Adult Consumption Patterns

According to 2014 NSDUH results, young people ages 18 through 25 had the highest rate of prescription pain medication abuse. Indiana's past-year usage rate of 9.5% (95% CI: 7.8–11.7) was statistically similar to the nation's rate (8.3%; 95 % CI: 8.0-8.7) (see Figure 9.3).

The Indiana College Substance Use Survey[3] includes questions on (a) use of prescription medications not prescribed to the student and (b) use of prescription medication prescribed to student but misused. Findings from the 2015 survey, which were based on eight participating colleges and universities, were as follows:

a) Misuse of prescription medications <u>not</u> prescribed to the student:

- 9.8% of Indiana college students used prescription medications not prescribed to them in the past year, and 3.9% currently use them.
- Rates were significantly higher among males for both past-year use (10.8%) and current use (4.1%) than among females (9.2% and 3.8%, respectively).
- Rates were significantly higher for those attending public institutions of higher education (past-year use: 10.6%; current use: 5.6%) than for those who attended private institutions (past-year use: 9.3%; current use: 3.0%).
- No significant differences in past-year or current use were found for college students ages 21 or over compared to those under 21.

Figure 9.2 Prevalence of Past-Year Pain Reliever Use in Indiana and the United States (National Survey on Drug Use and Health, 2004 – 2014)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	5.4%	5.4%	5.9%	6.2%	6.0%	5.7%	5.7%	5.7%	5.6%	5.3%	4.4%
U.S.	4.8%	4.8%	5.0%	5.1%	4.9%	4.8%	4.9%	4.6%	4.6%	4.5%	4.1%
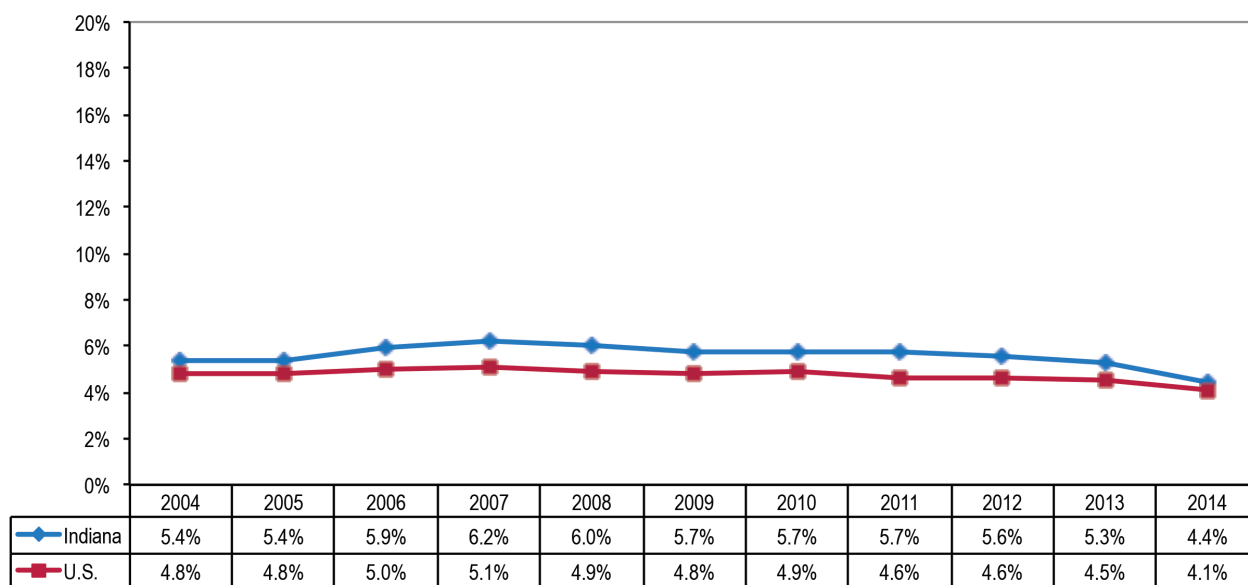
Source: SAMHSA, 2014

[4]Eight colleges participated in the 2015 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

b) Misuse of prescription medication prescribed to the student:

- 2.6% of Indiana college students misused their prescription medication in the past year, and 1.1% of students reported current misuse.
- Rates were significantly higher for past-year misuse among males (3.8%) than females (1.9%), but current misuse for both groups was statistically similar (males: 1.6%, females: 0.8%).
- Rates were similar for those attending public versus private institutions of higher education for both past-year misuse (public: 2.9%, private: 2.4%) and current misuse (public: 1.3%, private: 0.9%).
- No significant differences in past-year or current use were found for college students ages 21 or over compared to those under 21 (King & Jun, 2014).

Another method of tracking prescription drug abuse is to examine the Treatment Episode Data Set (TEDS) for individuals who report nonmedical use of pain relievers (opioids),[4] CNS depressants (sedatives and tranquilizers),[5] and stimulants[6] at the time of admission to substance abuse treatment (SAMHSA, 2013). Overall reported use of these drug categories in 2013, when combined, was 27.5% in Indiana, which was significantly higher than the rest of the nation's rate of 20.9% ($P < 0.001$). A look at the individual drug types shows that Indiana's percentages were significantly higher for pain relievers and CNS depressants ($P < 0.001$) but not stimulants (see Figure 9.4).

Figure 9.3 Prevalence of Past-Year Pain Reliever Use in Indiana and the United States, by Age Group (National Survey on Drug Use and Health, 2014)

	12-17	18-25	26 and older
Indiana	5.0%	9.5%	3.4%
U.S.	4.7%	8.3%	3.3%
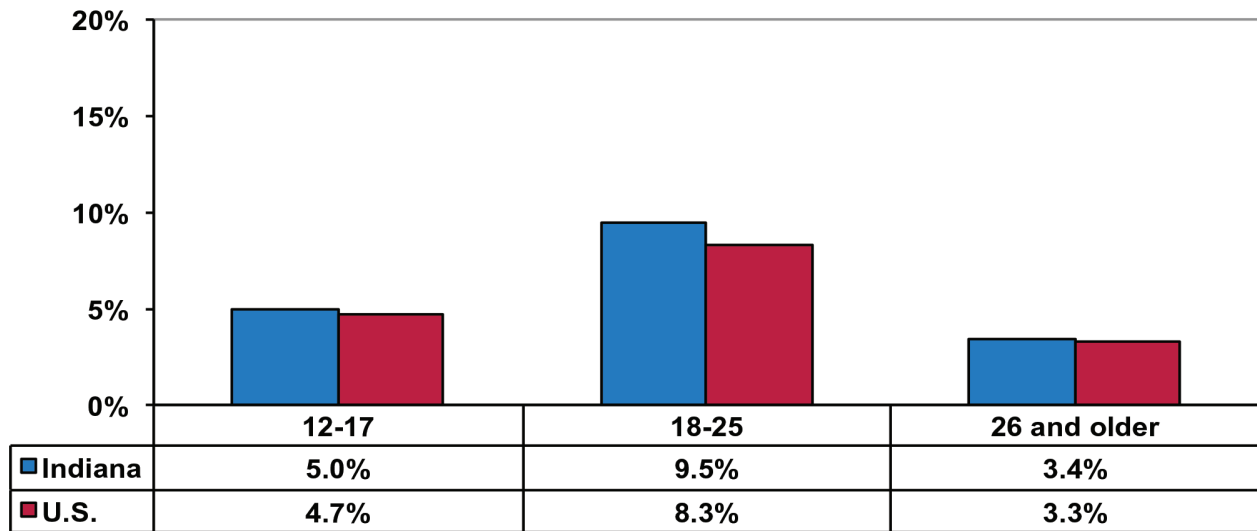
Source: SAMHSA, 2014

[4]We used TEDS variables "nonprescription methadone" and "other opiates/synthetics" to define pain reliever use [excludes heroin].
[5]We used TEDS variables "benzodiazepines," "other tranquilizers," "barbiturates," and "other sedatives/hypnotics" to define CNS depressant use.
[6]We used TEDS variables "other amphetamines" and "other stimulants" to define stimulant use.

Figure 9.4 Percentage of Indiana and U.S. Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2013)

	All Presecription Drugs	Pain Relievers	Sedatives & Tranquilizers	Stimulants
■ Indiana	27.5%	22.4%	8.1%	1.4%
■ U.S.	20.9%	15.6%	6.5%	1.5%
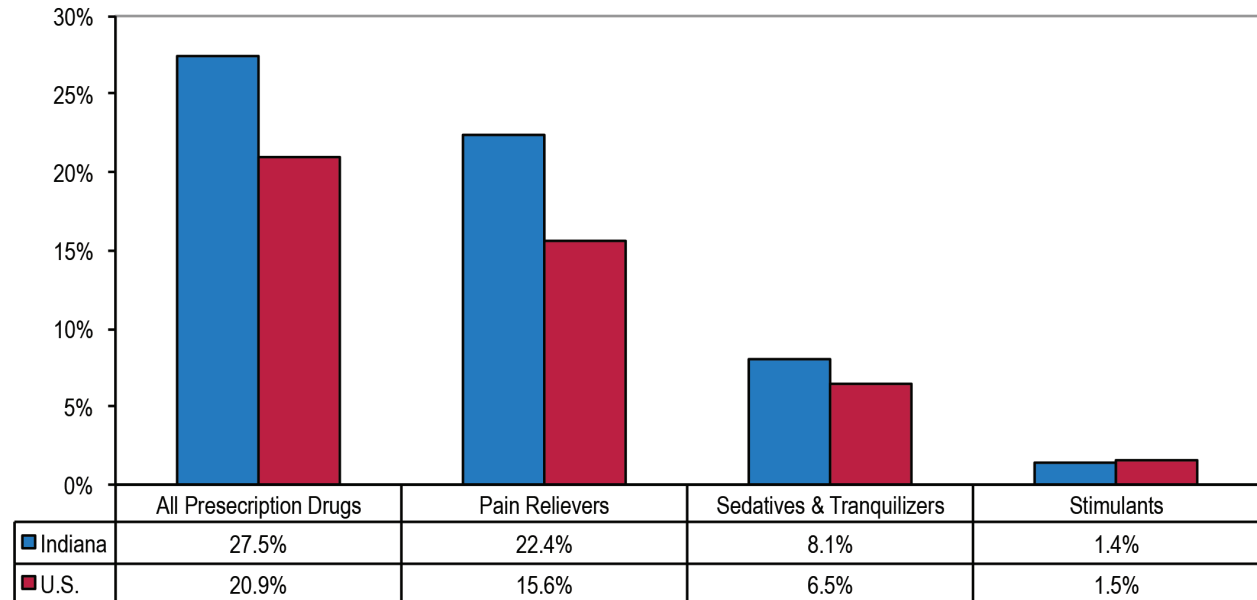
Source: SAMHSA, 2013

In Indiana, significant differences in reported prescription drug abuse were seen by gender, race, ethnicity, and age group (see Table 9.1) (SAMHSA, 2013):

- **Gender**—Women reported higher rates of use across all prescription drug categories except for stimulants, where use was statistically similar for both genders.
- **Race**—Whites had the highest rates across all prescription drug categories.

- **Age group**—Differences by age group were observed for all prescription drug categories.

A review of TEDS data from 2000 through 2013 shows that the percentages of treatment episodes with reported prescription drug abuse have increased significantly in Indiana (see Figure 9.5). For county-level information, see Appendix 9B, pages 155-158.

Table 9.1 Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2013)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	22.4%	18.0%	6.4%	1.3%
	Female	35.8%	29.7%	10.8%	1.7%
Race	White	31.7%	26.0%	9.3%	1.7%
	Black	6.1%	4.6%	1.9%	0.2%
	Other	20.3%	15.6%	6.3%	1.0%
Ethnicity	Hispanic	13.9%	7.0%	4.3%	1.2%
	Non-Hispanic	28.1%	23.0%	8.3%	1.5%
Age Group	Under 18	16.0%	10.0%	5.7%	1.8%
	18-24	29.4%	22.8%	9.3%	1.8%
	25-34	35.4%	29.7%	9.9%	1.7%
	35-44	25.2%	21.1%	7.1%	1.3%
	45-54	16.1%	13.2%	5.0%	0.7%
	55+	13.5%	11.0%	3.9%	1.4%

Source: SAMHSA, 2013

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Figure 9.5 Percentage of Indiana and U.S. Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
IN: Rx	11.6%	10.9%	11.6%	12.6%	12.8%	14.5%	15.5%	16.5%	18.9%	19.1%	20.2%	25.4%	29.1%	27.5%
U.S.: Rx	7.7%	9.0%	9.6%	10.0%	10.9%	11.0%	10.8%	12.4%	14.0%	16.2%	19.1%	21.0%	21.1%	20.9%
IN: Pain Reliever	5.5%	6.0%	6.4%	7.5%	7.9%	9.1%	10.2%	11.3%	13.7%	13.6%	15.2%	19.0%	22.0%	22.4%
U.S.: Pain Reliever	3.3%	4.2%	4.8%	5.4%	6.3%	6.8%	7.5%	8.8%	10.2%	11.9%	14.2%	16.0%	15.9%	15.6%
IN: Sed/Tranq	5.9%	4.9%	5.2%	5.4%	5.3%	6.0%	6.1%	6.6%	7.3%	7.6%	7.5%	8.4%	9.4%	8.1%
U.S.: Sed/Tranq	2.6%	2.9%	3.0%	3.1%	3.2%	3.2%	3.2%	3.7%	4.1%	4.9%	5.8%	6.6%	6.6%	6.5%
IN: Stimulants	1.4%	1.3%	1.5%	1.3%	1.3%	1.4%	1.2%	1.0%	1.0%	1.0%	1.0%	2.2%	2.6%	1.4%
U.S.: Stimulants	2.4%	2.6%	2.6%	2.5%	2.4%	2.0%	1.2%	1.2%	1.2%	1.3%	1.6%	1.5%	1.5%	1.5%
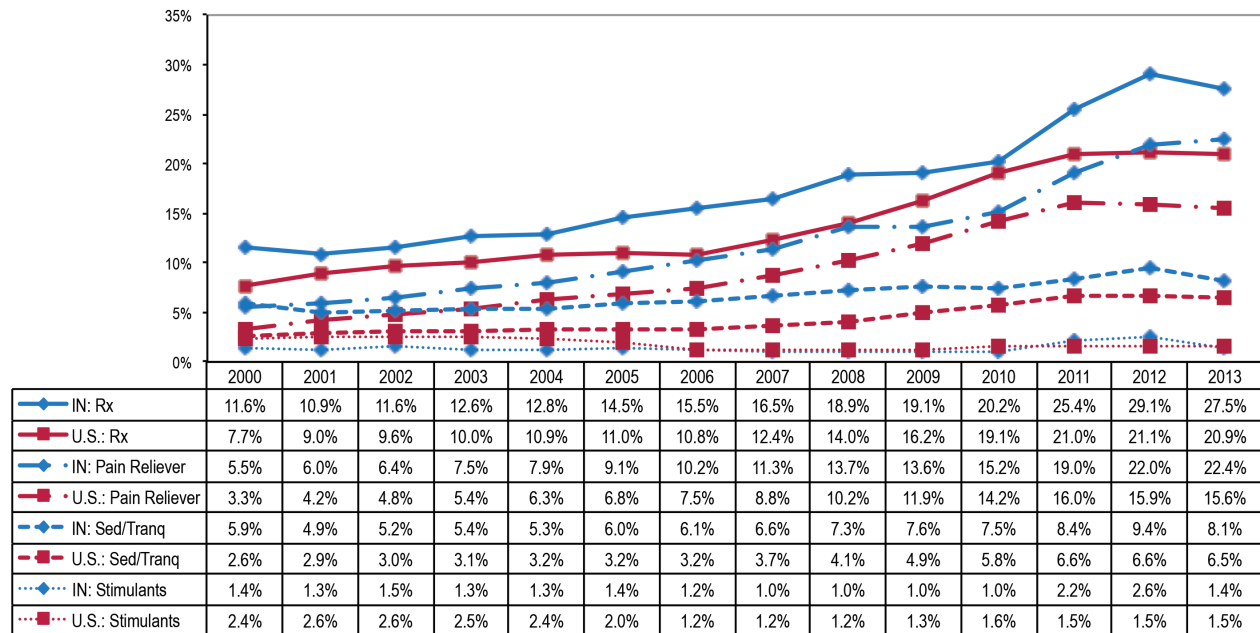
Source: SAMHSA, 2013

Youth Consumption Patterns

Estimates from the 2014 NSDUH suggest that 4.9% (95% CI: 3.8-6.4) of Indiana's youth ages 12 through 17 used prescription pain medications for nonmedical purposes in the past year. The national rate of prescription drug abuse by 12- to 17-year-olds was statistically similar at 4.6% (95% CI: 4.4-5.0) (SAMHSA, 2014).

For Indiana prevalence rates of current nonmedical use of prescription drugs[7] among 8th, 10th, and 12th grade students, see Figure 9.6 (Gassman, Jun, Samuel, Agley, King, & Lee, 2015). For regional prevalence rates among grades 6 through 12, see Appendix 9C, page 159.

Young Hoosiers (under the age of 18) in treatment reported significantly less use of psychotherapeutics than adults 18 and older. An examination of use by individual drug category showed that young patients were less likely to use pain relievers and sedatives but just as likely to use stimulants as their older counterparts (see Figure 9.7).

[7]Includes Ritalin®, Oxycontin®, and Xanax®.

Figure 9.6 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Indiana Youth Survey, 2003-2015)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
8th	1.4%	1.3%	1.5%	1.3%	1.9%	1.7%	1.8%	3.0%	2.7%	2.6%	2.2%	2.0%	2.3%
10th	2.1%	2.0%	2.1%	2.2%	3.7%	3.5%	3.3%	5.9%	5.2%	5.0%	4.3%	3.9%	4.4%
12th	1.5%	1.4%	1.7%	1.8%	2.9%	3.3%	3.1%	5.9%	5.9%	5.8%	5.7%	5.0%	6.0%
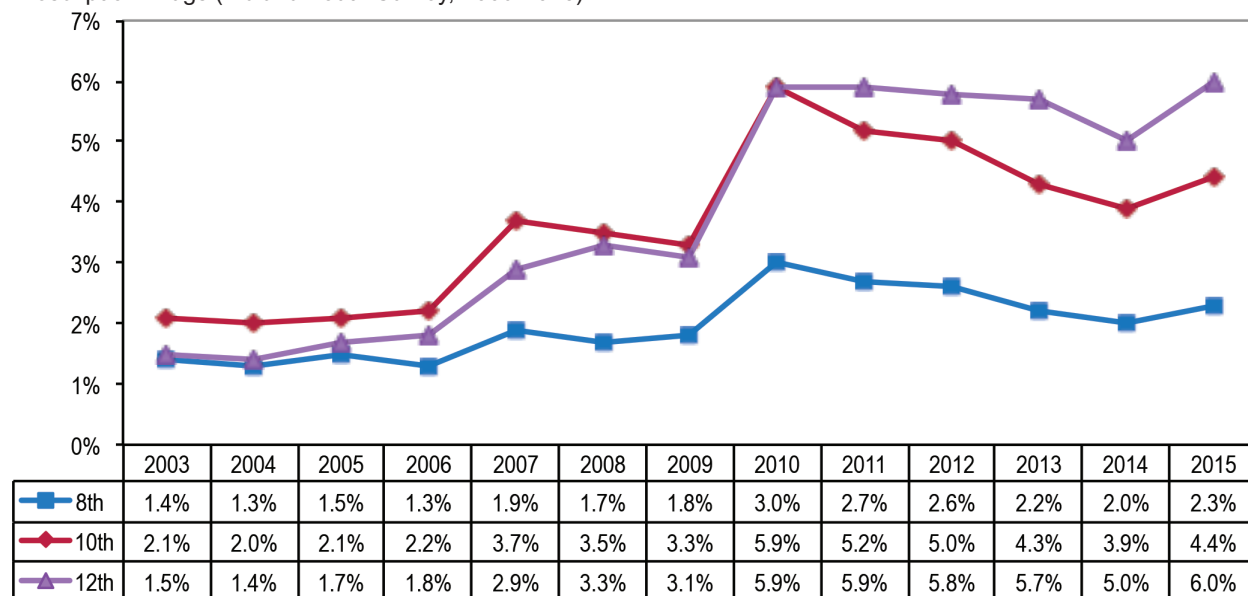
Source: Gassman, et al., 2015

Figure 9.7 Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission in Indiana, by Drug Category and Underage Status (Treatment Episode Data Set, 2013)

	All Prescription Drugs	Pain Relievers	Sedatives & Tranquilizers	Stimulants
Under 18	16.0%	10.0%	5.7%	1.8%
Over 18	27.9%	22.3%	8.2%	1.4%
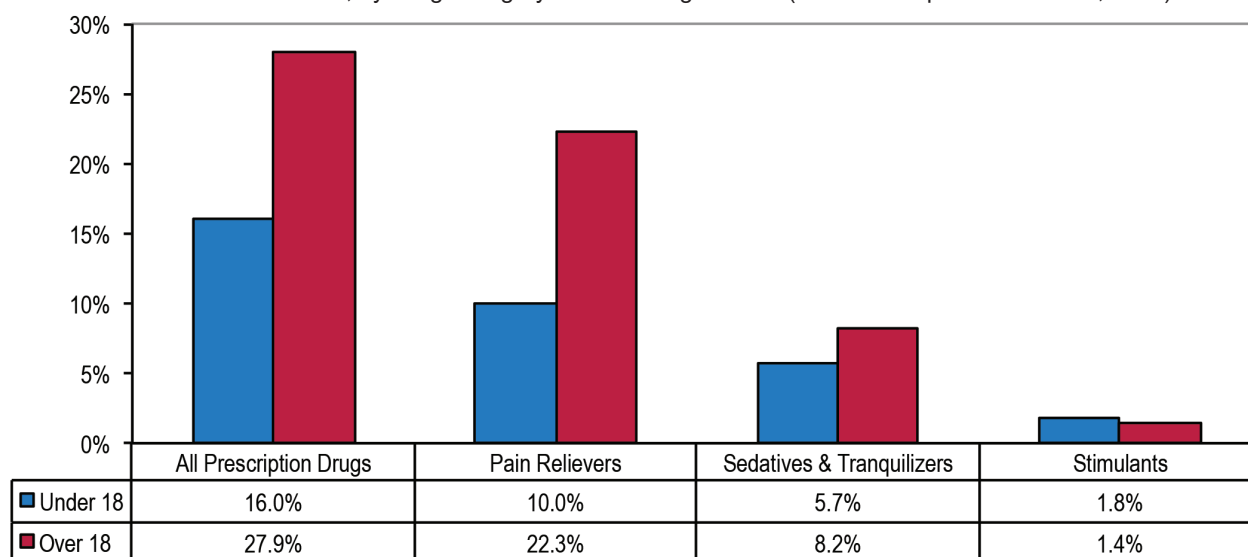
Source: SAMHSA, 2013

PRESCRIPTION DRUG ABUSE CONSEQUENCES

Prescription Drug Dependence

The most common consequences of prescription drug abuse are addiction and/or dependence.[8] To determine the extent of prescription drug abuse both nationally and in Indiana, we used the TEDS data set to track the percentage of substance abuse treatment admissions due to pain relievers, sedatives/tranquilizers, and stimulants. In 2013, all categories of prescription drug dependence were significantly higher in Indiana than the United States with the exception of stimulants, which was statistically higher

[8]IWe defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

in the U.S., though the difference of 0.1% did not seem clinically important (see Figure 9.8).

The percentage of treatment episodes in which prescription drug dependence was indicated varied significantly by gender, race, and age group in Indiana for most prescription drug categories (see Table 9.2) (SAMHSA, 2013):

- **Gender**—The percentage of females reporting dependence was significantly higher than the percentage of males across all prescription drug categories, except stimulants.
- **Race**—The lowest percentage of dependence was found in blacks and the highest percentage of dependence occurred in whites for all prescription drug categories.
- **Ethnicity**—The percentage of non-Hispanic Hoosiers reporting dependence was higher than Hispanics for overall prescription drug use and the use of prescription pain relievers but not for dependence on either sedatives or stimulants.
- **Age group**—Significant differences by age category were found for overall prescription drug dependence as well as each category.

For county-level information, see Appendix 9B, pages 155-158.

Table 9.2   Percentage of Indiana Treatment Episodes with Prescription Drug Dependence Reported at Treatment Admission, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2013)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	11.3%	9.6%	1.3%	0.4%
	Female	21.3%	17.9%	2.9%	0.5%
Race	White	18.2%	14.6%	2.5%	1.0%
	Black	2.7%	2.0%	0.5%	0.1%
	Other	9.1%	7.5%	1.4%	0.2%
Ethnicity	Hispanic	7.0%	5.1%	1.3%	0.5%
	Non-Hispanic	15.4%	13.0%	1.9%	0.5%
Age Group	Under 18	3.6%	2.6%	0.6%	0.4%
	18 to 24	13.8%	11.0%	2.1%	0.7%
	25 to 34	20.2%	17.6%	2.1%	0.5%
	35 to 44	15.3%	13.1%	1.9%	0.3%
	45 to 54	10.0%	8.0%	1.7%	0.3%
	55+	7.4%	6.1%	1.2%	0.1%

Source: SAMHSA, 2013

Figure 9.8 Percentage of Indiana and U.S. Treatment Episodes with Nonmedical Prescription Drug Dependence Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2013)

	All Prescription Drugs	Pain Relievers	Sedatives & Tranquilizers	Stimulants
Indiana	15.0%	12.7%	1.9%	0.5%
U.S.	10.8%	9.1%	1.1%	0.6%
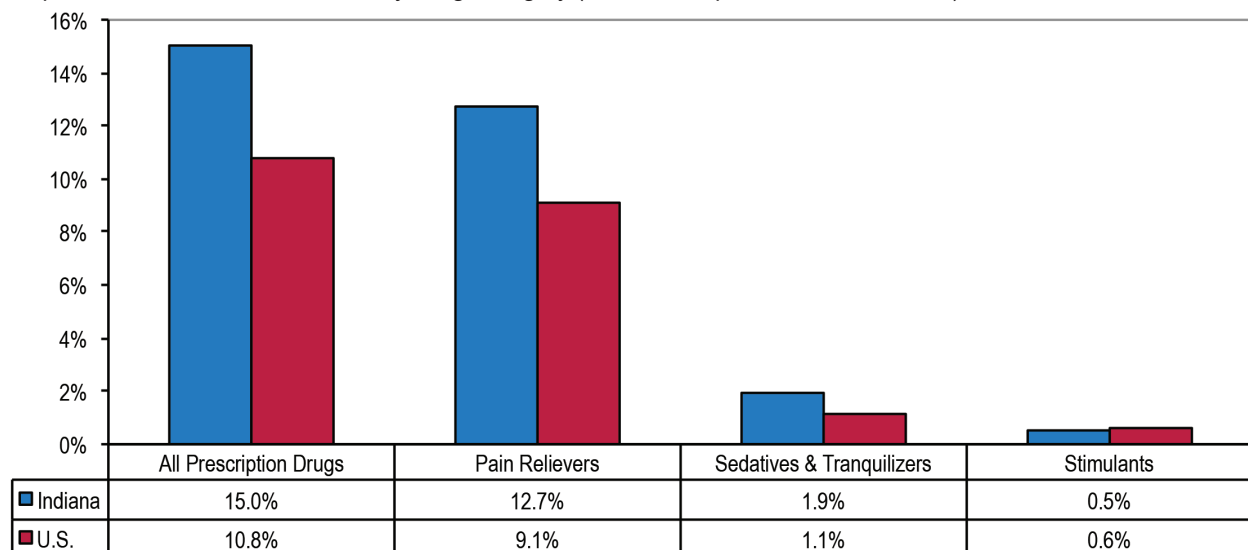
Source: SAMHSA, 2013

A review of TEDS data from 2000 through 2013 reveals that dependence on overall prescription medications increased significantly in Indiana. This holds true for each prescription drug category, including pain relievers, sedatives/tranquilizers, and stimulants (see Figure 9.9).

Criminal Consequences

Individuals illegally obtain prescription drugs through a variety of means, such as "doctor shopping" (going to a number of doctors to obtain prescriptions for a controlled pharmaceutical) or other prescription fraud; illegal online pharmacies; theft and burglary (from residences and pharmacies); and receiving/purchasing the medication from friends, family members, and dealers. Patients may also obtain controlled substances when physicians overprescribe, either negligently or intentionally.

The Uniform Crime Reporting (UCR) Program collects information on criminal activities, including possession and sale/manufacture of various drugs (Federal Bureau of Investigation (FBI), 2012). The "other drugs" category in the data set refers to arrests involving barbiturates (sedatives) and Benzedrine (amphetamine/ stimulant). In 2012, over 2,500 arrests were made for possession and 1,000 arrests for sale/manufacture of "other drugs" in Indiana. This represents arrest rates of 0.4 (95% CI: 0.4–0.4) and 0.2 (95% CI: 0.1–0.2) per 1,000 population, respectively. The U.S. rates per 1,000 population were statistically higher for possession of "other drugs," at 0.8 per 1,000 population (95% CI: 0.8–0.8). However, the rates per 1,000 population were the same for sale/manufacture of "other drugs," at 0.2 per 1,000 population (95% CI: 0.2–0.2) (see Figures 9.10 and 9.11) (FBI, 2012). The distribution of arrest rates for possession and sale/manufacture in Indiana by county for 2012 is depicted on Maps 9.1 and 9.2, pages 162 and 163, and in Appendix 9D, pages 160-161.

Fatal Drug Overdoses

Since 1999, mortality rates due to prescription drug overdoses have more than doubled in the United States, with an estimated 120 people dying every day (CDC, 2015). The number of fatal overdoses increased in Indiana from 281 in 2002 to 1,273 in 2014 (CDC, 2016).[9] For prescription drug overdose mortality rates, by county, from 2002-2014, see Map 9.3 on page 164.

Figure 9.9 Percentage of Indiana and U.S. Treatment Episodes with Prescription Drug Dependence Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
IN: Rx	4.8%	4.8%	4.9%	5.4%	5.7%	6.7%	7.2%	8.2%	9.6%	9.8%	10.8%	13.4%	15.5%	15.0%
U.S.: Rx	3.2%	3.9%	4.3%	4.7%	5.3%	5.3%	5.2%	6.1%	7.1%	8.4%	10.2%	11.8%	11.4%	10.8%
IN: Pain Reliever	3.2%	3.3%	3.2%	3.9%	4.0%	4.7%	5.4%	6.2%	7.8%	7.9%	9.1%	11.0%	12.5%	12.7%
U.S.: Pain Reliever	1.6%	2.1%	2.4%	2.8%	3.4%	3.6%	4.1%	5.0%	5.9%	7.1%	8.6%	10.1%	9.7%	9.1%
IN: Sed/Tranq	1.2%	1.2%	1.3%	1.2%	1.3%	1.6%	1.4%	1.7%	1.6%	1.7%	1.5%	1.7%	2.2%	1.9%
U.S.: Sed/Tranq	0.6%	0.6%	0.7%	0.7%	0.7%	0.7%	0.6%	0.8%	0.8%	1.0%	1.1%	1.2%	1.2%	1.1%
IN: Stimulants	0.3%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.2%	0.8%	0.9%	0.5%
U.S.: Stimulants	1.1%	1.2%	1.2%	1.2%	1.2%	1.0%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.6%
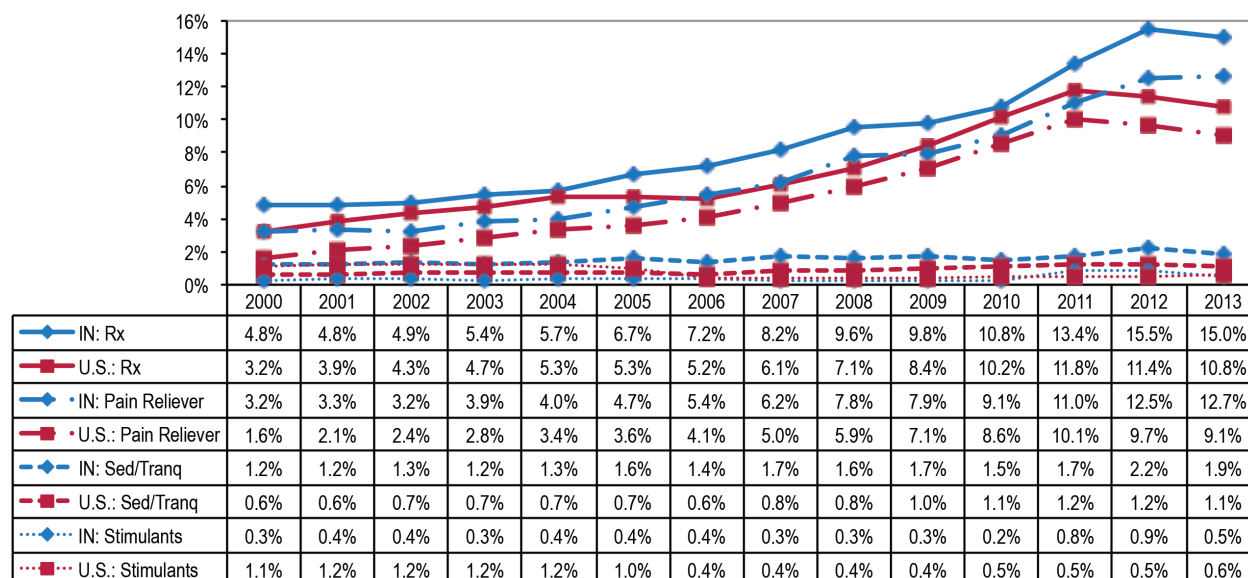
Source: SAMHSA, 2013

[9]Includes ICD-10 causes of death: X40, X41, X42, X43, X44, X60, X61, X62, X63, X64, Y10, Y11, Y12, Y13, and Y14

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Figure 9.10 Number of Arrests for Possession and Sale/Manufacture of "Other Drugs" (Barbiturates and Benzedrine) in Indiana (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Possession	1,617	1,255	1,493	1,621	1,688	2,191	2,620	2,643	2,720	3,511	3,994	3,426	3,227	2,590
Sale	316	528	537	476	556	659	746	767	690	815	930	931	1,074	1,000
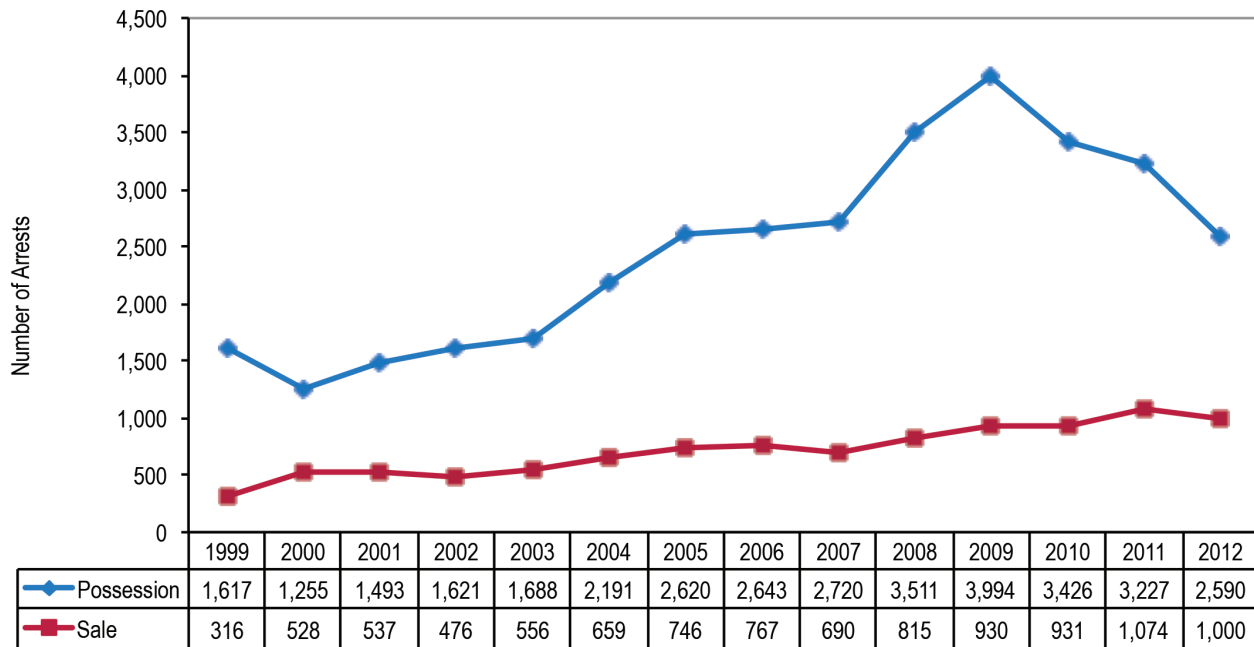
Source: FBI, 2012

Figure 9.11 Arrest Rates, per 1,000 Population, for Possession and Sale/Manufacture of "Other Drugs" (Barbiturates and Benzedrine) in Indiana and the United States (Uniform Crime Reporting Program, 1999–2012)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana Possession	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.4
U.S. Possession	0.5	0.6	0.6	0.6	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.8	0.8	0.8
Indiana Sale	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
U.S. Sale	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
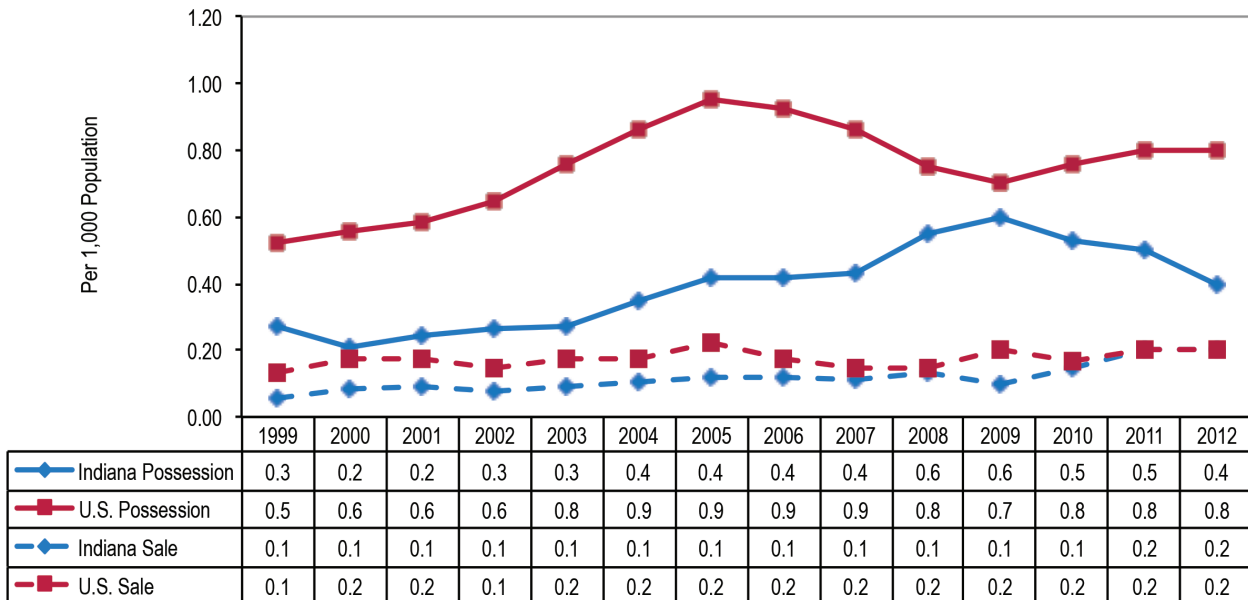
Source: FBI, 2012

APPENDIX 9A

Number of Prescription Opioids Dispensed in Indiana, by County (INSPECT, 2015)

County	Opioids	County	Opioids
Adams	24,155	Madison	175,986
Allen	288,017	Marion	822,441
Bartholomew	83,938	Marshall	40,514
Benton	7,555	Martin	14,777
Blackford	21,666	Miami	35,183
Boone	53,333	Monroe	96,548
Brown	8,243	Montgomery	41,212
Carroll	14,018	Morgan	84,135
Cass	34,194	Newton	11,610
Clark	140,438	Noble	45,358
Clay	29,612	Ohio	6,745
Clinton	38,775	Orange	26,795
Crawford	15,139	Owen	28,753
Daviess	30,084	Parke	13,094
Dearborn	45,968	Perry	18,213
Decatur	27,789	Pike	17,662
DeKalb	39,680	Porter	165,598
Delaware	137,386	Posey	26,593
Dubois	39,821	Pulaski	16,098
Elkhart	147,738	Putnam	34,665
Fayette	36,469	Randolph	29,915
Floyd	83,024	Ripley	32,268
Fountain	19,601	Rush	18,645
Franklin	17,976	Saint Joseph	230,576
Fulton	20,156	Scott	39,759
Gibson	40,636	Shelby	44,474
Grant	88,350	Spencer	20,541
Greene	40,380	Starke	35,207
Hamilton	172,914	Steuben	28,890
Hancock	69,084	Sullivan	24,965
Harrison	42,936	Switzerland	10,370
Hendricks	109,395	Tippecanoe	126,980
Henry	69,662	Tipton	14,746
Howard	105,232	Union	5,733
Huntington	38,312	Vanderburgh	226,645
Jackson	51,142	Vermillion	15,613
Jasper	40,429	Vigo	104,053
Jay	17,555	Wabash	37,995
Jefferson	39,673	Warren	5,892
Jennings	35,701	Warrick	61,804
Johnson	143,914	Washington	31,082
Knox	53,980	Wayne	85,312
Kosciusko	67,453	Wells	24,148
LaGrange	18,776	White	27,097
Lake	407,027	Whitley	34,431
LaPorte	130,324	Out of State	163,800
Lawrence	67,900	**Indiana**	**6,458,471**

Source: Indiana Professional Licensing Agency, 2016

Indiana University Center for Health Policy

Number of Treatment Episodes with Prescription Drug (Rx) Abuse and Dependence Reported at Treatment Admission in Indiana, by County and Drug Category (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Treatment Episodes Total	All Rx Abuse		All Rx Dependence		Opioid Abuse		Opioid Dependence	
		Number	%	Number	%	Number	%	Number	%
Adams	176	47	26.7%	15	8.5%	42	23.9%	13	7.4%
Allen	1715	335	19.5%	137	8.0%	288	16.8%	126	7.3%
Bartholomew	577	183	31.7%	70	12.1%	149	25.8%	45	7.8%
Benton	49	15	30.6%	6	12.2%	11	22.4%	5	10.2%
Blackford	76	33	43.4%	19	25.0%	28	36.8%	16	21.1%
Boone	191	47	24.6%	32	16.8%	43	22.5%	31	16.2%
Brown	107	33	30.8%	13	12.1%	25	23.4%	8	7.5%
Carroll	107	29	27.1%	12	11.2%	21	19.6%	8	7.5%
Cass	235	50	21.3%	19	8.1%	40	17.0%	18	7.7%
Clark	408	108	26.5%	107	26.2%	85	20.8%	84	20.6%
Clay	185	28	15.1%	9	4.9%	18	9.7%	6	3.2%
Clinton	171	46	26.9%	19	11.1%	35	20.5%	15	8.8%
Crawford	37	14	37.8%	10	27.0%	12	32.4%	9	24.3%
Daviess	252	102	40.5%	38	15.1%	79	31.3%	34	13.5%
Dearborn	493	191	38.7%	85	17.2%	176	35.7%	77	15.6%
Decatur	199	48	24.1%	18	9.0%	42	21.1%	15	7.5%
DeKalb	274	36	13.1%	11	4.0%	27	9.9%	9	3.3%
Delaware	1067	441	41.3%	248	23.2%	383	35.9%	227	21.3%
Dubois	277	77	27.8%	34	12.3%	53	19.1%	25	9.0%
Elkhart	672	107	15.9%	51	7.6%	87	12.9%	43	6.4%
Fayette	223	114	51.1%	65	29.1%	88	39.5%	37	16.6%
Floyd	171	48	28.1%	45	26.3%	42	24.6%	40	23.4%
Fountain	43	14	32.6%	9	20.9%	14	32.6%	8	18.6%
Franklin	145	51	35.2%	26	17.9%	44	30.3%	22	15.2%
Fulton	160	33	20.6%	14	8.8%	27	16.9%	13	8.1%
Gibson	245	53	21.6%	21	8.6%	39	15.9%	15	6.1%
Grant	526	196	37.3%	98	18.6%	155	29.5%	89	16.9%
Greene	183	72	39.3%	39	21.3%	59	32.2%	32	17.5%
Hamilton	972	204	21.0%	97	10.0%	155	15.9%	80	8.2%
Hancock	226	74	32.7%	37	16.4%	57	25.2%	33	14.6%
Harrison	31	8	25.8%	8	25.8%	7	22.6%	7	22.6%
Hendricks	346	83	24.0%	40	11.6%	66	19.1%	34	9.8%
Henry	347	189	54.5%	129	37.2%	175	50.4%	116	33.4%
Howard	596	238	39.9%	111	18.6%	217	36.4%	106	17.8%
Huntington	130	52	40.0%	30	23.1%	47	36.2%	29	22.3%
Jackson	347	102	29.4%	49	14.1%	83	23.9%	39	11.2%
Jasper	127	50	39.4%	19	15.0%	43	33.9%	16	12.6%
Jay	159	58	36.5%	20	12.6%	49	30.8%	19	11.9%
Jefferson	375	159	42.4%	74	19.7%	141	37.6%	58	15.5%
Jennings	265	93	35.1%	41	15.5%	80	30.2%	35	13.2%
Johnson	237	81	34.2%	39	16.5%	70	29.5%	34	14.3%
Knox	273	80	29.3%	41	15.0%	52	19.0%	27	9.9%
Kosciusko	309	91	29.4%	40	12.9%	74	23.9%	33	10.7%
LaGrange	166	28	16.9%	9	5.4%	18	10.8%	8	4.8%
Lake	2344	363	15.5%	172	7.3%	257	11.0%	136	5.8%
LaPorte	451	112	24.8%	67	14.9%	103	22.8%	65	14.4%
Lawrence	467	212	45.4%	116	24.8%	161	34.5%	82	17.6%
Madison	1193	452	37.9%	292	24.5%	383	32.1%	253	21.2%
Marion	4457	1311	29.4%	706	15.8%	1044	23.4%	632	14.2%
Marshall	190	53	27.9%	33	17.4%	39	20.5%	31	16.3%
Martin	46	18	39.1%	13	28.3%	14	30.4%	10	21.7%
Miami	268	85	31.7%	36	13.4%	72	26.9%	31	11.6%

County	Treatment Episodes Total	All Rx Abuse		All Rx Dependence		Opioid Abuse		Opioid Dependence	
		Number	%	Number	%	Number	%	Number	%
Monroe	1214	352	29.0%	184	15.2%	262	21.6%	127	10.5%
Montgomery	341	99	29.0%	43	12.6%	76	22.3%	33	9.7%
Morgan	469	126	26.9%	56	11.9%	95	20.3%	43	9.2%
Newton	40	10	25.0%	<5	10.0%	9	22.5%	4	10.0%
Noble	235	38	16.2%	13	5.5%	26	11.1%	8	3.4%
Ohio	33	8	24.2%	5	15.2%	6	18.2%	2	6.1%
Orange	135	63	46.7%	36	26.7%	53	39.3%	33	24.4%
Owen	184	56	30.4%	24	13.0%	45	24.5%	19	10.3%
Parke	105	16	15.2%	10	9.5%	13	12.4%	10	9.5%
Perry	121	36	29.8%	14	11.6%	29	24.0%	12	9.9%
Pike	38	9	23.7%	6	15.8%	7	18.4%	6	15.8%
Porter	679	231	34.0%	126	18.6%	188	27.7%	114	16.8%
Posey	132	42	31.8%	16	12.1%	31	23.5%	10	7.6%
Pulaski	122	40	32.8%	27	22.1%	38	31.1%	26	21.3%
Putnam	208	48	23.1%	28	13.5%	40	19.2%	23	11.1%
Randolph	156	55	35.3%	32	20.5%	48	30.8%	23	14.7%
Ripley	217	59	27.2%	23	10.6%	49	22.6%	20	9.2%
Rush	143	54	37.8%	22	15.4%	38	26.6%	10	7.0%
Saint Joseph	1518	238	15.7%	114	7.5%	173	11.4%	97	6.4%
Scott	144	70	48.6%	56	38.9%	66	45.8%	54	37.5%
Shelby	142	49	34.5%	23	16.2%	40	28.2%	18	12.7%
Spencer	174	50	28.7%	23	13.2%	34	19.5%	14	8.0%
Starke	255	139	54.5%	88	34.5%	124	48.6%	87	34.1%
Steuben	262	21	8.0%	7	2.7%	14	5.3%	5	1.9%
Sullivan	58	23	39.7%	14	24.1%	16	27.6%	12	20.7%
Switzerland	69	28	40.6%	22	31.9%	28	40.6%	22	31.9%
Tippecanoe	461	129	28.0%	57	12.4%	98	21.3%	51	11.1%
Tipton	61	25	41.0%	17	27.9%	23	37.7%	17	27.9%
Union	31	14	45.2%	6	19.4%	9	29.0%	1	3.2%
Vanderburgh	1333	393	29.5%	219	16.4%	306	23.0%	188	14.1%
Vermillion	128	30	23.4%	15	11.7%	28	21.9%	14	10.9%
Vigo	652	148	22.7%	79	12.1%	98	15.0%	63	9.7%
Wabash	281	104	37.0%	49	17.4%	97	34.5%	46	16.4%
Warren	17	6	35.3%	<5	23.5%	6	35.3%	3	17.6%
Warrick	253	83	32.8%	51	20.2%	66	26.1%	41	16.2%
Washington	98	29	29.6%	16	16.3%	22	22.4%	13	13.3%
Wayne	386	113	29.3%	51	13.2%	86	22.3%	33	8.5%
Wells	119	52	43.7%	21	17.6%	50	42.0%	21	17.6%
White	133	34	25.6%	12	9.0%	24	18.0%	10	7.5%
Whitley	102	36	35.3%	24	23.5%	29	28.4%	21	20.6%
County Info Missing	61	12	19.7%	5	8.2%	7	11.5%	<5	N/A
Indiana	**34,596**	**9,915**	**28.7%**	**5,131**	**14.8%**	**8,016**	**23.2%**	**4,342**	**12.6%**

Note: We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

We calculated the percentages by dividing the number of reported prescription drug use/dependence by the number of treatment episodes.

Information on treatment episodes <5 was suppressed due to confidentiality constraints.

Source: Indiana Family and Social Services Administration, 2015

County	CNS Depressant Abuse Number	%	CNS Depressant Dependence Number	%	Stimulant Abuse Number	%	Stimulant Dependence Number	%
Adams	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Allen	62	3.6%	6	.3%	26	1.5%	5	.3%
Bartholomew	44	7.6%	21	3.6%	7	1.2%	<5	N/A
Benton	6	12.2%	<5	N/A	<5	N/A	<5	N/A
Blackford	11	14.5%	<5	N/A	<5	N/A	<5	N/A
Boone	6	3.1%	<5	N/A	<5	N/A	<5	N/A
Brown	7	6.5%	<5	N/A	<5	N/A	<5	N/A
Carroll	7	6.5%	<5	N/A	<5	N/A	<5	N/A
Cass	6	2.6%	<5	N/A	9	3.8%	<5	N/A
Clark	21	5.1%	21	5.1%	<5	N/A	<5	N/A
Clay	13	7.0%	<5	N/A	<5	N/A	<5	N/A
Clinton	18	10.5%	<5	N/A	<5	N/A	<5	N/A
Crawford	<5	5.4%	<5	N/A	<5	N/A	<5	N/A
Daviess	39	15.5%	<5	N/A	<5	1.6%	<5	N/A
Dearborn	34	6.9%	7	N/A	<5	.8%	<5	N/A
Decatur	9	4.5%	<5	N/A	<5	.5%	<5	N/A
DeKalb	7	2.6%	<5	N/A	7	2.6%	<5	N/A
Delaware	109	10.2%	18	N/A	20	1.9%	<5	N/A
Dubois	32	11.6%	7	N/A	9	3.2%	<5	N/A
Elkhart	18	2.7%	<5	N/A	13	1.9%	<5	N/A
Fayette	37	16.6%	23	10.3%	6	2.7%	5	2.2%
Floyd	6	3.5%	<5	2.3%	<5	N/A	<5	N/A
Fountain	<5	9.3%	<5	2.3%	<5	N/A	<5	N/A
Franklin	10	6.9%	<5	1.4%	<5	N/A	<5	N/A
Fulton	<5	2.5%	<5	.6%	<5	N/A	<5	N/A
Gibson	14	5.7%	5	2.0%	<5	N/A	<5	N/A
Grant	56	10.6%	7	1.3%	29	N/A	<5	N/A
Greene	17	9.3%	5	2.7%	9	N/A	<5	N/A
Hamilton	61	6.3%	14	1.4%	14	N/A	<5	N/A
Hancock	23	10.2%	<5	1.8%	<5	N/A	<5	N/A
Harrison	<5	3.2%	<5	3.2%	<5	N/A	<5	N/A
Hendricks	22	6.4%	5	1.4%	6	N/A	<5	N/A
Henry	46	13.3%	12	3.5%	7	N/A	<5	N/A
Howard	58	9.7%	5	.8%	<5	N/A	<5	N/A
Huntington	<5	4.6%	<5	N/A	6	N/A	<5	N/A
Jackson	24	6.9%	10	2.9%	<5	N/A	<5	N/A
Jasper	17	N/A	<5	N/A	<5	2.4%	<5	N/A
Jay	11	N/A	<5	N/A	<5	1.9%	<5	N/A
Jefferson	21	N/A	12	N/A	9	2.4%	<5	N/A
Jennings	15	N/A	5	N/A	<5	1.1%	<5	N/A
Johnson	23	N/A	5	N/A	<5	.8%	<5	N/A
Knox	37	N/A	11	N/A	<5	1.5%	<5	N/A
Kosciusko	19	N/A	5	N/A	7	2.3%	<5	N/A
LaGrange	<5	N/A	<5	N/A	8	4.8%	<5	N/A
Lake	135	5.8%	31	1.3%	14	.6%	5	.2%
LaPorte	18	4.0%	<5	.4%	<5	.2%	<5	N/A
Lawrence	67	14.3%	32	6.9%	7	1.5%	<5	N/A
Madison	140	11.7%	34	2.8%	12	1.0%	5	.4%
Marion	373	8.4%	57	1.3%	44	1.0%	17	.4%
Marshall	13	6.8%	<5	N/A	7	3.7%	<5	N/A
Martin	7	15.2%	<5	N/A	<5	N/A	<5	N/A
Miami	15	5.6%	<5	N/A	6	2.2%	<5	N/A
Monroe	107	8.8%	46	3.8%	19	1.6%	11	.9%
Montgomery	26	7.6%	8	2.3%	5	N/A	<5	N/A

County	CNS Depressant Abuse		CNS Depressant Dependence		Stimulant Abuse		Stimulant Dependence	
	Number	%	Number	%	Number	%	Number	%
Morgan	37	7.9%	12	2.6%	<5	N/A	<5	N/A
Newton	<5	10.0%	<5	N/A	<5	N/A	<5	N/A
Noble	9	3.8%	<5	1.7%	7	N/A	<5	N/A
Ohio	<5	9.1%	<5	9.1%	<5	N/A	<5	N/A
Orange	11	8.1%	<5	1.5%	5	N/A	<5	N/A
Owen	15	8.2%	5	2.7%	<5	N/A	<5	N/A
Parke	6	5.7%	<5	N/A	<5	N/A	<5	N/A
Perry	8	6.6%	<5	.8%	<5	N/A	<5	N/A
Pike	<5	5.3%	<5	N/A	<5	N/A	<5	N/A
Porter	53	7.8%	10	1.5%	7	N/A	<5	N/A
Posey	16	12.1%	6	4.5%	<5	N/A	<5	N/A
Pulaski	8	6.6%	<5	N/A	<5	N/A	<5	N/A
Putnam	10	4.8%	<5	1.4%	<5	N/A	<5	N/A
Randolph	13	8.3%	7	4.5%	<5	N/A	<5	N/A
Ripley	15	6.9%	<5	.9%	<5	N/A	<5	N/A
Rush	23	16.1%	10	7.0%	<5	N/A	<5	N/A
Saint Joseph	82	5.4%	12	.8%	19	1.3%	5	.3%
Scott	8	5.6%	<5	N/A	<5	N/A	<5	N/A
Shelby	18	12.7%	5	N/A	<5	1.4%	<5	N/A
Spencer	20	11.5%	8	N/A	5	2.9%	<5	N/A
Starke	38	14.9%	<5	N/A	<5	1.2%	<5	N/A
Steuben	6	2.3%	<5	N/A	<5	1.1%	<5	N/A
Sullivan	<5	5.2%	<5	N/A	6	10.3%	<5	N/A
Switzerland	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Tippecanoe	42	9.1%	5	N/A	6	1.3%	<5	N/A
Tipton	<5	6.6%	<5	N/A	<5	N/A	<5	N/A
Union	8	25.8%	<5	N/A	<5	3.2%	<5	N/A
Vanderburgh	149	11.2%	26	2.0%	18	1.4%	5	.4%
Vermillion	8	6.3%	<5	N/A	<5	N/A	<5	N/A
Vigo	59	9.0%	11	1.7%	9	1.4%	5	.8%
Wabash	11	N/A	<5	N/A	5	N/A	<5	N/A
Warren	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Warrick	27	N/A	7	N/A	<5	N/A	<5	N/A
Washington	8	N/A	<5	N/A	<5	N/A	<5	N/A
Wayne	37	N/A	17	N/A	<5	N/A	<5	N/A
Wells	<5	N/A	<5	N/A	<5	N/A	<5	N/A
White	13	N/A	<5	N/A	<5	N/A	<5	N/A
Whitley	<5	N/A	<5	N/A	5	N/A	<5	N/A
County Info Missing	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Indiana	**2,677**	**7.7%**	**641**	**1.9%**	**502**	**1.5%**	**148**	**0.4%**

Note: We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

We calculated the percentages by dividing the number of reported prescription drug use/dependence by the number of treatment episodes.

Information on treatment episodes <5 was suppressed due to confidentiality constraints.

Source: Indiana Family and Social Services Administration, 2015

APPENDIX 9C

Percentage of Indiana Students Reporting Monthly Nonmedical Prescription Drug Use, by Region and Grade (Indiana Youth Survey, 2015)

	Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	1.5	1.9	1.3	2.0	1.3	1.2	1.8	1.5	1.3
7th Grade	1.4	1.7	1.2	1.8	1.4	1.5	1.6	1.0	1.0
8th Grade	2.3	2.7	3.1*	2.4	1.8	1.6*	2.5	1.9	2.3
9th Grade	3.2	3.6	3.8	3.3	2.6	2.9	3.8	3.1	2.4*
10th Grade	4.4	6.7*	4.1	4.5	4.5	3.6*	4.7	3.6*	4.1
11th Grade	5.2	6.8*	7.2*	5.9	3.8*	5.6	4.9	4.2*	3.4*
12th Grade	6.0	8.6*	6.7	5.9	6.1	5.4	6.0	4.8*	4.9

Notes: Includes Ritalin®, Oxycontin®, and Xanax®.

* Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).

Beginning in 2015, lifetime prevalence is no longer available by region.

Source: Gassman et al., 2015

Number and Rate, per 1,000 Population, of Arrests for Possession and Sale/Manufacture of "Other Drugs" (including Barbiturates and Benzedrine) in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	8	*0.2	2	*0.1
Allen	106	0.3	60	0.2
Bartholomew	27	0.3	0	*0.0
Benton	2	*0.2	1	*0.1
Blackford	2	*0.2	3	*0.2
Boone	9	*0.2	4	*0.1
Brown	0	*0.0	0	*0.0
Carroll	8	*0.4	0	*0.0
Cass	35	0.9	32	0.8
Clark	20	0.2	4	*0.0
Clay	7	*0.3	3	*0.1
Clinton	11	*0.3	15	*0.5
Crawford	3	*0.3	0	*0.0
Daviess	23	0.7	3	*0.1
Dearborn	2	*0.0	9	*0.2
Decatur	29	1.1	28	1.1
DeKalb	13	*0.3	8	*0.2
Delaware	1	*0.0	1	*0.0
Dubois	8	*0.2	2	*0.0
Elkhart	12	*0.1	1	*0.0
Fayette	12	*0.5	4	*0.2
Floyd	162	2.1	144	1.9
Fountain	6	*0.4	4	*0.2
Franklin	6	*0.3	9	*0.4
Fulton	14	*0.7	8	*0.4
Gibson	32	1.0	2	*0.1
Grant	1	*0.0	2	*0.0
Greene	4	*0.1	1	*0.0
Hamilton	16	*0.1	7	*0.0
Hancock	29	0.4	12	*0.2
Harrison	3	*0.1	0	*0.0
Hendricks	57	0.4	15	*0.1
Henry	36	0.7	12	*0.2
Howard	92	1.1	10	*0.1
Huntington	6	*0.2	0	*0.0
Jackson	57	1.3	28	0.7
Jasper	9	*0.3	12	*0.4
Jay	8	*0.4	1	*0.0
Jefferson	14	*0.4	5	*0.2
Jennings	1	*0.0	6	*0.2
Johnson	51	0.4	45	0.3
Knox	37	1.0	11	*0.3
Kosciusko	35	0.5	29	0.4
LaGrange	3	*0.1	0	*0.0
Lake	395	0.8	81	0.2
LaPorte	18	*0.2	3	*0.0
Lawrence	19	*0.4	3	*0.1
Madison	137	1.1	55	0.4
Marion	31	0.0	39	0.0

(continued on next page)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	29	0.6	10	*0.2
Martin	3	*0.3	2	*0.2
Miami	4	*0.1	0	*0.0
Monroe	121	0.9	31	0.2
Montgomery	59	1.5	3	*0.1
Morgan	70	1.0	16	*0.2
Newton	0	*0.0	1	*0.1
Noble	22	0.5	6	*0.1
Ohio	2	*0.3	1	*0.2
Orange	2	*0.1	0	*0.0
Owen	7	*0.3	3	*0.1
Parke	3	*0.2	1	*0.1
Perry	11	*0.6	2	*0.1
Pike	5	*0.4	2	*0.2
Porter	122	0.7	14	*0.1
Posey	7	*0.3	3	*0.1
Pulaski	4	*0.3	4	*0.3
Putnam	6	*0.2	3	*0.1
Randolph	10	*0.4	3	*0.1
Ripley	10	*0.4	2	*0.1
Rush	43	2.5	24	1.4
Saint Joseph	73	0.3	8	*0.0
Scott	2	*0.1	1	*0.0
Shelby	1	*0.0	0	*0.0
Spencer	8	*0.4	2	*0.1
Starke	1	*0.0	2	*0.1
Steuben	57	1.7	6	*0.2
Sullivan	2	*0.1	1	*0.0
Switzerland	4	*0.4	1	*0.1
Tippecanoe	29	0.2	12	*0.1
Tipton	10	*0.6	4	0*.3
Union	2	*0.3	1	*0.1
Vanderburgh	129	0.7	44	0.2
Vermillion	0	*0.0	0	*0.0
Vigo	30	0.3	5	*0.0
Wabash	12	*0.4	4	*0.1
Warren	3	*0.4	1	*0.1
Warrick	25	0.4	31	0.5
Washington	9	*0.3	3	*0.1
Wayne	7	*0.1	2	*0.0
Wells	12	*0.4	12	*0.4
White	2	*0.1	0	*0.0
Whitley	15	*0.5	5	*0.2
Indiana	**2,590**	**0.4**	**1,000**	**0.2**

* Rates based on arrest numbers lower than 20 are unreliable.
Source: FBI, 2012

Map 9.1 Arrest Rates, per 1,000 Population, for Possession of "Other Drugs" (Barbiturates and Benzedrine) in Indiana, by County (Uniform Crime Reporting Program, 2012)

Lake 11.46
Porter 3.54
LaPorte 0.52
St. Joseph 2.12
Elkhart 0.35
LaGrange 0.09
Steuben 1.65
Starke 0.03
Marshall 0.84
Kosciusko 1.02
Noble 0.64
DeKalb 0.38
Newton 0
Jasper 0.26
Pulaski 0.12
Fulton 0.41
Whitley 0.44
Allen 3.07
White 0.06
Cass 1.02
Miami 0.12
Wabash 0.35
Huntington 0.17
Wells 0.35
Adams 0.23
Benton 0.06
Carroll 0.23
Howard 2.67
Grant 0.03
Blackford 0.06
Jay 0.23
Warren 0.09
Tippecanoe 0.84
Clinton 0.32
Tipton 0.29
Delaware 0.03
Randolph 0.29
Fountain 0.17
Montgomery 1.71
Boone 0.26
Hamilton 0.46
Madison 3.97
Vermillion 0
Parke 0.09
Putnam 0.17
Hendricks 1.65
Marion 0.9
Hancock 0.84
Henry 1.04
Wayne 0.2
Rush 1.25
Fayette 0.35
Union 0.06
Vigo 0.87
Clay 0.2
Owen 0.2
Morgan 2.03
Johnson 1.48
Shelby 0.03
Franklin 0.17
Monroe 3.51
Brown 0
Bartholomew 0.78
Decatur 0.84
Dearborn 0.06
Sullivan 0.06
Greene 0.12
Ripley 0.29
Ohio 0.06
Jennings 0.03
Jackson 1.65
Lawrence 0.55
Jefferson 0.41
Switzerland 0.12
Knox 1.07
Daviess 0.67
Martin 0.09
Washington 0.26
Scott 0.06
Clark 0.58
Orange 0.06
Pike 0.15
Dubois 0.23
Crawford 0.09
Floyd 4.7
Gibson 0.93
Harrison 0.09
Posey 0.2
Vanderburgh 3.74
Warrick 0.73
Spencer 0.23
Perry 0.32

Rate per 1,000

- 0.00 - 0.09
- 0.09 - 0.29
- 0.29 - 0.87
- > 0.87

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 160-161) for additional information.
Source: FBI, 2012

Map 9.2 Arrest Rates, per 1,000 Population, for Sale/Manufacture of "Other Drugs" (Barbiturates and Benzedrine) in Indiana, by County (Uniform Crime Reporting Program, 2012)

County	Rate
LaGrange	0
Steuben	0.17
St. Joseph	0.23
Elkhart	0.03
LaPorte	0.09
Lake	2.35
Porter	0.41
Noble	0.17
DeKalb	0.23
Starke	0.06
Marshall	0.29
Kosciusko	0.84
Whitley	0.15
Allen	1.74
Newton	0.03
Jasper	0.35
Pulaski	0.12
Fulton	0.23
Wabash	0.12
Huntington	0
Wells	0.35
Adams	0.06
White	0
Cass	0.93
Miami	0
Benton	0.03
Carroll	0
Howard	0.29
Grant	0.06
Blackford	0.09
Jay	0.03
Warren	0.03
Tippecanoe	0.35
Clinton	0.44
Tipton	0.12
Madison	1.6
Delaware	0.03
Randolph	0.09
Fountain	0.12
Montgomery	0.09
Boone	0.12
Hamilton	0.2
Henry	0.35
Wayne	0.06
Vermillion	0
Parke	0.03
Hendricks	0.44
Marion	1.13
Hancock	0.35
Rush	0.7
Fayette	0.12
Union	0.03
Putnam	0.09
Shelby	0
Vigo	0.15
Clay	0.09
Owen	0.09
Morgan	0.46
Johnson	1.31
Franklin	0.26
Decatur	0.81
Sullivan	0.03
Greene	0.03
Monroe	0.9
Brown	0
Bartholomew	0
Ripley	0.06
Dearborn	0.26
Ohio	0.03
Jennings	0.17
Jackson	0.81
Jefferson	0.15
Switzerland	0.03
Knox	0.32
Daviess	0.09
Martin	0.06
Lawrence	0.09
Washington	0.09
Scott	0.03
Clark	0.12
Orange	0
Gibson	0.06
Pike	0.06
Dubois	0.06
Crawford	0
Floyd	4.18
Harrison	0
Posey	0.09
Vanderburgh	1.28
Warrick	0.9
Spencer	0.06
Perry	0.06

Rate per 1,000

- 0.00 - 0.03
- 0.03 - 0.12
- 0.12 - 0.35
- > 0.35

Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 160-161) for additional information.
Source: FBI, 2012

Map 9.3 Average Age-Adjusted Prescription Drug Overdose Mortality Rate per 100,000 in Indiana, by County (Indiana Mortality Data, 2002-2014)

County	Rate
LaGrange	U
Steuben	6.8
St. Joseph	10
Elkhart	8
LaPorte	12.2
Porter	13.6
Lake	5.9
Noble	9.8
DeKalb	10.3
Starke	33.3
Marshall	8
Kosciusko	9.2
Whitley	8.3
Allen	9.6
Newton	U
Jasper	11.9
Pulaski	16.4
Fulton	7.7
White	12.4
Cass	4.2
Miami	8.9
Wabash	19.7
Huntington	12.7
Wells	9.9
Adams	7.7
Benton	U
Carroll	9.5
Howard	23.4
Grant	19.4
Blackford	19.1
Jay	12.5
Warren	U
Tippecanoe	11.8
Clinton	12.6
Tipton	17.3
Delaware	17.6
Randolph	10.6
Fountain	U
Montgomery	20.3
Boone	10
Hamilton	6.5
Madison	25.2
Henry	27.5
Wayne	17.5
Vermillion	11.5
Parke	9.3
Hendricks	9.6
Marion	15.3
Hancock	12.8
Rush	10
Fayette	22.9
Union	U
Putnam	8.4
Shelby	13.9
Franklin	17.3
Vigo	14.8
Clay	12.6
Owen	11.5
Morgan	17.4
Johnson	12.5
Decatur	13.7
Sullivan	21
Greene	17.5
Monroe	15.3
Brown	13.7
Bartholomew	13.5
Ripley	13.5
Dearborn	17.1
Ohio	U
Jennings	17.6
Jackson	14.7
Jefferson	12.2
Switzerland	18.7
Knox	12
Daviess	11.4
Martin	U
Lawrence	14.2
Scott	33.2
Orange	U
Washington	15.9
Clark	16.7
Pike	U
Dubois	6.3
Crawford	16.4
Floyd	14.5
Harrison	8.7
Gibson	8.6
Posey	11.6
Vanderburgh	19.5
Warrick	6.9
Spencer	U
Perry	9.1

Avg. Age-Adjusted Rate

- Unstable Rate
- 0.0 - 12.0
- 12.1 - 16.4
- > 16.4

Note: Includes ICD-10 causes of death: X40, X41, X42, X43, X44, X60, X61, X62, X63, X64, Y10, Y11, Y12, Y13, and Y14.
Rates based on number of deaths <20 are not computed, but marked unstable ("U").
Source: CDC, 2016

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REFERENCES, CHAPTER 9

Centers for Disease Control and Prevention. (2015). *Prescription overdose in the United States: Fact sheet.* Retrieved from http://www.cdc.gov/drugoverdose

Centers for Disease Control and Prevention. (2016). *Compressed Mortality, 1999-2014.* Retrieved from http://wonder.cdc.gov/controller/datarequest/D124

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana Professional Licensing Agency. (2016). *INSPECT, 2015 data.* Information received February 11, 2016, from Amanda Garrett, Indiana Professional Licensing Agency.

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

King, R. A., & Jun, M. K. (2015). *Indiana College Substance Use Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey

Federal Bureau of Investigation. (2012). *Uniform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

National Institute on Drug Abuse. (2014). *Research report series: Prescription drug abuse.* Retrieved from http://www.drugabuse.gov/sites/default/files/prescriptiondrugrrs_11_14.pdf

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). Treatment Episode Data Set -- *Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

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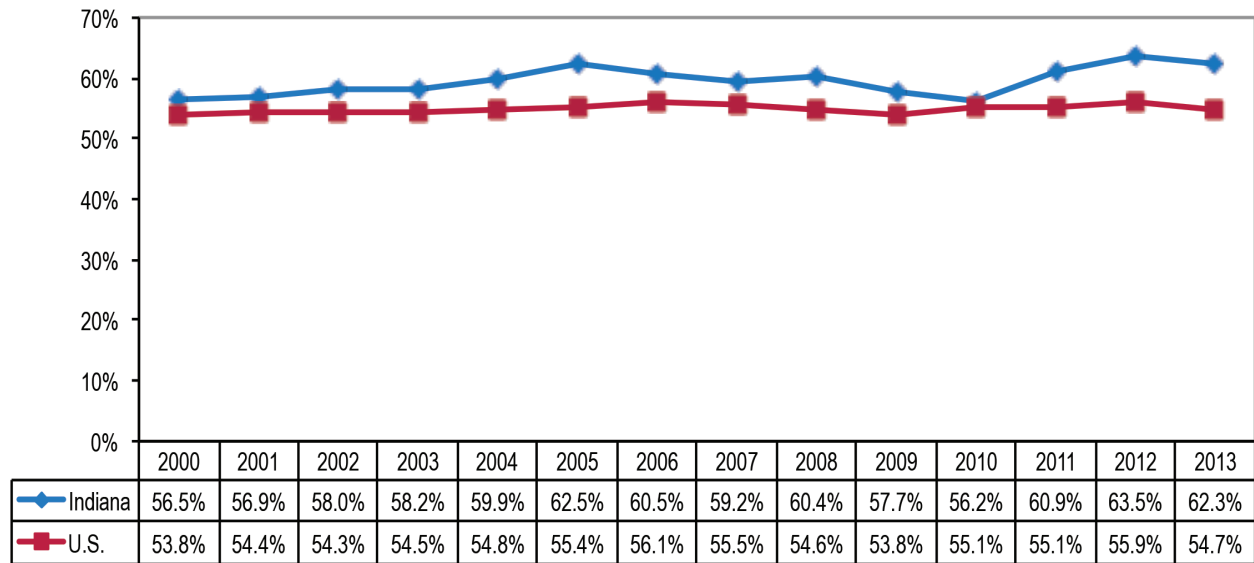
Polysubstance Abuse

Polysubstance abuse refers to substance abuse during which two or more substances are used in combination. It is a particularly serious pattern of drug abuse that appears to be generally established by late adolescence (Collins, Ellickson, & Bell, 1998).

Available data are limited, and all information gathered for this chapter was provided by the Treatment Episode Data Set (TEDS) (Substance Abuse and Mental Health Services Administration (SAMHSA), 2013). For each treatment admission, the TEDS allows for the recording of a primary, secondary, and tertiary substance of abuse. Polysubstance abuse was defined as any treatment admission where an individual reported using two or three substances. A review of the 2000 through 2013 TEDS data indicates use of at least two drugs reported at the time of treatment admission for over half of the treatment episodes in the database (see Figure 10.1).

Compared to the rest of the United States, the percentage of reported polysubstance abuse among the treatment population was statistically significantly higher in Indiana. Also, use of two or more substances increased significantly from 2000 in Indiana, peaking at 63.5% in 2012 (see Figure 10.1). County-level treatment data on individuals using two or more substances is available in Appendix 10A, pages 176-177.

Figure 10.1 Percentage of Indiana and U.S. Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

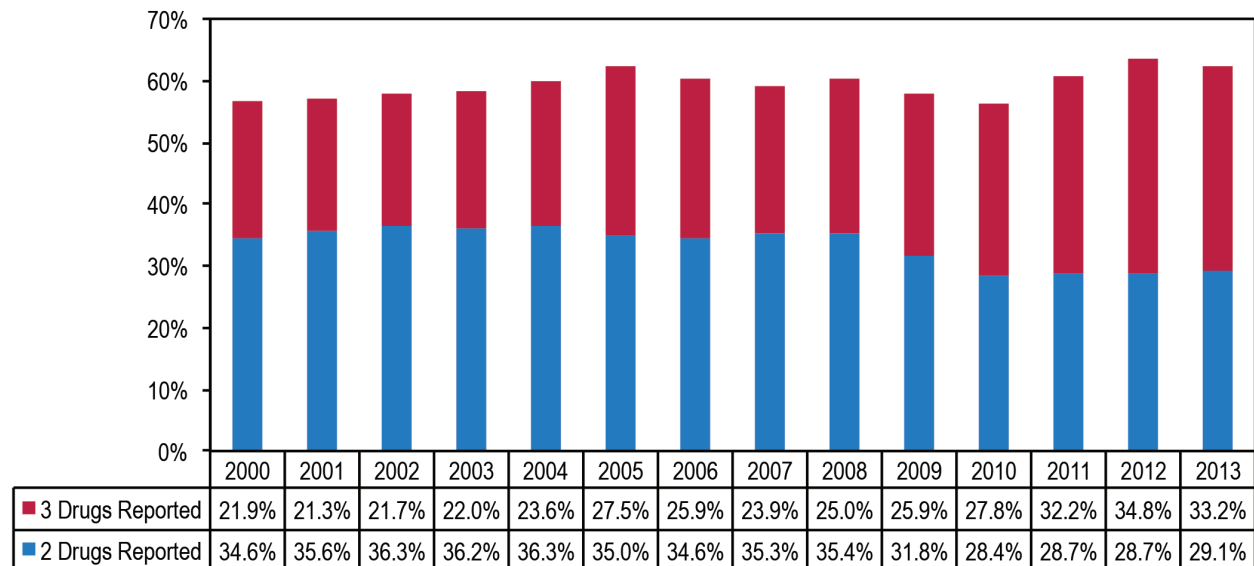|	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	56.5%	56.9%	58.0%	58.2%	59.9%	62.5%	60.5%	59.2%	60.4%	57.7%	56.2%	60.9%	63.5%	62.3%
U.S.	53.8%	54.4%	54.3%	54.5%	54.8%	55.4%	56.1%	55.5%	54.6%	53.8%	55.1%	55.1%	55.9%	54.7%

Source: SAMHSA, 2013

Among Indiana treatment episodes alone, 29% reported use of only two substances and 33% reported use of three substances (see Figure 10.2).

Demographic Characteristics of Polysubstance Users

Gender—From 2000 through 2013, the percentage of both males and females reporting use of two or more

substances at treatment admission fluctuated between 56% and 65% (see Figure 10.3). In 2013, men were more likely to report use of two substances, while women were more likely to report use of three substances (see Figure 10.4).

Figure 10.2 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
■ 3 Drugs Reported	21.9%	21.3%	21.7%	22.0%	23.6%	27.5%	25.9%	23.9%	25.0%	25.9%	27.8%	32.2%	34.8%	33.2%
■ 2 Drugs Reported	34.6%	35.6%	36.3%	36.2%	36.3%	35.0%	34.6%	35.3%	35.4%	31.8%	28.4%	28.7%	28.7%	29.1%

Source: SAMHSA, 2013

Figure 10.3 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Males	55.7%	56.6%	57.7%	58.2%	59.9%	62.0%	60.6%	59.0%	59.9%	57.5%	55.6%	59.6%	62.3%	61.5%
Females	58.1%	57.2%	58.9%	58.3%	59.8%	63.5%	60.4%	59.6%	61.2%	58.1%	57.4%	63.4%	65.4%	63.4%
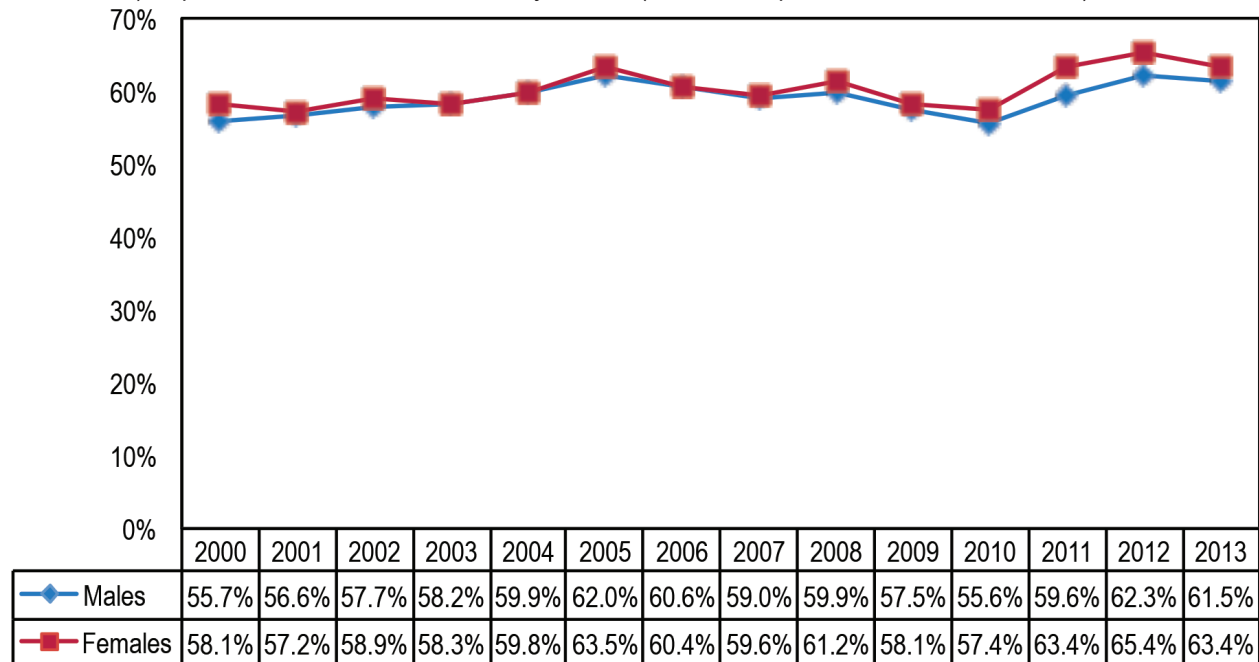
Source: SAMHSA, 2013

Figure 10.4 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2013)

	Males	Females
3 Drugs Reported	31.7%	35.6%
2 Drugs Reported	29.8%	27.8%

Source: SAMHSA, 2013

Race—Overall, in 2013, the percent of treatment episodes for blacks with polysubstance abuse reported (55.7%) was less than for whites (63.4%) and other races (61.8%) (see Figure 10.5). Blacks were more likely to report use of two substances, while whites and other races were more likely to report use of three substances (see Figure 10.6).
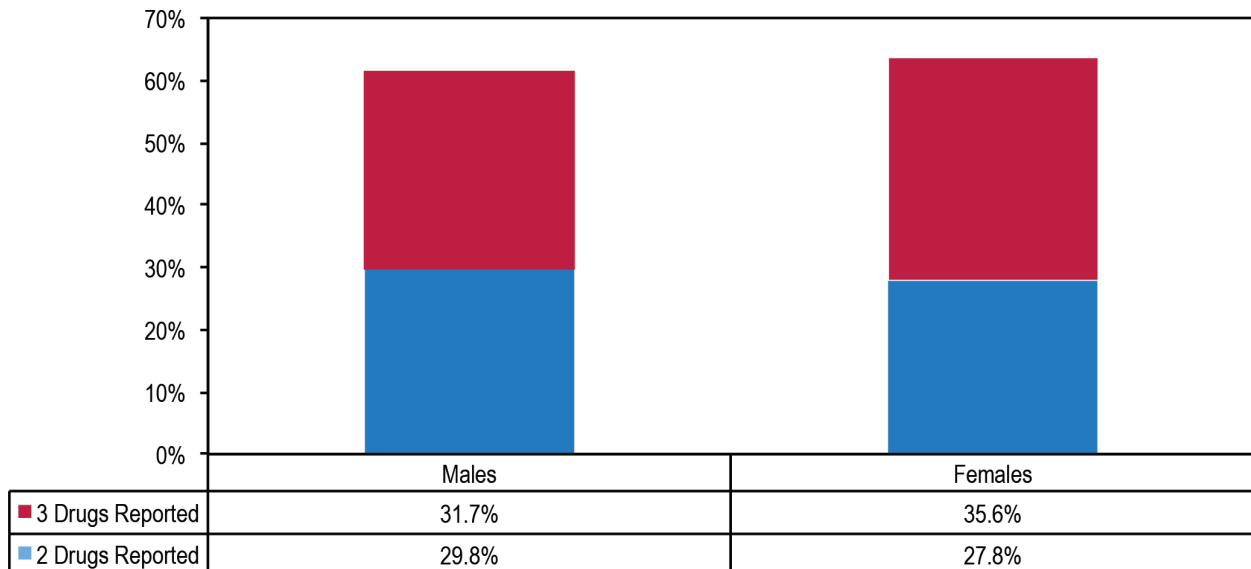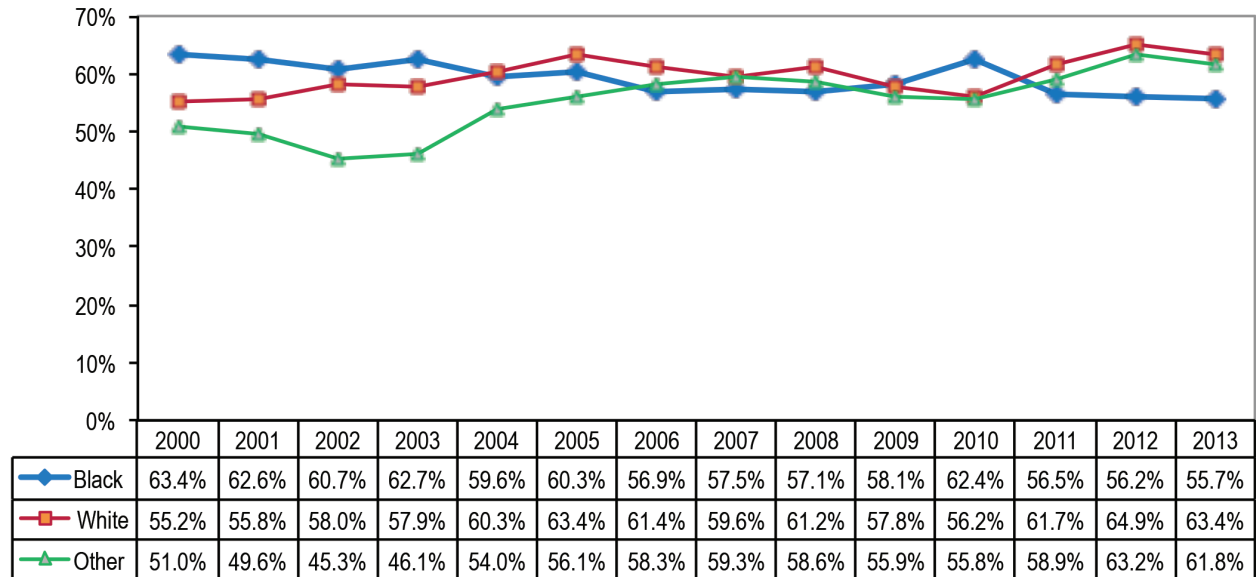
Age—Adults ages 18 to 34 had the highest percentage of polysubstance abuse reported at treatment admission, while older individuals ages 55 and above were the least likely to use multiple substances (see Figures 10.7 and 10.8).

Figure 10.5 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2013)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Black	63.4%	62.6%	60.7%	62.7%	59.6%	60.3%	56.9%	57.5%	57.1%	58.1%	62.4%	56.5%	56.2%	55.7%
White	55.2%	55.8%	58.0%	57.9%	60.3%	63.4%	61.4%	59.6%	61.2%	57.8%	56.2%	61.7%	64.9%	63.4%
Other	51.0%	49.6%	45.3%	46.1%	54.0%	56.1%	58.3%	59.3%	58.6%	55.9%	55.8%	58.9%	63.2%	61.8%

Source: Substance Abuse and Mental Health Data Archive, 2013

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Figure 10.6 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2013)

	Black	White	Other
■ 3 Drugs Reported	21.9%	35.2%	32.6%
■ 2 Drugs Reported	33.8%	28.2%	29.2%
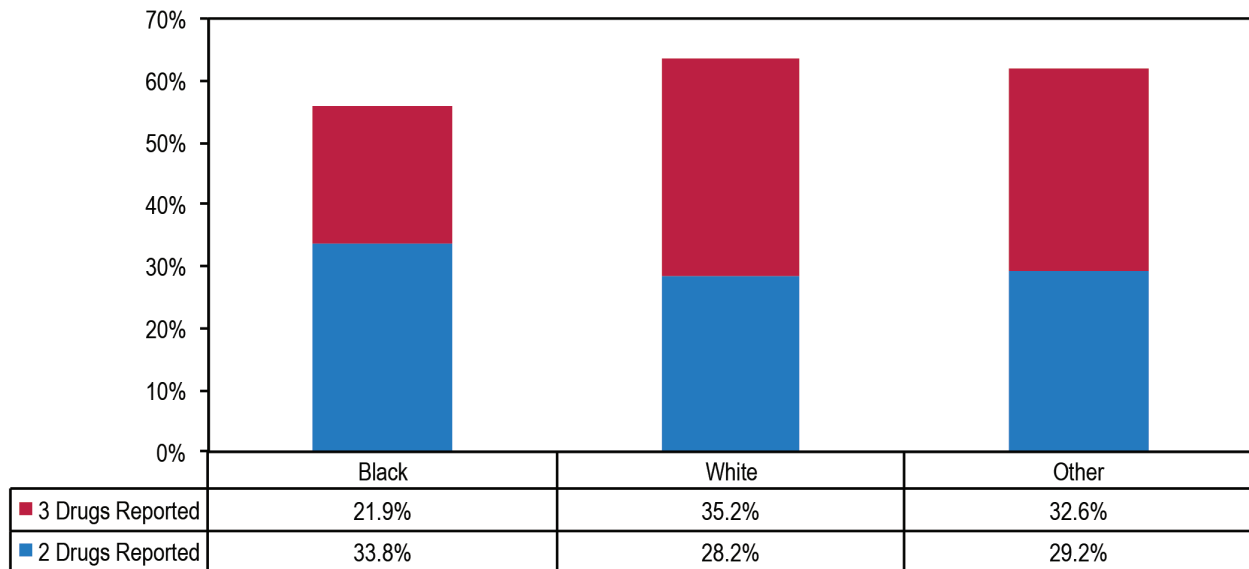
Source: SAMHSA, 2013

Figure 10.7 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Age (Treatment Episode Data Set, 2000–2013)
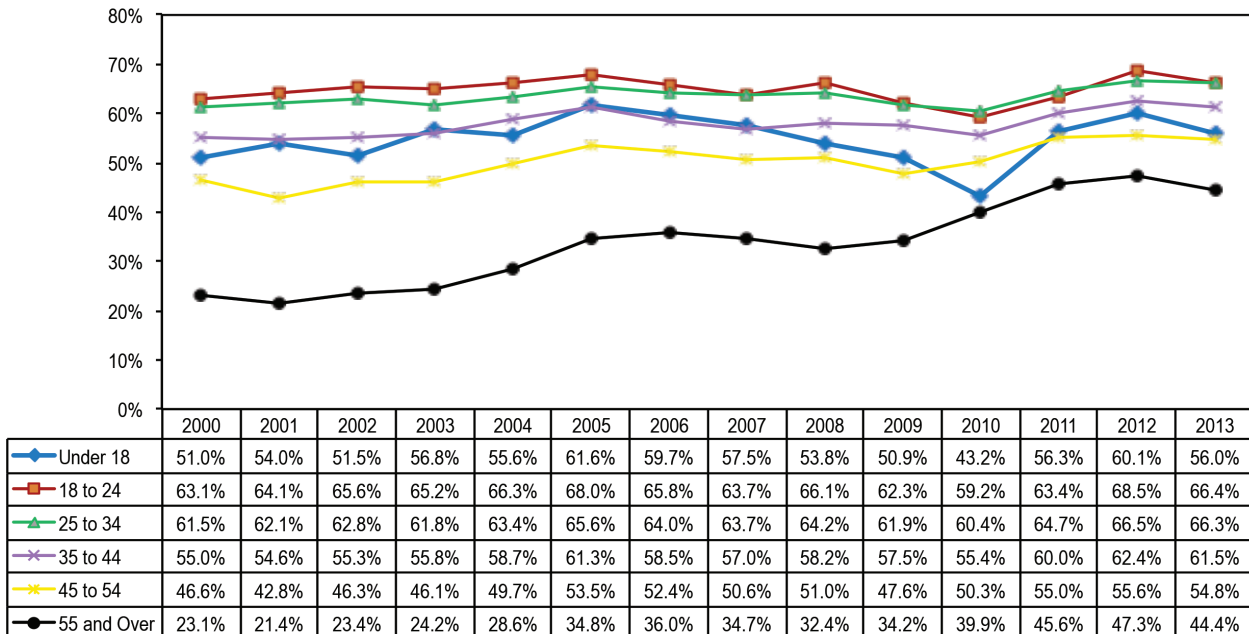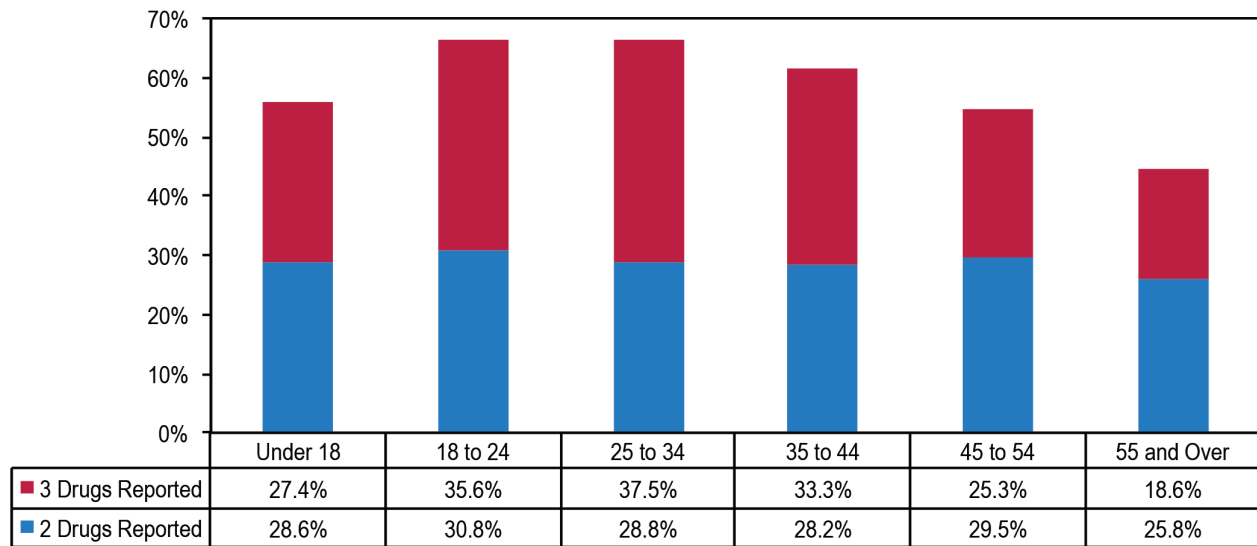

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Under 18	51.0%	54.0%	51.5%	56.8%	55.6%	61.6%	59.7%	57.5%	53.8%	50.9%	43.2%	56.3%	60.1%	56.0%
18 to 24	63.1%	64.1%	65.6%	65.2%	66.3%	68.0%	65.8%	63.7%	66.1%	62.3%	59.2%	63.4%	68.5%	66.4%
25 to 34	61.5%	62.1%	62.8%	61.8%	63.4%	65.6%	64.0%	63.7%	64.2%	61.9%	60.4%	64.7%	66.5%	66.3%
35 to 44	55.0%	54.6%	55.3%	55.8%	58.7%	61.3%	58.5%	57.0%	58.2%	57.5%	55.4%	60.0%	62.4%	61.5%
45 to 54	46.6%	42.8%	46.3%	46.1%	49.7%	53.5%	52.4%	50.6%	51.0%	47.6%	50.3%	55.0%	55.6%	54.8%
55 and Over	23.1%	21.4%	23.4%	24.2%	28.6%	34.8%	36.0%	34.7%	32.4%	34.2%	39.9%	45.6%	47.3%	44.4%

Source: SAMHSA, 2013

Figure 10.8 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission, by Age (Treatment Episode Data Set, 2013)

	Under 18	18 to 24	25 to 34	35 to 44	45 to 54	55 and Over
■ 3 Drugs Reported	27.4%	35.6%	37.5%	33.3%	25.3%	18.6%
■ 2 Drugs Reported	28.6%	30.8%	28.8%	28.2%	29.5%	25.8%

Source: SAMHSA, 2013

Polysubstance Abuse Clusters in Indiana

Statewide Analysis—We conducted a cluster analysis of 2013 Indiana TEDS data to determine the combinations of drugs currently used by polysubstance abusers within the state. The cluster analysis was completed in two steps following standardized methods (Hair, Anderson, Tatham, & Black, 1995).
In the first step, we performed a hierarchical cluster analysis specifying solutions with 2 to 20 clusters using Ward's method (Hair et al., 1995). Second, we used the results of the hierarchical cluster analysis to create "seed points" to serve as cluster centroids for follow-up K-Means cluster analyses, specifying 2 to 20 clusters. We selected this two-step method because it produces clusters that are more easily interpretable (Hair et al., 1995).

Then, to select the final classification solution, we compared the cubic clustering criteria (the expected value of the within sum of squares) with the face-validity of the set of drugs across the clusters (Hair et al., 1995). The results of the K-Means cluster analyses indicated that a 9-cluster solution best fit the available data.

Table 10.1, page 174, shows the image matrix for the 9-cluster solution. The image matrix represents the percentage of individuals within a cluster who used each specific drug. Using cluster 1 as an example, 88% of the individuals in this cluster used alcohol, 100% used cocaine, 57% used marijuana, 0% used heroin, and so on. A specific drug was considered part of a cluster, if at least 50% of the individuals within the cluster used the drug.

The most frequently occurring drug clusters in Indiana were clusters 3, 4, 2, 1, and 8. These clusters accounted for more than two-thirds of polysubstance users in the analysis (68.7%). Individuals in cluster 3 reported using a combination of alcohol and marijuana. Polysubstance users in cluster 4 reported using a combination of alcohol and some other drug. The individuals making up cluster 2 reported using alcohol, marijuana, and methamphetamine. Polysubstance users in cluster 1 reported using a combination of alcohol, cocaine, and marijuana, while persons in cluster 8 used alcohol along with marijuana and opiates-synthetics. The remaining four clusters accounted for 31.3% of polysubstance use within Indiana's treatment population (see Table 10.2)

Overall, alcohol and marijuana were the most commonly reported drugs, with alcohol appearing in five of the nine clusters and marijuana appearing in seven. Opiates-synthetic drugs appeared in three clusters and

heroin was seen in two of the nine clusters. For detailed information on all nine clusters, see Table 10.2 (page 174).

Table 10.3 (page 175) breaks down the clusters by demographic characteristics. In terms of gender, men accounted for at least half of the individuals within eight of the nine clusters. Women comprised just over 55% of the individuals in cluster 9 (heroin/opiates-synthetics). Clusters 1, 3, 4 and 8 were the most male-oriented clusters while cluster 6 (marijuana/opiates-synthetics/benzodiazepines) was composed by equal numbers of males and females.

Racially, whites composed the largest percentage of polysubstance abusers across every cluster. Blacks, however, were more strongly represented in cluster 1, the only cluster that contained cocaine and cluster 3 (alcohol/marijuana). Whites represented more than 90% of the population in clusters 5, 6, 7, and 8. These four clusters included opiates-synthetics, methamphetamine, or heroin.

Over 60% of polysubstance abusers within six of the nine clusters were between the ages of 18 and 34 (clusters 3, 5, 6, 7, 8, and 9). The majority of individuals in cluster 1 were between the ages of 25 to 54; persons in cluster 2 were typically 25 to 44; and those in cluster 4 were primarily 18 to 44 years of age. The youngest polysubstance users, those under 18, were more often found in clusters 3 (alcohol/marijuana) and 7 (marijuana/other drug). Older polysubstance users, those 45 years of age and above, were most strongly represented in cluster 1 (alcohol/cocaine/marijuana) and 4 (alcohol/other drug).

County-Level Analyses—We completed cluster analyses for each county within Indiana using the 2015 county-level TEDS data set. Appendix 10B (pages 178-183) lists the results of the cluster analysis for each county. Similar to the statewide findings, the most common polysubstance clusters were composed of both alcohol and marijuana (the top-ranked cluster in 38 counties) or alcohol, marijuana, and a drug falling in the other drug category (the top-ranked cluster in 13 counties) (See Appendix 10B).

Table 10.1 Image Matrix for Polysubstance Abuse Clusters (Treatment Episode Data Set, 2013)

Image Matrix	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9
Drug									
alcohol	0.88	0.52	0.98	1.00	0.29	0.42	0.00	0.58	0.10
cocaine	1.00	0.10	0.00	0.00	0.27	0.04	0.12	0.04	0.14
marijuana	0.57	0.71	0.99	0.48	0.55	0.51	0.78	0.81	0.00
heroin	0.00	0.00	0.00	0.02	1.00	0.02	0.00	0.12	0.63
methadone	0.00	0.01	0.01	0.00	0.02	0.02	0.01	0.01	0.04
opiates/synthetics	0.04	0.29	0.00	0.06	0.00	0.54	0.22	1.00	0.98
pcp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hallucinogens	0.01	0.01	0.03	0.00	0.01	0.01	0.02	0.01	0.00
methamphetamine	0.07	1.00	0.00	0.05	0.19	0.15	0.34	0.00	0.06
amphetamines	0.01	0.02	0.02	0.00	0.01	0.02	0.02	0.03	0.03
stimulants	0.00	0.01	0.01	0.00	0.00	0.01	0.04	0.01	0.01
benzodiazepines	0.01	0.00	0.00	0.01	0.09	1.00	0.04	0.00	0.15
tranquilizers	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01
barbiturates	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
sedatives/hypnotics	0.01	0.01	0.01	0.00	0.03	0.01	0.01	0.02	0.03
inhalants	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
over-the-counter	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
other drug	0.06	0.00	0.00	1.00	0.14	0.02	1.00	0.00	0.38

Note: Each number in the image matrix represents the percentage of individuals within a cluster that used each individual drug. For example, in cluster 1, 88% used alcohol, 100% used cocaine, 57% used marijuana, 0% used heroin, and so on.
Source: SAMHSA, 2013

Table 10.2 Number and Percentage of Treatment Episodes within Each Cluster in Indiana (Treatment Episode Data Set, 2013)

Cluster	Number of Treatment Episodes Within Cluster %
1 Alcohol, Cocaine, Marijuana	1,826 (11.3%)
2 Alcohol, Marijuana, Methamphetamine	1,892 (11.7%)
3 Alcohol, Marijuana	3,195 (19.8%)
4 Alcohol, Other Drug	2,382 (14.7%)
5 Marijuana, Heroin	1,494 (9.2%)
6 Marijuana, Opiates-Synthetics, Benzodiazepines	1,324 (8.2%)
7 Marijuana, Other Drug	1,064 (6.6%)
8 Alcohol, Marijuana, Opiates-Synthetics	1,815 (11.2%)
9 Heroin, Opiates-Synthetics	1,167 (7.2%)
Total	**16,159 (100.0%)**

Source: SAMHSA, 2013

Table 10.3 Demographic Characteristics of Polysubstance Abusers within Clusters (Treatment Episode Data Set, 2013)

	Cluster 1		Cluster 2		Cluster 3		Cluster 4	
	N	%	N	%	N	%	N	%
Gender								
Male	1117	61.2	1091	57.7	2465	77.2	1644	69.0
Female	709	38.8	801	42.3	730	22.8	738	31.0
Race								
White	1,000	54.8	1,792	94.7	2,302	72.1	2,034	85.4
Black	705	38.6	34	1.8	713	22.3	253	10.6
Other	121	6.6	66	3.5	180	5.6	95	4.0
Ethnicity								
Non-Hispanic	1,179	94.1	1,857	98.2	2,988	93.5	2,269	95.3
Hispanic	107	5.9	35	1.8	207	6.5	113	4.7
Age								
Under 18	13	0.7	26	1.4	265	8.3	101	4.2
18-24	121	6.6	387	20.5	1,059	33.1	516	21.7
25-34	486	26.6	796	42.1	997	31.2	689	28.9
35-44	573	31.4	456	24.1	467	14.6	504	21.2
45-54	494	27.1	192	10.1	321	10.0	414	17.4
55 and Older	139	7.6	35	1.8	86	2.7	158	6.6
Education								
Less than H.S.	534	29.2	614	32.5	1,045	32.7	723	30.4
H.S. Diploma	839	45.9	973	51.4	1,485	46.5	1,134	47.6
Above H.S.	453	24.8	305	16.1	664	20.8	523	22.0
Unknown	0	0.0	0	0.0	1	0.0	2	0.1

	Cluster 5		Cluster 6		Cluster 7		Cluster 8		Cluster 9	
	N	%	N	%	N	%	N	%	N	%
Gender										
Male	824	55.2	662	50.0	546	51.3	1,103	60.8	518	44.4
Female	670	44.8	662	50.0	518	48.7	712	39.2	649	55.6
Race										
White	1,324	88.6	1,236	93.4	880	82.7	1,674	92.2	1,105	94.7
Black	107	7.2	46	3.5	135	12.7	77	4.2	29	2.5
Other	63	4.2	42	3.2	49	4.6	64	3.5	33	2.8
Ethnicity										
Non-Hispanic	1,458	97.6	1,295	97.8	1,025	96.3	1,770	97.5	1,146	98.2
Hispanic	36	2.4	29	2.2	39	3.7	45	2.5	21	1.8
Age										
Under 18	12	0.8	38	2.9	71	6.7	76	4.2	1	0.1
18-24	478	32.0	368	27.8	266	25.0	491	27.1	248	21.3
25-34	669	44.8	541	40.9	388	36.5	781	43.0	612	52.4
35-44	194	13.0	238	18.0	211	19.8	280	15.4	211	18.1
45-54	88	5.9	118	8.9	105	9.9	140	7.7	66	5.7
50 and Older	53	3.5	21	1.6	23	2.2	47	2.6	29	2.5
Education										
Less than H.S.	437	29.3	442	33.4	427	40.1	552	30.4	355	30.4
H.S. Diploma	697	46.7	600	45.3	477	44.8	862	47.5	531	45.5
Above H.S.	360	24.1	282	21.3	160	15.0	401	22.1	281	24.1
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Source: SAMHSA, 2013

Number and Percentage of Treatment Episodes with Polysubstance Abuse (Use of Two and Three Substances) Reported at Treatment Admission in Indiana, by County (Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Treatment Episodes Total	Use of 2 Substances Number	Percentage	Use of 3 Substances Number	Percentage	Polysubstance Abuse Number	Percentage
Adams	176	61	34.7	84	47.7	145	82.4
Allen	1,715	586	34.2	683	39.8	1,269	74.0
Bartholomew	577	185	32.1	205	35.5	390	67.6
Benton	49	13	26.5	33	67.3	46	93.9
Blackford	76	22	28.9	29	38.2	51	67.1
Boone	191	41	21.5	28	14.7	69	36.1
Brown	107	30	28.0	38	35.5	68	63.6
Carroll	107	37	34.6	56	52.3	93	86.9
Cass	235	63	26.8	136	57.9	199	84.7
Clark	408	6	1.5	6	1.5	12	2.9
Clay	185	57	30.8	79	42.7	136	73.5
Clinton	171	55	32.2	66	38.6	121	70.8
Crawford	37	5	13.5	19	51.4	24	64.9
Daviess	252	64	25.4	110	43.7	174	69.0
Dearborn	493	133	27.0	279	56.6	412	83.6
Decatur	199	60	30.2	49	24.6	109	54.8
DeKalb	274	69	25.2	128	46.7	197	71.9
Delaware	1,067	298	27.9	309	29.0	607	56.9
DuBois	277	75	27.1	108	39.0	183	66.1
Elkhart	672	210	31.3	120	17.9	330	49.1
Fayette	223	50	22.4	93	41.7	143	64.1
Floyd	171	<5	N/A	5	2.9	5	2.9
Fountain	43	5	11.6	31	72.1	36	83.7
Franklin	145	33	22.8	68	46.9	101	69.7
Fulton	160	36	22.5	92	57.5	128	80.0
Gibson	245	77	31.4	93	38.0	170	69.4
Grant	526	133	25.3	305	58.0	438	83.3
Greene	183	43	23.5	79	43.2	122	66.7
Hamilton	972	320	32.9	198	20.4	518	53.3
Hancock	226	86	38.1	66	29.2	152	67.3
Harrison	31	<5	N/A	<5	N/A	<5	N/A
Hendricks	346	70	20.2	85	24.6	155	44.8
Henry	347	107	30.8	105	30.3	212	61.1
Howard	596	179	30.0	299	50.2	478	80.2
Huntington	130	36	27.7	75	57.7	111	85.4
Jackson	347	86	24.8	120	34.6	206	59.4
Jasper	127	31	24.4	67	52.8	98	77.2
Jay	159	35	22.0	75	47.2	110	69.2
Jefferson	375	82	21.9	126	33.6	208	55.5
Jennings	265	63	23.8	85	32.1	148	55.8
Johnson	237	112	47.3	67	28.3	179	75.5
Knox	273	72	26.4	66	24.2	138	50.5
Kosciusko	309	82	26.5	181	58.6	263	85.1
LaGrange	166	29	17.5	101	60.8	130	78.3
Lake	2,344	713	30.4	520	22.2	1,233	52.6
LaPorte	451	130	28.8	104	23.1	234	51.9

County	Treatment Episodes	Use of 2 Substances		Use of 3 Substances		Polysubstance Abuse	
	Total	Number	Percentage	Number	Percentage	Number	Percentage
Lawrence	467	134	28.7	149	31.9	283	60.6
Madison	1,193	352	29.5	318	26.7	670	56.2
Marion	4,457	1,281	28.7	1542	34.6	2,823	63.3
Marshall	190	47	24.7	92	48.4	139	73.2
Martin	46	8	17.4	19	41.3	27	58.7
Miami	268	80	29.9	138	51.5	218	81.3
Monroe	1,214	366	30.1	301	24.8	667	54.9
Montgomery	341	84	24.6	172	50.4	256	75.1
Morgan	469	110	23.5	134	28.6	244	52.0
Newton	40	13	32.5	19	47.5	32	80.0
Noble	235	60	25.5	142	60.4	202	86.0
Ohio	33	10	30.3	15	45.5	25	75.8
Orange	135	38	28.1	58	43.0	96	71.1
Owen	184	51	27.7	56	30.4	107	58.2
Parke	105	33	31.4	37	35.2	70	66.7
Perry	121	28	23.1	51	42.1	79	65.3
Pike	38	11	28.9	13	34.2	24	63.2
Porter	679	171	25.2	251	37.0	422	62.2
Posey	132	35	26.5	62	47.0	97	73.5
Pulaski	122	34	27.9	59	48.4	93	76.2
Putnam	208	73	35.1	70	33.7	143	68.8
Randolph	156	44	28.2	50	32.1	94	60.3
Ripley	217	59	27.2	80	36.9	139	64.1
Rush	143	48	33.6	61	42.7	109	76.2
Saint Joseph	1,518	492	32.4	370	24.4	862	56.8
Scott	144	17	11.8	22	15.3	39	27.1
Shelby	142	29	20.4	55	38.7	84	59.2
Spencer	174	36	20.7	99	56.9	135	77.6
Starke	255	55	21.6	157	61.6	212	83.1
Steuben	262	81	30.9	102	38.9	183	69.8
Sullivan	58	13	22.4	27	46.6	40	69.0
Switzerland	69	23	33.3	27	39.1	50	72.5
Tippecanoe	461	150	32.5	215	46.6	365	79.2
Tipton	61	25	41.0	22	36.1	47	77.0
Union	31	11	35.5	16	51.6	27	87.1
Vanderburgh	1,333	299	22.4	503	37.7	802	60.2
Vermillion	128	40	31.3	60	46.9	100	78.1
Vigo	652	203	31.1	324	49.7	527	80.8
Wabash	281	78	27.8	168	59.8	246	87.5
Warren	17	<5	N/A	7	41.2	11	64.7
Warrick	253	54	21.3	109	43.1	163	64.4
Washington	98	<5	N/A	20	20.4	22	22.4
Wayne	386	112	29.0	160	41.5	272	70.5
Wells	119	32	26.9	70	58.8	102	85.7
White	133	50	37.6	64	48.1	114	85.7
Whitley	102	17	16.7	77	75.5	94	92.2
Missing County Data	61	25	41.0	18	29.5	43	70.5
Indiana	**34,596**	**9,698**	**28.0**	**12,252**	**35.4**	**21,950**	**63.4**

Note: The category "Polysubstance Abuse" is an aggregate of "Use of 2 Substances" and "Use of 3 Substances."
We calculated the percentages by dividing the number of reported polysubstance abuse by the number of treatment episodes.
Information on treatment episodes <5 was suppressed due to confidentiality constraints.
Source: Indiana Family and Social Services Administration, 2015

Combination of Drugs Used Among Polysubstance Abusers in Substance Abuse Treatment, by County (Based on Cluster Analysis of Substance Abuse Population by County/Treatment Episode Data Set, 2015)

County	Cluster #	Cluster Composition	N	%
Adams				
	1	Alcohol/Marijuana	72	49.7%
	2	Alcohol/Marijuana/Other Drug	40	27.6%
	3	Marijuana/Heroin/Opiates-Synthetics	33	22.8%
		Total	145	
Allen				
	2	Alcohol/Marijuana	433	34.1%
	1	Alcohol/Marijuana/Other Drug	283	22.3%
	4	Alcohol/Cocaine/Marijuana	241	19.0%
	5	Marijuana/Opiates-Synthetics	172	13.6%
	3	Heroin/Opiates-Synthetics	140	11.0%
		Total	1269	
Bartholomew				
	1	Marijuana/Methamphetamine	89	22.8%
	3	Alcohol/Methamphetamine	63	16.2%
	5	Alcohol/Marijuana	61	15.6%
	4	Opiates-Synthetics/Methamphetamine	49	12.6%
	6	Marijuana/Opiates-Synthetics	49	12.6%
	7	Marijuana/Heroin/Methamphetamine	41	10.5%
	2	Cocaine/Marijuana/Methamphetamine	38	9.7%
		Total	390	
Benton				
	1	Alcohol/Marijuana/Other Drug	23	50.0%
	2	Alcohol/Marijuana	23	50.0%
		Total	46	
Blackford				
	2	Alcohol/Opiates-Synthetics	18	35.3%
	3	Marijuana/Heroin/Opiates-Synthetics	17	33.3%
	1	Alcohol/Marijuana	16	31.4%
		Total	51	
Boone				
	4	Alcohol/Marijuana	21	30.4%
	3	Marijuana/Opiates-Synthetics	20	29.0%
	1	Alcohol/Marijuana/Other Drug	14	20.3%
	2	Marijuana/Heroin	14	20.3%
		Total	69	
Brown				
	3	Alcohol/Marijuana	19	27.9%
	5	Marijuana/Methamphetamine	19	27.9%
	1	Marijuana/Heroin	12	17.6%
	4	Heroin/Opiates-Synthetics	12	17.6%
	2	Alcohol/Other Drug	6	8.8%
		Total	68	
Carroll				
	1	Alcohol/Other Drug	53	57.0%
	2	Alcohol/Marijuana	40	43.0%
		Total	93	

County	Cluster #	Cluster Composition	N	%
Cass				
	1	Alcohol/Marijuana/Other Drug	70	35.2%
	3	Alcohol/Other Drug	70	35.2%
	2	Alcohol/Marijuana	59	29.6%
		Total	199	
Clark				
		Insufficient data for analysis		
Clay				
	3	Marijuana/Methamphetamine/Other Drug	62	45.6%
	1	Alcohol/Other Drug	38	27.9%
	2	Alcohol/Marijuana/Methamphetamine	36	26.5%
		Total	136	
Clinton				
	2	Marijuana/Other Drug	47	38.8%
	1	Alcohol/Marijuana	42	34.7%
	3	Alcohol/Other Drug	32	26.4%
		Total	121	
Crawford				
		Insufficient data for analysis		
Daviess				
	1	Opiates-Synthetics/Methamphetamine	58	5.0%
	3	Alcohol/Marijuana/Methamphetamine	45	3.9%
	4	Marijuana/Other Drug	45	3.9%
	2	Marijuana/Methamphetamine	26	2.2%
		Total	1156	
Dearborn				
	2	Alcohol/Other Drug	99	24.0%
	3	Heroin/Opiates-Synthetics	99	24.0%
	1	Alcohol/Marijuana/Opiates-Synthetics	93	22.6%
	4	Alcohol/Marijuana	77	18.7%
	5	Marijuana/Heroin/Other Drug	44	10.7%
		Total	412	
Decatur				
	1	Alcohol/Marijuana	38	34.9%
	3	Alcohol/Marijuana/Methamphetamine	21	19.3%
	2	Opiates-Synthetics/Methamphetamine	19	17.4%
	4	Marijuana/Methamphetamine	18	16.5%
	5	Marijuana/Opiates-Synthetics	13	11.9%
		Total	109	
DeKalb				
	3	Alcohol/Marijuana/Other Drug	67	34.0%
	1	Alcohol/Marijuana/Methamphetamine	66	33.5%
	2	Alcohol/Marijuana	64	32.5%
		Total	197	

County	Cluster #	Cluster Composition	N	%
Delaware				
	1	Alcohol/Marijuana	115	20.1%
	6	Marijuana/Heroin	86	15.0%
	5	Opiates-Synthetics/Methamphetamine	85	14.8%
	8	Marijuana/Opiates-Synthetics	73	12.7%
	2	Alcohol/Cocaine	68	11.9%
	7	Marijuana/Methamphetamine	67	11.7%
	3	Alcohol/Marijuana/Opiates-Synthetics	57	9.9%
	4	Opiates-Synthetics/Benzodiazepines	56	9.8%
		Total	573	
Dubois				
	2	Alcohol/Marijuana/Opiates-Synthetics	60	32.8%
	4	Alcohol/Marijuana	63	34.4%
	1	Alcohol/Marijuana/Other Drug	35	19.1%
	3	Opiates-Synthetics/Benzodiazepines	25	13.7%
		Total	183	
Elkhart				
	1	Alcohol/Marijuana	112	33.9%
	5	Alcohol/Marijuana/Opiates-Synthetics	54	16.4%
	2	Marijuana/Methamphetamine	52	15.8%
	3	Alcohol/Cocaine/Marijuana	49	14.8%
	4	Marijuana/Other Drug	40	12.1%
	6	Heroin/Various Other Drugs*	23	7.0%
		Total	330	
Fayette				
	1	Alcohol/Marijuana	41	28.7%
	3	Heroin/Opiates-Synthetics	35	24.5%
	2	Alcohol/Other Drug	23	16.1%
	4	Cocaine/Marijuana	22	15.4%
	5	Marijuana/Heroin	22	15.4%
		Total	143	
Floyd				
		Insufficient cases for analysis		
Fountain				
	1	Alcohol/Marijuana/Other Drug	19	52.8%
	2	Marijuana/Heroin	17	47.2%
		Total	36	
Franklin				
	2	Alcohol/Marijuana/Opiates-Synthetics	37	36.6%
	1	Alcohol/Marijuana/Other Drug	33	32.7%
	3	Heroin/Opiates-Synthetics	31	30.7%
		Total	101	
Fulton				
	1	Alcohol/Marijuana/Other Drug	48	37.5%
	2	Alcohol/Other Drug	48	37.5%
	3	Alcohol/Marijuana	32	25.0%
		Total	128	

County	Cluster #	Cluster Composition	N	%
Gibson				
	1	Alcohol/Marijuana/Other Drug	69	40.6%
	2	Marijuana/Methamphetamine	57	33.5%
	3	Alcohol/Marijuana	44	25.9%
		Total	170	
Grant				
	1	Alcohol/Other Drug	133	30.4%
	6	Marijuana/Opiates-Synthetics	81	18.5%
	2	Alcohol/Marijuana	68	15.5%
	5	Alcohol/Marijuana/Opiates-Synthetics	64	14.6%
	4	Marijuana/Other Drug	56	12.8%
	3	Alcohol/Cocaine/Marijuana	36	8.2%
		Total	438	
Greene				
	3	Marijuana/Opiates-Synthetics	40	32.8%
	2	Alcohol/Marijuana/Other Drug	32	26.2%
	1	Alcohol/Marijuana/Methamphetamine	28	23.0%
	4	Alcohol/Marijuana	22	18.0%
		Total	122	
Hamilton				
	1	Alcohol/Marijuana	201	38.8%
	6	Marijuana/Opiates-Synthetics	45	8.7%
	4	Alcohol/Benzodiazepines	42	8.1%
	8	Marijuana/Heroin	38	7.3%
	10	Heroin/Opiates-Synthetics	37	7.1%
	5	Alcohol/Opiates-Synthetics	35	6.8%
	7	Alcohol/Marijuana/Heroin	32	6.2%
	3	Alcohol/Cocaine	32	6.2%
	2	Alcohol/Marijuana/Other Drug	31	6.0%
	9	Cocaine/Heroin	25	4.8%
		Total	518	
Hancock				
	1	Alcohol/Marijuana	67	44.1%
	3	Marijuana/Opiates-Synthetics	44	28.9%
	2	Alcohol/Cocaine/Heroin	23	15.1%
	4	Marijuana/Heroin/Opiates-Synthetics	18	11.8%
		Total	152	
Harrison				
		Insufficient data for analysis		
Hendricks				
	1	Marijuana/Heroin/Opiates-Synthetics	92	59.4%
	2	Alcohol/Marijuana	63	40.6%
		Total	155	
Henry				
	2	Marijuana/Opiates-Synthetics	64	30.2%
	5	Alcohol/Opiates-Synthetics	48	22.6%
	3	Alcohol/Marijuana	41	19.3%

County	Cluster #	Cluster Composition	N	%
Henry (cont.)	1	Opiates-Synthetics/Other Drug	35	16.5%
	4	Cocaine/Opiates-Synthetics	24	11.3%
		Total	212	
Howard				
	6	Alcohol/Marijuana	98	20.5%
	5	Alcohol/Other Drug	71	14.9%
	2	Marijuana/Other Drug	65	13.6%
	1	Heroin/Opiates-Synthetics/Other Drug	58	12.1%
	4	Marijuana/Opiates-Synthetics	56	11.7%
	3	Heroin/Opiates-Synthetics	48	10.0%
	8	Opiates-Synthetics/Methamphetamine	46	9.6%
	7	Marijuana/Methamphetamine	36	7.5%
		Total	478	
Huntington				
	2	Alcohol/Marijuana	35	31.5%
	1	Alcohol/Marijuana/Other Drug	28	25.2%
	3	Alcohol/Other Drug	21	18.9%
	4	Opiates-Synthetics/Methamphetamine	14	12.6%
	5	Opiates-Synthetics/Other Drug	13	11.7%
		Total	111	
Jackson				
	2	Alcohol/Marijuana	62	30.1%
	3	Marijuana/Methamphetamine	51	24.8%
	4	Opiates-Synthetics/Methamphetamine	50	24.3%
	1	Alcohol/Methamphetamine	31	15.0%
	5	Marijuana/Benzodiazepines	12	5.8%
		Total	206	
Jasper				
	1	Heroin/Opiates-Synthetics	57	58.2%
	2	Alcohol/Marijuana	41	41.8%
		Total	98	
Jay				
	1	Marijuana/Heroin/Opiates-Synthetics	59	53.6%
	2	Alcohol/Marijuana	51	46.4%
		Total	110	
Jefferson				
	4	Alcohol/Marijuana	64	30.8%
	2	Marijuana/Opiates-Synthetics	49	23.6%
	1	Marijuana/Heroin/Methamphetamine	35	61.4%
	3	Alcohol/Methamphetamine	31	14.9%
	5	Heroin/Opiates-Synthetics	29	13.9%
		Total	208	
Jennings				
	1	Opiates-Synthetics/Methamphetamine	58	39.2%
	3	Marijuana/Methamphetamine	49	33.1%
	2	Alcohol/Marijuana	41	27.7%
		Total	148	

County	Cluster #	Cluster Composition	N	%
Johnson				
	1	Alcohol/Marijuana	63	35.2%
	3	Marijuana/Heroin	26	14.5%
	4	Marijuana/Opiates-Synthetics	23	12.8%
	6	Heroin/Methamphetamine	20	11.2%
	2	Heroin/Opiates-Synthetics/Other Drug	19	10.6%
	7	Alcohol/Opiates-Synthetics	17	9.5%
	5	Cocaine/Marijuana/	11	6.1%
		Total	179	
Knox				
	2	Marijuana/Methamphetamine	82	59.4%
	1	Alcohol/Marijuana	56	40.6%
		Total	138	
Kosciusko				
	1	Alcohol/Marijuana/Other Drug	76	28.9%
	2	Alcohol/Marijuana	62	23.6%
	4	Alcohol/Marijuana/Opiates-Synthetics	51	19.4%
	3	Marijuana/Methamphetamine/Other Drug	44	16.7%
	5	Heroin/Opiates-Synthetics	30	11.4%
		Total	263	
LaGrange				
	1	Alcohol/Marijuana/Methamphetamine	55	42.3%
	2	Alcohol/Marijuana/Other Drug	29	22.3%
	4	Alcohol/Methamphetamine/Other Drug	24	18.5%
	3	Marijuana/Methamphetamine/Other Drug	22	16.9%
		Total	130	
Lake				
	3	Alcohol/Marijuana	381	30.9%
	1	Heroin/Various Other Drugs*	304	24.7%
	2	Alcohol/Marijuana/Other Drug	275	22.3%
	4	Alcohol/Cocaine/Marijuana	273	22.1%
		Total	1233	
LaPorte				
	1	Alcohol/Opiates-Synthetics	108	46.2%
	3	Alcohol/Marijuana	82	35.0%
	2	Marijuana/Heroin	44	18.8%
		Total	234	
Lawrence				
	2	Alcohol/Marijuana	50	17.7%
	6	Marijuana/Opiates-Synthetics	48	17.0%
	1	Methamphetamine/Benzodiazepines	44	15.5%
	5	Alcohol/Marijuana/Methamphetamine	44	15.5%
	3	Alcohol/Other Drug	40	14.1%
	4	Opiates-Synthetics/Methamphetamine	38	13.4%

County	Cluster #	Cluster Composition	N	%
Lawrene (cont.)	7	Marijuana/Heroin	19	6.7%
		Total	283	
Madison				
	1	Alcohol/Marijuana	169	25.2%
	2	Marijuana/Opiates-Synthetics	131	19.6%
	3	Marijuana/Other Drug	111	16.6%
	5	Alcohol/Opiates-Synthetics	96	14.3%
	4	Alcohol/Cocaine/Marijuana	83	12.4%
	6	Heroin/Opiates-Synthetics	80	11.9%
		Total	670	
Marion				
	2	Alcohol/Marijuana	717	25.4%
	4	Opiates-Synthetics/Other Drug	497	17.6%
	1	Alcohol/Marijuana/Other Drug	480	17.0%
	3	Marijuana/Heroin	407	14.4%
	5	Alcohol/Cocaine	392	13.9%
	6	Heroin/Opiates-Synthetics/Other Drug	330	11.7%
		Total	2823	
Marshall				
	3	Marijuana/Other Drug	53	38.1%
	1	Alcohol/Marijuana	46	33.1%
	2	Alcohol/Marijuana/Other Drug	40	28.8%
		Total	139	
Martin				
		Insufficient cases for analysis		
Miami				
	1	Alcohol/Marijuana/Other Drug	70	32.1%
	2	Alcohol/Marijuana	51	23.4%
	4	Heroin/Opiates-Synthetics	49	22.5%
	3	Marijuana/Methamphetamine/Other Drug	48	22.0%
		Total	218	
Monroe				
	1	Alcohol/Marijuana	194	29.1%
	5	Marijuana/Opiates-Synthetics	151	22.6%
	3	Alcohol/Marijuana/Methamphetamine	66	9.9%
	7	Heroin/Opiates-Synthetics	64	9.6%
	2	Alcohol/Cocaine/Marijuana	51	7.6%
	6	Marijuana/Heroin	49	7.3%
	8	Alcohol/Marijuana/Benzodiazepines	47	7.0%
	4	Alcohol/Other Drug	45	6.7%
		Total	667	
Montgomery				
	1	Alcohol/Marijuana/Other Drug	80	31.3%
	3	Alcohol/Marijuana	64	25.0%
	4	Marijuana/Heroin/Opiates-Synthetics	60	23.4%

County	Cluster #	Cluster Composition	N	%
Montgomery (cont.)	2	Marijuana/Heroin/Methamphetamine	52	20.3%
		Total	256	
Morgan				
	3	Alcohol/Marijuana	60	24.6%
	1	Heroin/Methamphetamine	52	21.3%
	5	Marijuana/Methamphetamine	39	16.0%
	6	Opiates-Synthetics/Methamphetamine	37	15.2%
	4	Alcohol/Marijuana/Methamphetamine	32	13.1%
	2	Alcohol/Marijuana/Opiates-Synthetics	24	9.8%
		Total	244	
Newton				
	2	Alcohol/Marijuana	17	53.1%
	1	Heroin/Opiates-Synthetics	15	46.9%
		Total	32	
Noble				
	2	Alcohol/Marijuana	57	28.2%
	4	Marijuana/Methamphetamine/Other Drug	53	26.2%
	1	Alcohol/Marijuana/Methamphetamine	34	16.8%
	5	Alcohol/Other Drug	31	15.3%
	3	Alcohol/Methamphetamine	27	13.4%
		Total	202	
Ohio				
		Insufficient cases for analysis		
Orange				
	1	Alcohol/Marijuana	35	36.5%
	2	Marijuana/Methamphetamine	33	34.4%
	3	Alcohol/Marijuana/Opiates-Synthetics	28	29.2%
		Total	96	
Owen				
	1	Marijuana/Methamphetamine	30	28.0%
	2	Marijuana/Other Drug	23	21.5%
	3	Alcohol/Marijuana	20	18.7%
	5	Marijuana/Opiates-Synthetics	18	16.8%
	4	Marijuana/Opiates-Synthetics/Methamphetamine	16	15.0%
		Total	107	
Parke				
	1	Alcohol/Other Drug	46	65.7%
	2	Alcohol/Marijuana/Methamphetamine	24	34.3%
		Total	70	
Perry				
	1	Alcohol/Marijuana	39	49.4%
	3	Marijuana/Opiates-Synthetics/Methamphetamine	22	27.8%
	2	Alcohol/Opiates-Synthetics/Methamphetamine	18	22.8%
		Total	79	

County	Cluster #	Cluster Composition	N	%
Pike				
	1	Alcohol/Marijuana	13	54.2%
	2	Alcohol/Other Drug	11	45.8%
		Total	24	
Pulaski				
	1	Alcohol/Marijuana/Other Drug	27	29.0%
	4	Opiates-Synthetics/Other Drug	25	26.9%
	3	Alcohol/Other Drug	23	24.7%
	2	Alcohol/Marijuana	18	19.4%
		Total	93	
Porter				
	2	Alcohol/Marijuana/Other Drug	168	39.8%
	3	Marijuana/Heroin	134	31.8%
	1	Opiates-Synthetics/Various Other Drugs*	120	28.4%
		Total	422	
Posey				
	3	Opiates-Synthetics/Methamphetamine	36	37.1%
	2	Alcohol/Marijuana	31	32.0%
	1	Alcohol/Other Drug	30	30.9%
		Total	97	
Putnam				
	1	Alcohol/Marijuana/Methamphetamine	54	37.8%
	3	Marijuana/Other Drug	51	35.7%
	2	Alcohol/Other Drug	38	26.6%
		Total	143	
Randolph				
	1	Alcohol/Marijuana	52	55.3%
	2	Heroin/Opiates-Synthetics	42	44.7%
		Total	94	
Ripley				
	1	Alcohol/Marijuana	78	56.1%
	2	Marijuana/Opiates-Synthetics	61	43.9%
		Total	139	
Rush				
	3	Alcohol/Marijuana	32	29.4%
	4	Marijuana/Methamphetamine	24	22.0%
	2	Alcohol/Benzodiazepines	20	18.3%
	1	Alcohol/Other Drug	17	15.6%
	5	Marijuana/Heroin	16	14.7%
		Total	109	
Saint Joseph				
	1	Alcohol/Marijuana	229	26.6%
	5	Alcohol/Cocaine/Marijuana	145	16.8%
	3	Alcohol/Cocaine	108	12.5%
	6	Marijuana/Heroin	108	12.5%
	7	Other Drug/Various Other Drugs*	87	10.1%
	2	Alcohol/Methamphetamine	72	8.4%
	4	Alcohol/Marijuana/Opiates-Synthetics	57	6.6%
	8	Heroin/Opiates-Synthetics	56	6.5%
		Total	862	

County	Cluster #	Cluster Composition	N	%
Scott				
	3	Opiates-Synthetics/Methamphetamine	12	30.8%
	1	Marijuana/Opiates-Synthetics	11	28.2%
	2	Marijuana/Methamphetamine	9	23.1%
	4	Benzodiazepines/Other Drug	7	17.9%
		Total	39	
Shelby				
	1	Heroin/Opiates-Synthetics	42	50.0%
	2	Alcohol/Marijuana	42	50.0%
		Total	84	
Spencer				
	1	Alcohol/Marijuana	49	36.3%
	2	Alcohol/Marijuana/Methamphetamine	34	25.2%
	3	Alcohol/Opiates-Synthetics/Methamphetamine	28	20.7%
	4	Marijuana/Methamphetamine	24	17.8%
		Total	135	
Starke				
	1	Marijuana/Methamphetamine	40	18.9%
	5	Opiates-Synthetics/Other Drug	33	15.6%
	2	Alcohol/Marijuana	31	14.6%
	7	Marijuana/Other Drug	29	13.7%
	3	Alcohol/Other Drug	27	12.7%
	6	Heroin/Opiates-Synthetics	27	12.7%
	4	Heroin/Methamphetamine	25	11.8%
		Total	212	
Steuben				
	1	Alcohol/Marijuana/Other Drug	48	26.2%
	2	Alcohol/Marijuana	48	26.2%
	3	Alcohol/Other Drug	47	25.7%
	4	Alcohol/Marijuana/Methamphetamine	40	21.9%
		Total	183	
Sullivan				
	3	Alcohol/Marijuana	18	45.0%
	1	Marijuana/Methamphetamine	14	35.0%
	2	Alcohol/Opiates-Synthetics	8	20.0%
		Total	40	
Switzerland				
	2	Alcohol/Other Drug	27	54.0%
	1	Opiates-Synthetics/Other Drug	23	46.0%
		Total	50	
Tippecanoe				
	3	Alcohol/Marijuana	60	16.4%
	6	Alcohol/Marijuana/Opiates-Synthetics	54	14.8%
	1	Alcohol/Marijuana/Other Drug	51	14.0%
	7	Heroin/Various Other Drugs*	51	14.0%
	5	Marijuana/Opiates-Synthetics/Other Drug	48	13.2%

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County	Cluster #	Cluster Composition	N	%
Tippecanoe (cont.)	4	Alcohol/Other Drug	36	9.9%
	8	Alcohol/Marijuana/ Methamphetamine	34	9.3%
	2	Alcohol/Cocaine/ Marijuana	31	8.5%
		Total	365	
Tipton				
	1	Alcohol/Marijuana	15	31.9%
	2	Alcohol/Marijuana/Other Drug	13	27.7%
	4	Heroin/Opiates-Synthetics/Other Drug	11	23.4%
	3	Marijuana/Opiates-Synthetics	8	17.0%
		Total	47	
Union				
	1	Alcohol/Marijuana	12	44.4%
	2	Marijuana/Heroin	10	37.0%
	3	Marijuana/Opiates-Synthetics	5	18.5%
		Total	27	
Vanderburgh				
	2	Alcohol/Marijuana	198	24.7%
	4	Marijuana/ Methamphetamine	182	22.7%
	3	Alcohol/Other Drug	161	20.1%
	1	Marijuana/ Opiates-Synthetics/ Benzodiazepines	137	17.1%
	5	Opiates-Synthetics/ Methamphetamine	124	15.5%
		Total	802	
Vermillion				
	1	Alcohol/Marijuana/Other Drug	40	40.0%
	2	Marijuana/ Methamphetamine/Other Drug	36	36.0%
	3	Opiates-Synthetics/Other Drug	24	24.0%
		Total	100	
Vigo				
	3	Alcohol/Marijuana/ Methamphetamine	219	41.6%
	1	Alcohol/Other Drug	159	30.2%
	2	Marijuana/ Methamphetamine/Other Drug	149	28.3%
		Total	527	
Wabash				
	3	Marijuana/Other Drug	57	23.2%
	1	Alcohol/Marijuana/Other Drug	54	22.0%
	5	Marijuana/Heroin/ Opiates-Synthetics	54	22.0%
	2	Alcohol/Other Drug	41	16.7%
	4	Alcohol/Marijuana	40	16.3%
		Total	246	

County	Cluster #	Cluster Composition	N	%
Warren				
		Insufficient cases for analysis		
Warrick				
	1	Alcohol/Marijuana/ Methamphetamine	45	27.6%
	3	Marijuana/ Opiates-Synthetics/ Methamphetamine	34	20.9%
	2	Alcohol/Marijuana	23	14.1%
	4	Marijuana/ Methamphetamine	23	14.1%
	6	Alcohol/Other Drug	22	13.5%
	5	Alcohol/Marijuana/ Opiates-Synthetics	16	9.8%
		Total	163	
Wayne				
	3	Heroin/Opiates-Synthetics	60	22.1%
	4	Marijuana/Heroin	60	22.1%
	2	Alcohol/Marijuana	53	19.5%
	1	Alcohol/Cocaine	51	18.8%
	5	Alcohol/Marijuana/Other Drug	48	17.6%
		Total	272	
Wells				
	1	Alcohol/Marijuana	41	40.2%
	2	Marijuana/Opiates-Synthetics	25	24.5%
	4	Alcohol/Marijuana/Other Drug	23	22.5%
	3	Cocaine/Heroin	13	12.7%
		Total	102	
White				
	3	Alcohol/Marijuana	42	36.8%
	2	Marijuana/ Methamphetamine/Other Drug	37	32.5%
	1	Alcohol/Other Drug	35	30.7%
		Total	114	
Whitley				
	1	Alcohol/Marijuana/Other Drug	40	42.6%
	2	Marijuana/Opiates-Synthetics/Other Drug	30	31.9%
	3	Alcohol/Marijuana	24	25.5%
		Total	94	
	3	Marijuana/ opiates-synthetics/ methamphetamine	17	18.9
	2	Alcohol/other drug	16	17.8
		Total	90	

Note: Results from the county-level cluster analysis differ from the state-level findings.
*Due to the small sample size and/or the nature of the data this cluster was composed of one drug where at least 50% of individuals reported using it but where the second and/or third drug used could not be determined.
Source: Indiana Family and Social Services Administration, 2015

REFERENCES, CHAPTER 10

Collins, R. L., Ellickson, P. L., & Bell, R. M. (1998). Simultaneous polydrug use among teens: Prevalence and predictors. *Journal of Substance Abuse, 10*(3), 233–253.

Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis: With readings.* Upper Saddle River, NJ: Prentice-Hall, Inc.

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2013). *Treatment Episode Data Set -- Admissions (TEDS-A), 2013.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/teds.htm

MENTAL HEALTH IN INDIANA

According to the U.S. Centers for Disease Control and Prevention (CDC, 2011), approximately 25% of U.S. adults currently have a mental illness and about 50% will develop a mental illness during their lifetime. Mental illness is associated with a number of other chronic diseases, tobacco use, substance abuse, and higher rates of suicide. It is also a significant barrier to accessing healthcare. Additionally, seven to ten million U.S. adults are living with both a diagnosable mental illness and substance use disorder in any given year (Substance Abuse and Mental Health Services Administration (SAMHSA), 2002). The National Survey on Drug Use and Health (NSDUH) report showed that 18.2% of adults with any mental illness also had a substance use disorder, while only 6.3% of adults with no mental illness had a substance use disorder in the past year (SAMHSA, 2014). Individuals diagnosed with both disorders have been demonstrated to have more complex problems, often resulting in a more chronic and persistent course of illness, poorer response to

treatment, and higher rates of substance abuse relapse (Bradizza, Stasiewicz, & Paas, 2006; Davidson & White, 2007; Kessler, 2006).

For this chapter, we compiled available state-level data on indicators related to mental health. Definitions of specific terms can be found in Appendix 11A, page 192.

PREVALENCE OF PSYCHOLOGICAL DISTRESS IN INDIANA

General Prevalence

In 2014, a total of 20.3% Indiana adults reported having any mental illness (AMI) in the past year (95% CI [Confidence Interval]: 18.0-22.8), which was statistically similar to the U.S. percentage of 18.3% (95% CI: 17.9-18.7). The percentage of adults in Indiana with serious mental illness (SMI) in the past year was also similar to the nation's (IN: 4.8%, 95% CI: 3.9-5.9; U.S.:4.2%, 95% CI: 4.0-4.4). There were no differences in AMI or SMI by age group (see Figure 11.1) (SAMHSA, 2014).

Figure 11.1 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, 2014)

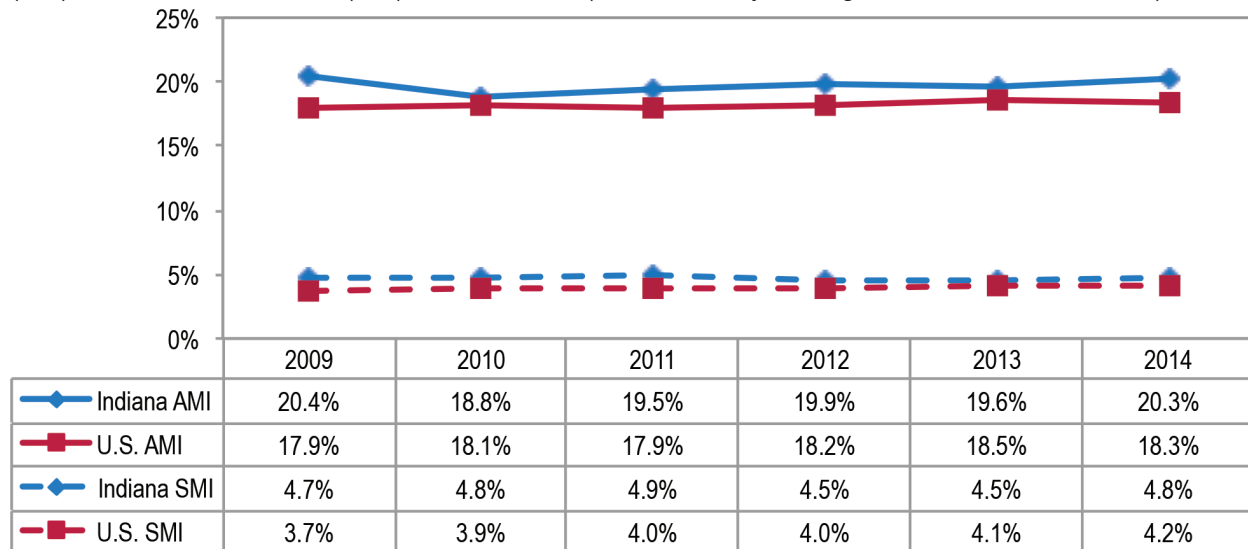|	Total	18-25	26 and older
■ Indiana AMI	20.3%	22.5%	19.8%
■ U.S. AMI	18.3%	19.8%	18.1%
▨ Indiana SMI	4.8%	5.4%	4.7%
▧ U.S. SMI	4.2%	4.5%	4.1%
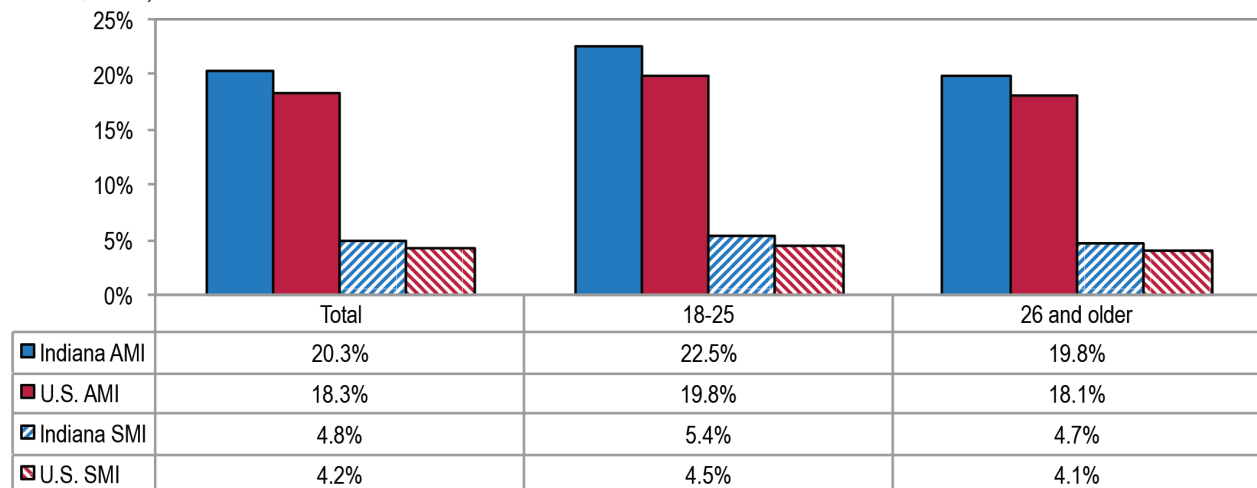
Source: SAMHSA, 2014

For adults ages 18 and older, past-year prevalence of AMI or SMI did not differ significantly from 2009 to 2014 in Indiana or the nation. Also, Indiana and U.S. rates were comparable (see Figure 11.2) (SAMHSA, 2014).

In 2014, 7.7% of Indiana adults (95% CI: 6.6-9.1) reported having had at least one major depressive episode (MDE) in the past year, which was similar to the United States (6.6%, 95% CI: 6.4-6.9). Indiana rates did not differ by age group (see Figure 11.3) (SAMHSA, 2014).

Figure 11.2   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, 2009-2014)

	2009	2010	2011	2012	2013	2014
Indiana AMI	20.4%	18.8%	19.5%	19.9%	19.6%	20.3%
U.S. AMI	17.9%	18.1%	17.9%	18.2%	18.5%	18.3%
Indiana SMI	4.7%	4.8%	4.9%	4.5%	4.5%	4.8%
U.S. SMI	3.7%	3.9%	4.0%	4.0%	4.1%	4.2%

Source: SAMHSA, 2014

Figure 11.3   Percentage of Indiana and U.S. Population (12 Years and Older) Reporting at Least One Major Depressive Episode in the Past Year, by Age Group (National Survey on Drug Use and Health, 2014)

	Total (18 and older)	12-17	18-25	26 and older
Indiana	7.7%	12.2%	10.6%	7.2%
U.S.	6.6%	11.0%	9.0%	6.2%
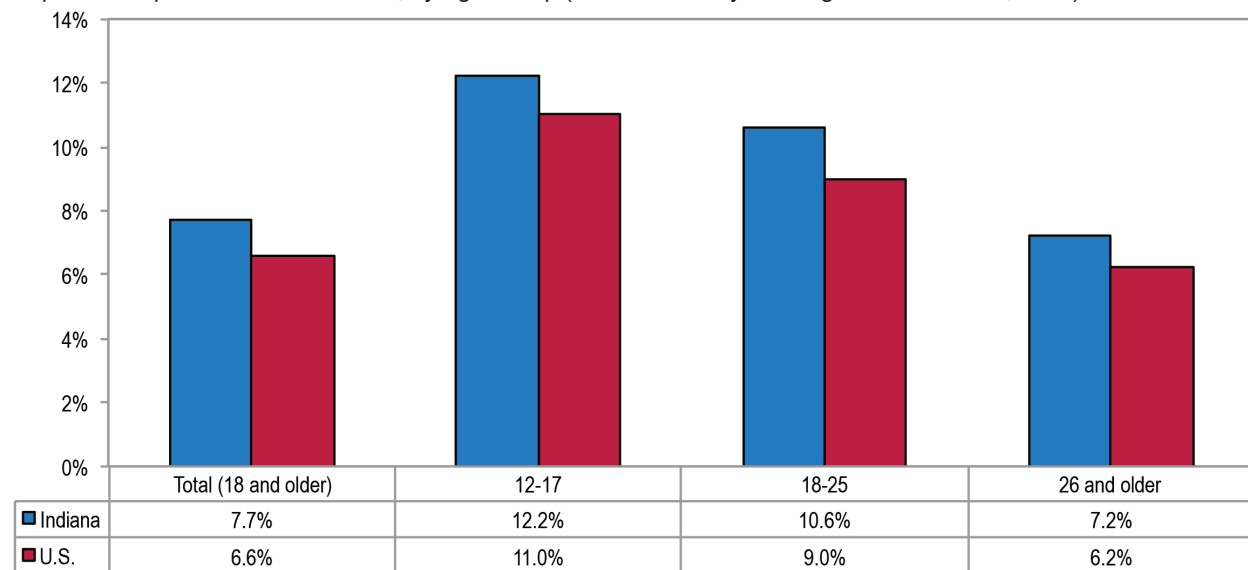
Note: There are minor wording differences in the questions in the adult and adolescent MDE modules. Therefore, data from youths aged 12 to 17 were not combined with data from persons aged 18 or older to produce the total MDE estimate.

Source: SAMHSA, 2014

Indiana University Center for Health Policy

In Indiana and the United States, the percentage of adults with a major depressive episode did not change from 2006-2014, and there are no differences between Indiana and the United States for any of these years (see Figure 11.4) (SAMHSA, 2014).

According to the 2014 Behavioral Risk Factor Surveillance System (BRFSS), 20.7% of adults in Indiana reported ever being told that they had depression, which was similar to the United States. Within Indiana, history of depression was greatest among females and those who identified as multiracial (see Table 11.1) (CDC, 2015).

Figure 11.4 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, 2006-2014)

	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	7.4%	7.6%	8.2%	8.1%	7.5%	7.6%	6.8%	7.2%	7.7%
U.S.	6.5%	6.6%	6.6%	6.5%	6.7%	6.7%	6.7%	6.8%	6.6%
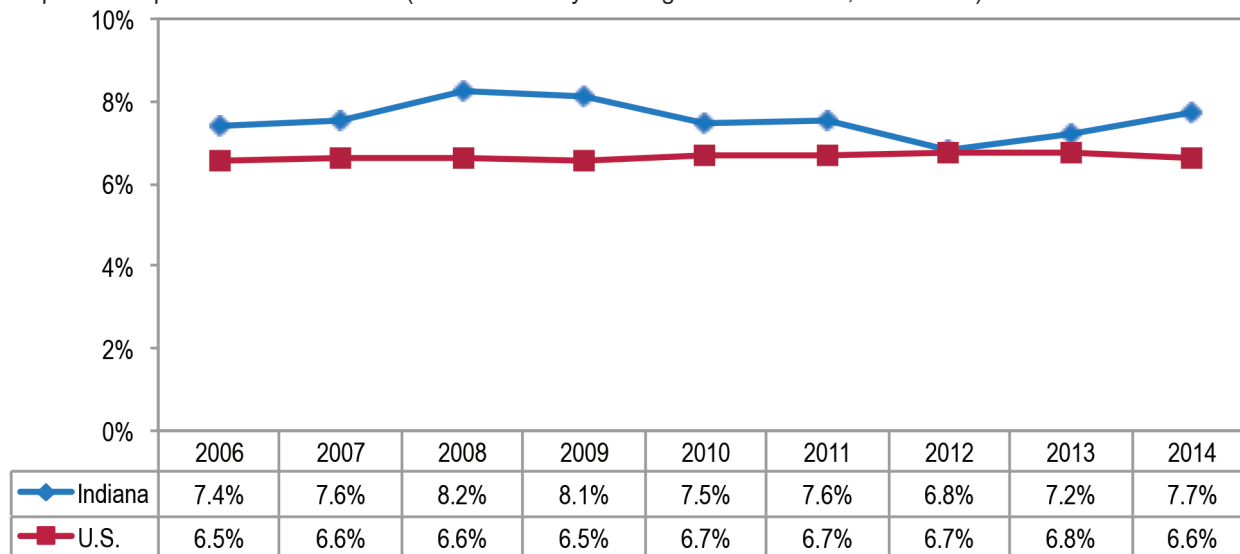
Source: SAMHSA, 2014

Table 11.1 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting a History of Depression (Behavioral Risk Factor Surveillance System, 2014)

		Indiana (95% CI)	U.S.
Gender	Male	14.8% (13.4-16.2)	13.6%
	Female	26.3% (24.8-27.8)	23.9%
Race/Ethnicity	White	21.8% (20.6-22.9)	20.1%
	Black	15.0% (11.8-18.3)	15.3%
	Hispanic	12.4% (8.3-16.5)	18.9%
	Other	19.7% (12.9-26.5)	15.0%
	Multiracial	25.5% (16.0-35.1)	31.4%
Age Group	18-24	17.3% (13.8-20.7)	15.6%
	25-34	22.8% (19.5-26.0)	19.6%
	35-44	24.2% (21.4-27.1)	20.0%
	45-54	23.0% (20.8-25.2)	21.6%
	55-64	23.6% (21.7-25.5)	21.8%
	65+	13.8% (12.5-15.1)	14.8%
Total		**20.7% (19.7-21.7)**	**18.7%**

Note: Indiana prevalence estimates were based on 2014 BRFSS data, while U.S. estimates reflect 2013 data (2014 BRFSS data for the nation was not broken down by individual demographic characteristics).
Source: CDC, 2015

Youth Prevalence

Based on the 2011 Youth Risk Behavior Surveillance System (YRBSS), the percentage of Indiana high school students (29.1%) who reported "stopping some of their normal activities during the past year due to feeling sad or hopeless almost every day for two weeks" did not differ significantly from the nation's (28.5%). Indiana prevalence rates differed by gender, but not by race/ethnicity or grade level (see Table 11.2). Indiana and U.S. rates did not change significantly from 2003 to 2011 (CDC, 2016).

Table 11.2 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Feeling Sad or Hopeless (Youth Risk Behavior Surveillance System, 2011)

		Indiana (95% CI)	U.S. (95% CI)
Gender	Male	23.7% (19.0-29.2)	21.5% (19.9-23.1)
	Female	34.5% (31.2-37.9)	35.9% (34.1-37.8)
Race/Ethnicity	White	28.4% (24.9-32.2)	27.2% (25.8-28.7)
	Black	31.4% (23.9-39.9)	24.7% (22.1-27.4)
	Hispanic	31.5% (24.1-40.0)	32.6% (30.6-34.7)
Grade	9	26.3% (23.2-29.7)	27.6% (25.3-30.1)
	10	31.1% (26.9-35.7)	28.7% (26.5-31.1)
	11	31.6% (25.8-38.1)	28.8% (26.8-30.9)
	12	27.6% (21.0-35.3)	28.9% (27.1-30.6)
Total		**29.1% (26.3-31.9)**	**28.5% (27.2-29.7)**

Source: CDC, 2016

Results from the Indiana Youth Survey (Gassman, Jun, Samuel, Agley, King, & Lee, 2015) similarly suggest higher rates of sadness and hopelessness for female students in grades 6 through 12 (see Figure 11.5). However, due to the nature of the data, statistical significance of differences cannot be determined.

Physically and verbally threatening behaviors, most often in the form of bullying, have been linked to a number of mental health problems in youth, chief among these problems being depression and anxiety (CDC, 2015). According to YRBSS results, prevalence rates were similar between Indiana and U.S. high school students for the following:

- Being threatened or injured on school property at least once with a weapon (IN: 6.8%, 95% CI: 4.8-9.5; U.S.: 7.4%, 95% CI: 6.8-8.1)
- Being in a physical fight at least once (IN: 29.0%, 95% CI: 26.3-31.8; U.S.: 32.8%, 95% CI: 31.5-34.1)
- Being electronically bullied (IN: 18.7%, 95% CI: 16.4-21.2; U.S.:16.2%, 95% CI: 15.3-17.2)

However, a higher percentage of Indiana students experienced being bullied on school property (25.0%, 95% CI: 22.3-27.9) compared to their U.S. counterparts (20.1%; 95% CI: 18.7-21.5) (CDC, 2016).
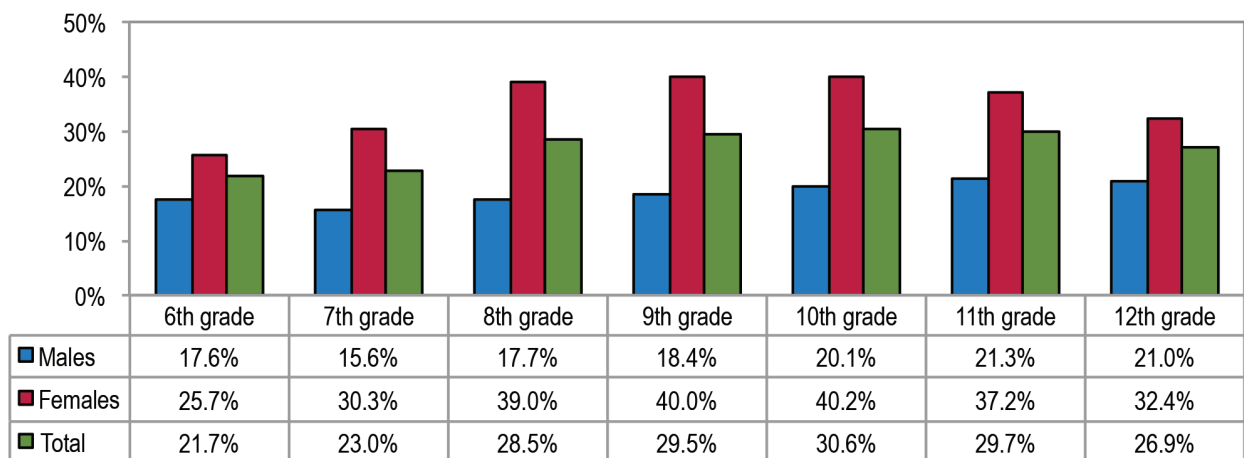
CONSEQUENCES
Treatment

In the United States, 5.1 million adults aged 18 or older had a perceived unmet need for mental health care in 2013. The most commonly cited reason reported for not receiving mental health services was an inability to afford the costs of care (48.3%). Additionally, 7.7 million U.S. adults had a co-occurring mental illness and substance abuse disorder. Out of those with co-occurring disorders (CODs), 47.8% received either mental health care or substance use treatment, with 7.7% receiving both mental health care and specialty substance abuse treatment (SAMHSA, 2014).

Findings from the SAMHSA Uniform Reporting System showed that 128,192 Hoosiers were served

Figure 11.5 Percentage of Indiana Students (Grades 6 through 12) Reporting Feeling Sad or Hopeless (Indiana Youth Survey, 2015)

	6th grade	7th grade	8th grade	9th grade	10th grade	11th grade	12th grade
Males	17.6%	15.6%	17.7%	18.4%	20.1%	21.3%	21.0%
Females	25.7%	30.3%	39.0%	40.0%	40.2%	37.2%	32.4%
Total	21.7%	23.0%	28.5%	29.5%	30.6%	29.7%	26.9%

Source: Gassman, et al., 2015

by Indiana's Division of Mental Health and Addiction (DMHA) in 2014, nearly all of which (127,472) were treated in community settings rather than state hospitals (1,200). The client population was predominately white (76.8%) and slightly more than half were female (52.7%) (SAMHSA, 2015). For more detailed client information see Table 11.3.

In 2011, the percentages of adults receiving any mental health treatment or any substance abuse treatment were similar in Indiana and the United States, as was the perceived unmet need for both mental health and substance abuse treatment (see Figure 11.6).

The percentages of adolescents using outpatient, inpatient (residential), or no specialty medical treatment for mental health issues were similar between Indiana and the United States (see Figure 11.7). While treatment rates were similar, the per capita revenue of mental health treatment centers was lower in Indiana ($84.90) than the national average ($127.22) (SAMHSA, 2013). Current NSDUH data do not include comparisons at the state level.

Table 11.3 Characteristics of Adults with SMI and Children with SED Served by the Indiana Division of Mental Health and Addiction (Uniform Reporting System, 2014)

Gender	Male	47.3%
	Female	52.7%
Race	White	76.8%
	Black	14.6%
	Other/Unknown	8.6%
Ethnicity	Hispanic	5.8%
Age	0 – 17	39.6%
	18 – 64	57.6%
	65 and over	2.8%
Employment status (adults)	Employed	20.9%
	Unemployed	22.0%
	Not in labor force	57.2%
Medicaid funding status	Medicaid only	65.5%
	Both Medicaid and other funds	18.9%
	Non-Medicaid	15.7%
Total clients served		**128,192 (100.0%)**

Source: SAMHSA, 2015

Figure 11.6 Percentage of Indiana and U.S. Adults Receiving Mental Health or Substance Abuse Treatment or Perceiving an Unmet Need for Such Treatment in the Past Year, 2011

	Any Mental Health Treatment	Perceived Unmet Need for Mental Health Treatment	Any Substance Abuse Treatment	Unmet Need for Substance Abuse Treatment
Indiana	12.7%	5.0%	1.4%	7.2%
U.S.	13.6%	4.6%	1.5%	7.6%
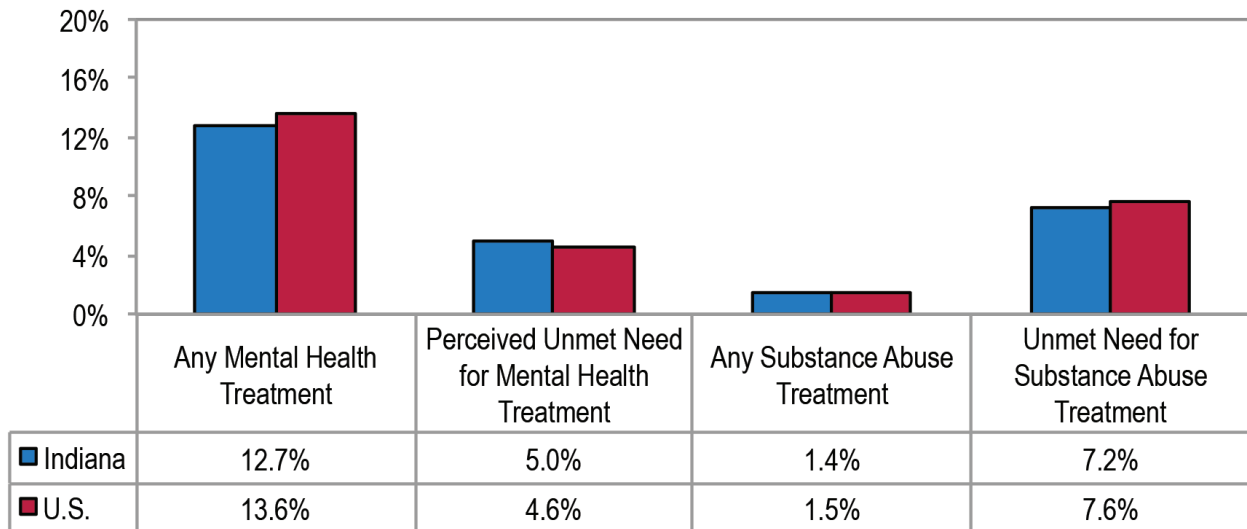
Source: SAMHSA, 2013

Based on information from the Data Assessment Registry Mental Health and Addiction (DARMHA), we find that in the treatment population, there was a significantly higher percentage of SMI (64.1%) than Substance Use Disorder (SUD) (34.9%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (22.0%). This pattern was also found when looking at the DARMHA population by gender, race/ethnicity, and age group.

Males had a lower percentage of SMI (55.9%) but a higher percentage of SUD (38.7%) compared to females (SMI: 77.2%, SUD: 31.2%); COD did not differ significantly by gender. Similar to the previous year, race/ethnicity seemed to have little effect on diagnosis; most differences were not statistically significant. Age, however, was clearly associated with diagnosis.

The percentage of those with SMI significantly increased with age, from 44.9% for those under 18 to 91.1% for those 65 and older. SUD was lowest for those under 18 (14.5%) and highest for those 25-34 (55.7%) years of age, but then decreased significantly with age. COD was lowest for those under 18 (12.2%) and highest in both 25-34 (29%) and 45-54 (29%) (see Table 11.4) (Indiana Division of Mental Health and Addiction, 2016). The patterns identified within the treatment population in 2014 are very similar to the patterns in the previous year.

Table 11.4 Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2015)

		SMI	SUD	COD
Gender	Male	55.9% (55.6-56.2)	38.7% (38.3-39.0)	22.5% (22.2-22.8)
	Female	77.2% (71.9-72.6)	31.2% (30.8-31.5)	21.4% (21.1-21.7)
Race	White	65.2% (64.9-65.4)	35.7% (35.4-36.0)	22.3% (22.1-22.6)
	Black	62.4% (61.8-63.1)	34.5% (33.8-35.1)	23.4% (22.8-23.9)
	Other	58.7% (58.0-59.5)	29.7% (29.0-30.3)	17.1% (16.5-17.7)
Ethnicity	Hispanic	61.7% (61.0-62.5)	29.9% (29.2-30.7)	19.7% (19.0-20.3)
	Non-Hispanic	64.4% (64.1-64.6)	35.4% (35.2-35.7)	22.2% (22.0-22.4)
Age Group	Under 18	44.9% (44.5-45.4)	14.5% (14.2-14.8)	12.2% (11.9-12.4)
	18-24	63.8% (63.1-64.6)	49.4% (48.7-50.2)	24.6% (23.9-25.2)
	25-34	65.6% (65.0-66.2)	55.7% (55.1-56.3)	29.0% (28.5-29.6)
	35-44	74.4% (73.9-75.0)	47.4% (46.8-48.1)	25.7% (28.2-29.3)
	45-54	82.5% (81.9-82.9)	41.2% (40.6-41.9)	29.0% (28.3-29.6)
	55-64	87.2% (86.6-87.8)	32.5% (31.7-33.3)	24.5% (23.7-25.2)
	65+	91.1% (90.1-91.9)	18.0% (16.8-19.2)	14.8% (13.7-16.0)
Total		**64.1% (63.9-64.4)**	**34.9% (34.7-35.1)**	**22.0% (21.8-22.2)**

Source: Indiana Division of Mental Health and Addiction, 2016

Figure 11.7 Percentage of Indiana and U.S. Adolescents (Ages 12 to 17) Using Specialty and Non-specialty Mental Health Services in the Past Year (National Survey on Drug Use and Health, 2011)

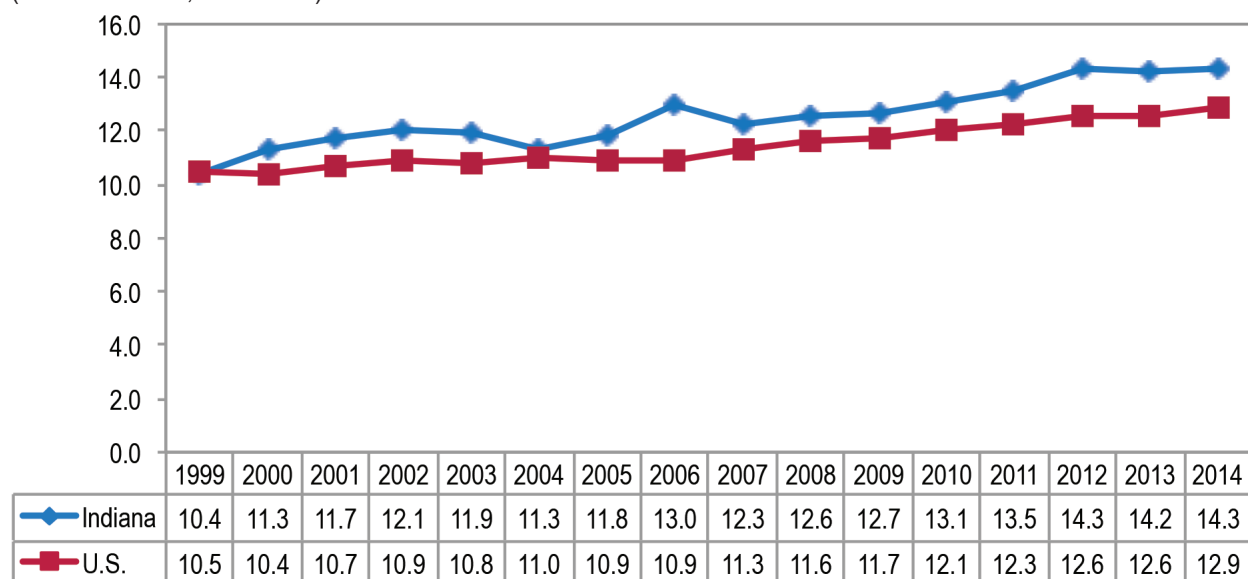|	Adolescents Using Outpatient Treatment	Adolescents Using Inpatient or Residential Treatment	Adolescents Using Non-specialty Medical Treatment
Indiana	9.8%	1.9%	2.1%
U.S.	11.2%	2.4%	2.5%
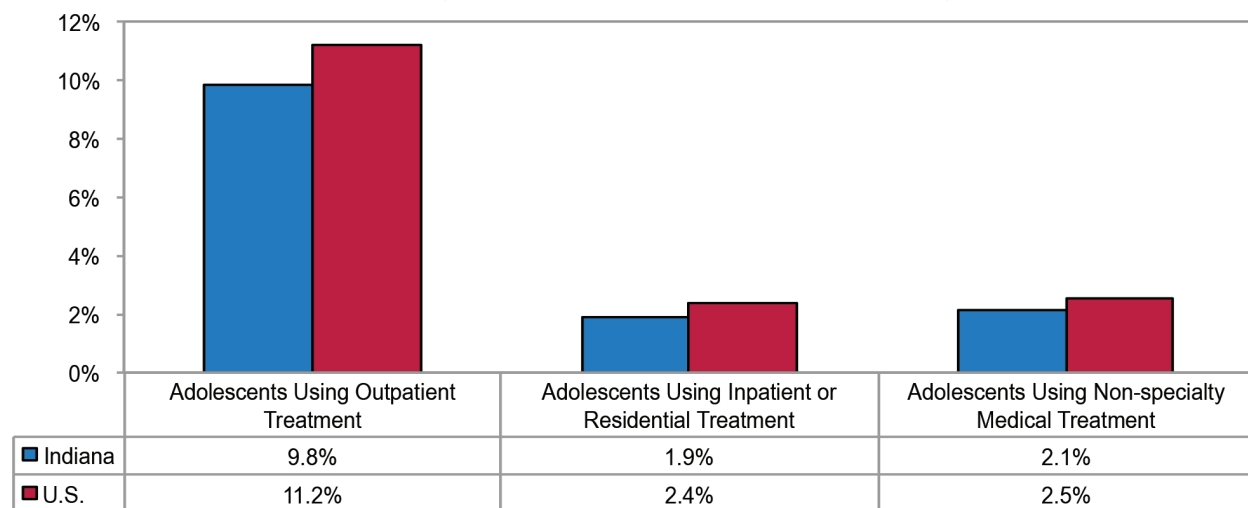
Source: SAMHSA, 2013

Suicide Ideation and Attempted Suicides

Suicide is a public health issue that is often associated with mental illness and substance abuse (CDC, 2013). The overall percentage of high school students attempting suicide in the past year was significantly higher in Indiana (11.0%) than in the U.S. (7.8%). Within Indiana, there were no significant differences by gender, race/ethnicity, or grade level (see Table 11.5) (CDC, 2016).

Suicide Completion

For most years, Indiana's rates of age-adjusted suicide deaths did not differ significantly from U.S. rates. Suicide deaths within Indiana have increased significantly from 1999 to 2014 (see Figure 11.8) (CDC, 2016). Within Indiana and the U.S., suicide completion has remained significantly greater among whites and males (see Table 11.6) (CDC, 2016).

Figure 11.8 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 1999-2014)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Indiana	10.4	11.3	11.7	12.1	11.9	11.3	11.8	13.0	12.3	12.6	12.7	13.1	13.5	14.3	14.2	14.3
U.S.	10.5	10.4	10.7	10.9	10.8	11.0	10.9	10.9	11.3	11.6	11.7	12.1	12.3	12.6	12.6	12.9

Source: CDC, 2016

Table 11.5 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, 2011)

		Indiana (95% CI)	U.S. (95% CI)
Gender	Male	10.5% (7.6-14.3)	5.8% (5.0-6.7)
	Female	11.4% (8.5-15.1)	9.8% (8.9-10.7)
Race/Ethnicity	White	9.8% (7.5-12.7)	6.2% (5.6-6.9)
	Black	17.6% (11.5-25.9)	8.3% (6.8-10.0)
	Hispanic	11.6% (7.5-17.5)	10.2% (8.8-11.8)
Grade	9	13.0% (9.3-17.7)	9.3% (8.0-10.8)
	10	12.1% (9.8-14.9)	8.2% (7.5-9.1)
	11	8.9% (5.8-13.4)	6.6% (5.5-7.9)
	12	9.5% (6.7-13.3)	6.3% (5.4-7.4)
Total		11.0% (8.9-13.4)	7.8% (7.1-8.5)

Source: CDC, 2016

Table 11.6 Age-Adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 2014)

		Indiana (95% CI)	U.S. (95% CI)
Gender	Male	23.4% (21.7 - 25.1)	20.6% (20.4-20.9)
	Female	5.6% (4.8 - 6.5)	5.8% (5.7-5.9)
Race/Ethnicity	White	15.5% (14.5-16.6)	14.7% (14.5-14.8)
	Black	5.0% (3.4 – 7.1)	5.5% (5.3-5.8)
	Hispanic	6.9% (4.1 – 10.9)	6.3% (6.1 – 6.5)
Total		14.3 (13.3 - 15.2)	12.9% (12.8-13.0)

Source: CDC, 2016

Appendix 11A
Definitions and Explanations

Any Mental Illness (AMI): "AMI among adults aged 18 or older is defined as currently or at any time in the past 12 months having had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specified within the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)" (SAMHSA, 2014). [See Figures 11.1 and 11.2.]

Serious Mental Illness (SMI): "SAMHSA defined SMI as persons aged 18 or older who currently or at any time in the past year have had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet the criteria specified within DSM-IV that has resulted in serious functional impairment, which substantially interferes with or limits one or more major life activities" (SAMHSA, 2014). [See Figures 11.1 and 11.2.]

Major Depressive Episode (MDE): "MDE, as defined in NSDUH, is based on the definition of MDE in the DSM-IV (APA, 1994) and is measured for the lifetime and past year periods. Lifetime MDE is defined as having at least five or more of nine symptoms of depression in the same 2-week period in a person's lifetime, in which at least one of the symptoms was a depressed mood or loss of interest or pleasure in daily activities. Respondents who had MDE in their lifetime were defined as having past year MDE if they had a period of depression lasting 2 weeks or longer in the past 12 months while also having some of the other symptoms of MDE. It should be noted that, unlike the DSM-IV criteria for MDE, no exclusions were made in NSDUH for depressive symptoms caused by medical illness, bereavement, or substance use disorders" (SAMHSA, 2014). [See Figures 11.3 and 11.4.]

Depression: "Has a doctor, nurse, or other health professional EVER told you that you had...a depressive disorder, including depression, major depression, dysthymia, or minor depression?" (CDC, 2013). [See Table 11.1.]

Feeling Sad or Hopeless:
a) "Felt sad or hopeless (almost every day for 2 or more weeks in a row so that they stopped doing some usual activities during the 12 months before the survey)" (CDC, 2016). [See Table 11.2.]
b) "During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?" (Gassman, et al., 2014). [See Figure 11.5.]

Indiana and U.S. State Mental Health Agency Revenue Per Capita: "State mental health agency revenue includes all state general revenues that flow through the agency to local providers. This includes state general fund and other expenditures that go to local mental health providers, Medicaid funds controlled by the agency that go to local entities, and federal funds that go directly to the agency (e.g. the Mental Health Block Grant). Revenue estimates were adjusted to 2012 dollars using the GDP Price Index. The index is compiled by the U.S. Department of Commerce's Bureau of Economic Analysis" (SAMHSA, 2014).
To compute per capita revenue, we divided these values by the number of Indiana and U.S. populations, based on population estimates as of July 1, 2010 retrieved from the U.S. Census Bureau.

Mental Health Treatment: "Mental health treatment is using prescription medication or receiving outpatient or inpatient care for problems with emotions, nerves, or mental health. Respondents were asked not to include treatment for alcohol or drug use. Respondents with unknown treatment information were excluded" (SAMHSA, 2013). [See Figure 11.6.]

Perceived Unmet Need for Mental Health Treatment:
"Perceived unmet need for mental health treatment is defined as reporting at least one occurrence in the past 12 months of feeling the need for mental health treatment or counseling but not receiving it. This definition of unmet need does not preclude respondents from having received mental health treatment in the past 12 months. Respondents with unmet need may have eventually gotten mental health treatment or counseling, or they may have received mental health treatment but perceived the need for additional treatment that they did not receive" (SAMHSA, 2013). [See Figure 11.6.]

Substance Abuse Treatment: "Substance abuse treatment is treatment to reduce or stop alcohol or illicit drug use or for medical problems associated with alcohol or illicit drug use. It includes treatment received at any location, such as a hospital (inpatient), rehabilitation facility (inpatient or outpatient), mental health center, emergency room, private doctor's office, self-help group, or prison/jail. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically including data from original methamphetamine questions but not including new methamphetamine items added in 2005 and 2006" (SAMHSA, 2013). [See Figure 11.6.]

Unmet Need for Substance Abuse Treatment: "Unmet need for substance abuse treatment is defined as a need for treatment that was not received. Respondents were classified as needing treatment for an alcohol or illicit drug problem if they met at least one of three criteria during the past year: (1) dependent on alcohol or illicit drugs, (2) abused alcohol or illicit drugs, or (3) received treatment for alcohol or illicit drug use at a specialty facility (i.e., alcohol and drug rehabilitation facility [inpatient or outpatient], hospital [inpatient only], or mental health center). Adults are defined as people aged 18 or older" (SAMHSA, 2013). [See Figure 11.6.]

Outpatient Services: "Outpatient services are treatment from a (1) private therapist, psychologist, psychiatrist, social worker, or counselor; (2) mental health clinic or center; (3) partial day hospital or day treatment program; or (4) in-home therapist, counselor, or family preservation worker…Mental health services include treatment for emotional or behavioral problems not caused by alcohol or drug use. Respondents with unknown receipt of mental health service information were excluded. Respondents could indicate multiple service sources; thus, these responsive categories are not mutually exclusive" (SAMHSA, 2013). [See Figure 11.7.]

Inpatient Services: "An inpatient service is a stay of overnight or longer in a hospital or other facility for mental health problems…Mental health services include treatment for emotional or behavioral problems not caused by alcohol or drug use. Respondents with unknown receipt of mental health service information were excluded. Respondents could indicate multiple service sources; thus, these responsive categories are not mutually exclusive" (SAMHSA, 2013). [See Figure 11.7.]

Nonspecialty Services: "Includes use of mental health services provided by a pediatrician or other family doctor…Mental health services include treatment for emotional or behavioral problems not caused by alcohol or drug use. Respondents with unknown receipt of mental health service information were excluded. Respondents could indicate multiple service sources; thus, these responsive categories are not mutually exclusive" (SAMHSA, 2013). [See Figure 11.7.]

Suicide Attempts: "Attempted suicide one or more times during the 12 months before the survey" (CDC, 2016). [See Table 11.5.]

Suicide Deaths: Suicide (intentional self-harm) deaths include ICD-10 codes X60-X84 (CDC, 2013). [See Figure 11.8.and Table 11.6.]

REFERENCES, CHAPTER 11

Bradizza, C. M., Stasiewicz, P. R., & Paas, N. D. (2006). Relapse to alcohol and drug use among individuals diagnosed with co-occurring mental health and substance use disorders: A review. *Clinical Psychology Review, 26*(2), 162–178. doi:10.1016/j.cpr.2005.11.005.

Centers for Disease Control and Prevention. (2011). *U.S. Adult Mental Illness Surveillance Report.* Retrieved from http://www.cdc.gov/MentalHealthSurveillance/

Centers for Disease Control and Prevention. (2013). *Suicide Prevention.* Retrieved from http://www.cdc.gov/ViolencePrevention/suicide/index.html

Centers for Disease Control and Prevention. (2014). *Bullying Research.* Retrieved from http://www.cdc.gov/violenceprevention/youthviolence/bullyingresearch/index.html

Centers for Disease Control and Prevention. (2015). *Behavioral Risk Factor Surveillance System (BRFSS) prevalence & trends data.* Retrieved from http://www.cdc.gov/brfss/brfssprevalence/index.html

Centers for Disease Control and Prevention. (2016). *Youth Risk Behavior Surveillance System (YRBSS), 1991-2013.* Retrieved from http://nccd.cdc.gov/youthonline

Centers for Disease Control and Prevention. (2016). *Compressed Mortality, 1999-2014.* Retrieved from http://wonder.cdc.gov/controller/datarequest/D124

Davidson, L., & White, W. (2007). The Concept of Recovery as an Organizing Principle for Integrating Mental Health and Addiction Services. *The Journal of Behavioral Health Services and Research, 34*(2), 109–120. doi:10.1007/s11414-007-9053-7.

Gassman, R., Jun, M., Samuel, S., Agley, J. D., King, R., & Lee, J. (2015). *Indiana Youth Survey, 2015.* Indiana Prevention Resource Center, Indiana University. Retrieved from http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey

Indiana Division of Mental Health and Addiction. (2015). *Data Assessment Registry Mental Health and Addiction (DARMHA), 2015.* De-identified data received February 12, 2016, from the Indiana Family & Social Services Administration.

Kessler, R. C. (2004). The epidemiology of dual diagnosis. *Biological Psychiatry, 56*(10), 730–737. doi:10.1016/j.biopsych.2004.06.034.

Substance Abuse and Mental Health Services Administration. (2002). *Report to Congress on the prevention and treatment of co-occurring substance abuse disorders and mental disorders.* Washington DC: United States Department of Health and Human Services.

Substance Abuse and Mental Health Services Administration. (2013a). *Behavioral Health, United States, 2012.* HHS Publication No. (SMA) 13-4797. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2014). *National Survey on Drug Use and Health (NSDUH), 2014.* Retrieved from http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf

Substance Abuse and Mental Health Services Administration, Center for Mental Health Services (SAMHSA/CMHS) (2015). *Indiana 2014 Mental Health National Outcome Measures (NOMS): SAMHSA Uniform Reporting System.* Retrieved from http://wwwdasis.samhsa.gov/dasis2/URS.htm

Indiana University Center for Health Policy

INDICATORS OF SUBSTANCE ABUSE

INDIANA COMMUNITIES AT RISK

To measure and compare the severity of substance abuse among Indiana counties, we identified county-level consumption and consequence data for individual drug categories, including alcohol, marijuana, cocaine and heroin, methamphetamine, and prescription drugs. We then ranked Indiana counties on the selected indicators, using a highest-need/highest-contributor model; i.e., counties received a priority score based on their need for intervention (measured by the rate[1] at which an indicator occurred) and their overall *contribution* to the problem (measured by the frequency with which an indicator occurred).

For each indicator, counties were given three points if they were in the top 10 percent (90th percentile), two points if they were in the top 11 to 25 percent (75th percentile), one point if they were in the top 26 to 50 percent (50th percentile), and zero points if they fell below the 50th percentile. The points were then added up, averaged over the number of indicators, and multiplied by 100; this created a priority score for each drug category. Higher scores equated to larger burdens of substance abuse. For each substance, the top 10 percent of counties, i.e., those most severely affected, were determined.

We then calculated an *overall substance abuse priority score* to assess severity of consumption and consequences of alcohol and other drugs within each county. This score was computed by averaging the priority scores from each drug category. The top 10 percent of counties, i.e., those with the highest overall scores and most severe problems, are listed in Table 12.6.

The selection of substance abuse indicators was limited to datasets with de-identified county-level information, such as the

- 2015 Treatment Episode Data Set (TEDS) (Indiana Family and Social Services Administration, 2015),[2]
- 2012 Uniform Crime Reporting (UCR) Program (Federal Bureau of Investigation (FBI), 2012),[3]
- 2014 Indiana Automated Reporting Information Exchange System (ARIES) (Indiana State Police, 2014),
- 2015 Methamphetamine Lab Statistics (Indiana State Police, 2015), and
- 2015 INSPECT data (Indiana Professional Licensing Agency, 2015).

[1]The rate was calculated by taking the frequency of an event (e.g., number of arrests), dividing it by the specified population (e.g., county population), and multiplying the result by 1,000. This represents the rate per 1,000 population.
[2]Indiana TEDS data are limited to individuals entering substance abuse treatment who are 200% below the federal poverty level and receive state-funded treatment; therefore, data are not representative of the entire substance abuse treatment population.
[3]States are not required to submit crime information to the FBI and level of reporting varies by county. The FBI uses statistical algorithms to estimate arrests for counties in which reporting is less than 100%. In Indiana, an average of about 60% of counties report the number of arrests, so the rest is estimated (see Table 2.1, page 26, for level of coverage by county).=

INDICATORS OF ABUSE

Alcohol Indicators

Counties were assessed and ranked according to the following 10 indicators for alcohol abuse:
- number and rate of alcohol-related crashes
- number and rate of arrests for driving under the influence (DUI)
- number and rate of arrests for public intoxication
- number and rate of arrests for liquor law violations
- number and rate of substance abuse treatment episodes with reported alcohol use

The counties that scored in the top 10 percent based on these 10 alcohol indicators are shown in Table 12.1. For a complete listing of counties by all alcohol abuse indicators, see Appendix 12A, pages 199-201.

Table 12.1   Counties with Alcohol Priority Scores in the Top 10 Percent

Top 10 Percent	Alcohol Priority Score
Lake	230
Monroe	220
Porter	210
LaPorte	200
Allen	190
Tippecanoe	190
Vanderburgh	190
Marion	180
Vigo	180

Note: Alcohol priority scores ranged from 0 to 230, with higher scores indicating a more severe problem. Source: Indiana Family and Social Services Administration, 2015; FBI, 2012; Indiana State Police, 2014

Marijuana Indicators

Following the methodology of the highest-need/highest-contributor model, we computed priority scores for marijuana abuse for each county. We examined communities based on the following six indicators for marijuana abuse:
- number and rate of arrests for possession of marijuana
- number and rate of arrests for sale/manufacture of marijuana
- number and rate of substance abuse treatment episodes with reported marijuana use

Table 12.2 lists the counties that ranked in the top 10 percent for marijuana abuse. For a complete listing of counties by all marijuana indicators, see Appendix 12B, pages 202-203.

Table 12.2   Counties with Marijuana Priority Scores in the Top 10 Percent

Top 10 Percent	Marijuana Priority Score
Vanderburgh	250
Lake	233
Monroe	217
Rush	217
Tippecanoe	217
LaPorte	183
Madison	183
Montgomery	183
Morgan	183

Note: Marijuana priority scores ranged from 0 to 250, with higher scores indicating a more severe problem. Source: Indiana Family and Social Services Administration, 2015; FBI, 2012

Cocaine and Heroin Indicators

Since the UCR data do not provide cocaine- or heroin-specific information, we utilized aggregated arrests for cocaine and opiates. In order to stay consistent with our methodology, we included both treatment admissions with reported use of cocaine and heroin. Our analysis is based on the following eight indicators:

- number and rate of arrests for possession of cocaine and opiates
- number and rate of arrests for sale/manufacture of cocaine and opiates
- number and rate of substance abuse treatment episodes with reported cocaine use
- number and rate of substance abuse treatment episodes with reported heroin use

Table 12.3 displays the counties with priority scores in the top 10 percent. For a complete listing of counties by cocaine and heroin abuse indicators, see Appendix 12C, pages 204-205.

Table 12.3   Counties with Cocaine and Heroin Priority Scores in the Top 10 Percent

Top 10 Percent	Cocaine-Heroin Priority Score
Howard	300
Lake	238
LaPorte	238
Marion	238
Montgomery	238
Wayne	238
Allen	200
Fayette	200
Saint Joseph	200
Starke	200

Note: Marijuana priority scores ranged from 0 to 300, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2015; FBI, 2012

Methamphetamine (Meth) Indicators

We computed meth priority scores based on eight indicators:

- number and rate of arrests for possession of synthetic drugs
- number and rate of arrests for sale/manufacture of synthetic drugs
- number and rate of substance abuse treatment episodes with reported meth use
- number and rate of clandestine meth lab seizures

The UCR program does not collect meth-specific information, but includes arrests for possession and sale/manufacture of synthetic drugs, encompassing methamphetamine. For the top 10 percent of counties with the highest meth priority scores, see Table 12.4. A complete listing of all counties by methamphetamine indicators can be found in Appendix 12D, pages 206-207.

Table 12.4   Counties with Methamphetamine Priority Scores in the Top 10 Percent

Top 10 Percent	Meth Priority Score
Starke	238
Vigo	238
Vanderburgh	225
Noble	200
DeKalb	200
Orange	200
Daviess	200
Tippecanoe	188
Bartholomew	188
Warrick	188

Note: Methamphetamine priority scores ranged from 0 to 238, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2015; FBI, 2012; Indiana State Police, 2015

Prescription Drug (Rx) Indicators

Prescription drug abuse refers to the nonmedical use of any prescription-type pharmaceutical, which includes opioids (pain relievers), depressants of the central nervous system (sedatives, hypnotics, and tranquilizers), and stimulants. We selected the following prescription drug indicators for our analysis:

- number and rate of arrests for possession of "other drugs" (barbiturates and Benzedrine)[4]
- number and rate of arrests for sale/manufacture of "other drugs" (barbiturates and Benzedrine)
- number and rate of treatment episodes with nonmedical prescription drug use reported
- number and rate of prescription opioids (pain relievers) dispensed in Indiana

Table 12.5 lists the counties in the top 10 percent for prescription drug abuse. For a complete listing of counties by prescription drug abuse indicators, see Appendix 12E, pages 208-209.

Table 12.5 Counties with Prescription Drug (Rx) Priority Scores in the Top 10 Percent

Top 10 Percent	Rx Priority Score
Madison	288
Vanderburgh	238
Howard	213
Monroe	213
Henry	200
Morgan	188
Floyd	188
Decatur	175
Jackson	175

Note: Prescription drug priority scores ranged from 0 to 288, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2015; FBI, 2012; Indiana Professional Licensing Agency. 2015

SEVERITY OF BURDEN – OVERALL RANKING OF COUNTIES

To measure the overall burden of substance abuse on Indiana communities, we averaged the priority scores across all five drug categories and ranked counties by severity of alcohol and drug problems. The top 10 percent of counties are displayed in Table 12.6. A complete listing of all counties by overall priority score can be found in Appendix 12F, page 210.

Table 12.6 Counties with Total Priority Scores in the Top 10 Percent

Top 10 Percent	Total Priority Score
Vanderburgh	206
Monroe	192
Lake	180
Madison	176
Howard	175
Marion	169
Tippecanoe	166
Allen	156
LaPorte	149
Montgomery	149

Note: Overall substance abuse priority scores ranged from 14 to 206, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2015; FBI, 2012; Indiana State Police, 2014, 2015; Indiana Board of Pharmacy, 2015

[4]Barbiturates (central nervous system depressants) and Benzedrine (amphetamine/stimulant) are types of prescription drugs that are frequently used nonmedically for recreational purposes.

Alcohol Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015; and Automated Reporting Information Exchange System, 2014)

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Adams	147	4.26	32	0.93	67	1.94	124	3.60	23	0.67	60	
Allen	1,500	4.17	679	1.89	264	0.73	1,159	3.22	507	1.41	190	Top 10
Bartholomew	375	4.82	203	2.61	217	2.79	242	3.11	80	1.03	150	Top 25
Benton	17	*1.91	5	*0.56	10	*1.13	37	4.17	10	*1.13	20	
Blackford	38	3.04	13	*1.04	12	*0.96	34	2.72	14	*1.12	0	
Boone	89	1.54	54	0.94	110	1.91	93	1.61	50	0.87	40	
Brown	31	2.05	3	*0.20	30	1.98	51	3.37	26	1.72	50	
Carroll	97	4.83	20	1.00	48	2.39	66	3.28	24	1.19	40	
Cass	152	3.90	160	4.11	145	3.72	173	4.44	39	1.00	150	Top 25
Clark	919	8.21	318	2.84	171	1.53	98	0.88	137	1.22	160	Top 25
Clay	96	3.56	46	1.71	31	1.15	112	4.15	34	1.26	60	
Clinton	127	3.82	39	1.17	68	2.05	96	2.89	60	1.81	80	Top 50
Crawford	61	5.71	22	2.06	15	1.40	24	2.24	12	*1.12	30	
Daviess	145	4.52	54	1.68	58	1.81	94	2.93	20	0.62	60	
Dearborn	116	2.31	57	1.13	37	0.74	270	5.37	98	1.95	120	Top 25
Decatur	75	2.88	52	2.00	66	2.54	121	4.65	30	1.15	60	
DeKalb	149	3.50	47	1.10	100	2.35	199	4.67	57	1.34	100	Top 50
Delaware	405	3.43	248	2.10	205	1.74	480	4.07	154	1.30	150	Top 25
Dubois	112	2.65	42	0.99	92	2.17	226	5.34	72	1.70	120	Top 25
Elkhart	676	3.38	153	0.76	272	1.36	387	1.93	239	1.19	130	Top 25
Fayette	96	3.94	49	2.01	78	3.20	92	3.78	30	1.23	80	Top 50
Floyd	373	4.96	251	3.34	127	1.69	28	0.37	112	1.49	140	Top 25
Fountain	68	3.94	20	1.16	34	1.97	20	1.16	28	1.62	50	
Franklin	5	*0.23	0	*0.00	55	2.56	80	3.73	26	1.21	40	
Fulton	69	3.30	27	1.29	38	1.81	102	4.87	23	1.10	60	
Gibson	182	5.42	0	*0.00	135	4.02	167	4.97	47	1.40	130	Top 25
Grant	177	2.53	85	1.21	90	1.29	341	4.87	87	1.24	110	Top 50
Greene	103	3.12	81	2.45	40	1.21	90	2.73	31	0.94	30	
Hamilton	948	3.34	150	0.53	841	2.96	619	2.18	268	0.94	170	Top 25
Hancock	238	3.24	106	1.44	166	2.26	135	1.84	84	1.14	100	Top 50
Harrison	42	1.06	10	*0.25	34	0.86	<5	N/A	56	1.42	30	
Hendricks	508	3.42	152	1.02	249	1.68	153	1.03	141	0.95	100	Top 50
Henry	85	1.72	46	0.93	200	4.05	153	3.10	34	0.69	60	
Howard	211	2.54	169	2.03	110	1.32	285	3.43	104	1.25	110	Top 50
Huntington	165	4.42	20	0.54	90	2.41	76	2.04	45	1.21	70	Top 50
Jackson	146	3.39	79	1.83	112	2.60	145	3.36	58	1.35	110	Top 50
Jasper	93	2.77	33	0.98	55	1.64	60	1.79	48	1.43	30	
Jay	73	3.39	88	4.09	54	2.51	75	3.49	26	1.21	80	Top 50
Jefferson	116	3.59	53	1.64	84	2.60	154	4.76	37	1.14	100	Top 50
Jennings	77	2.72	35	1.24	49	1.73	110	3.89	19	*0.67	10	
Johnson	475	3.33	95	0.67	403	2.83	130	0.91	115	0.81	120	Top 25

(continued on next page)

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Knox	117	3.03	49	1.27	379	9.81	184	4.85	52	1.37	130	Top 25
Knox	117	3.03	49	1.27	379	9.81	144	3.73	48	1.24	120	Top 25
Kosciusko	591	7.67	100	1.30	147	1.91	203	2.63	99	1.28	150	Top 25
LaGrange	92	2.45	9	*0.24	98	2.61	120	3.20	39	1.04	50	
Lake	2,395	4.82	1,678	3.38	1,144	2.30	1,462	2.94	718	1.44	230	Top 10
LaPorte	645	5.77	308	2.76	368	3.29	246	2.20	175	1.57	200	Top 10
Lawrence	117	2.52	53	1.14	113	2.44	191	4.12	70	1.51	110	Top 50
Madison	349	2.65	282	2.14	159	1.21	581	4.41	145	1.10	160	Top 25
Marion	2,394	2.63	4,463	4.90	988	1.08	1,899	2.08	1,068	1.17	180	Top 10
Marshall	307	6.50	114	2.42	169	3.58	113	2.39	56	1.19	160	Top 25
Martin	27	2.61	21	2.03	20	1.93	19	*1.83	7	*0.68	20	
Miami	77	2.10	58	1.58	19	*0.52	155	4.22	35	0.95	50	
Monroe	417	2.97	635	4.53	666	4.75	636	4.54	176	1.26	220	Top 10
Montgomery	144	3.73	100	2.59	89	2.31	141	3.66	44	1.14	110	Top 50
Morgan	175	2.51	70	1.00	191	2.74	183	2.63	49	0.70	80	Top 50
Newton	83	5.84	40	2.82	6	*0.42	21	1.48	20	1.41	70	Top 50
Noble	177	3.71	68	1.43	140	2.93	157	3.29	70	1.47	120	Top 25
Ohio	15	2.47	4	*0.66	8	*1.31	21	3.45	6	*0.99	10	
Orange	117	5.84	43	2.15	14	*0.70	74	3.69	21	1.05	70	Top 50
Owen	55	2.55	15	*0.70	30	1.39	82	3.80	31	1.44	30	
Parke	106	6.13	27	1.56	27	1.56	63	3.64	37	2.14	80	Top 50
Perry	86	4.43	62	3.19	66	3.40	86	4.43	31	1.60	120	Top 25
Pike	41	3.21	16	*1.25	26	2.04	24	1.88	22	1.72	40	
Porter	1,028	6.19	217	1.31	544	3.28	327	1.97	262	1.58	210	Top 10
Posey	67	2.60	31	1.20	37	1.43	96	3.72	33	1.28	20	
Pulaski	59	4.40	29	2.16	8	*0.60	67	5.00	14	*1.04	70	Top 50
Putnam	247	6.49	50	1.31	61	1.60	96	2.52	25	0.66	70	Top 50
Randolph	29	1.11	14	0.53	56	2.14	86	3.28	17	*0.65	20	
Ripley	78	2.56	22	0.72	41	1.34	134	4.40	50	1.64	70	Top 50
Rush	64	3.69	1	*0.06	92	5.31	82	4.73	16	*0.92	70	Top 50
Saint Joseph	653	2.44	94	0.35	311	1.16	871	3.26	321	1.20	140	Top 25
Scott	61	2.54	75	3.12	70	2.91	27	1.12	19	*0.79	60	
Shelby	82	1.85	27	0.61	34	0.77	66	1.49	51	1.15	10	
Spencer	60	2.85	19	*0.90	30	1.43	123	5.85	23	1.09	40	
Starke	49	2.11	28	1.20	33	1.42	94	4.04	19	*0.82	10	
Steuben	148	4.34	26	0.76	105	3.08	191	5.60	62	1.82	150	Top 25
Sullivan	35	1.63	22	1.03	28	1.31	30	1.40	25	1.17	0	
Switzerland	30	2.83	10	0.94	15	*1.41	33	3.11	9	*0.85	0	
Tippecanoe	593	3.38	616	3.51	372	2.12	284	1.62	246	1.40	190	Top 10
Tipton	33	2.08	37	2.34	11	*0.69	26	1.64	15	*0.95	20	
Union	19	2.52	5	*0.66	10	*1.33	12	*1.59	9	*1.19	0	
Vanderburgh	626	3.46	731	4.04	230	1.27	724	4.00	230	1.27	190	Top 10

County	DUI Arrests		Public Intoxication Arrests		Liquor Law Violation Arrests		Alcohol Use Reported at Treatment Admission		Alcohol-Related Collisions		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Vermillion	37	2.27	49	3.01	10	*0.61	71	4.36	25	1.54	70	Top 50
Wabash	108	3.30	55	1.68	83	2.54	162	4.95	47	1.44	120	Top 25
Warren	24	2.84	8	*0.95	12	*1.42	6	*0.71	7	*0.83	0	
Warrick	141	2.33	51	0.84	70	1.16	151	2.50	59	0.98	50	
Washington	204	7.23	46	1.63	49	1.74	24	0.85	38	1.35	60	
Wayne	171	2.48	239	3.47	65	0.94	192	2.79	91	1.32	110	Top 50
Wells	46	1.65	9	*0.32	45	1.62	72	2.59	24	0.86	0	
White	99	4.00	32	1.29	32	1.29	74	2.99	36	1.45	40	
Whitley	102	3.05	29	0.87	60	1.79	63	1.88	24	0.72	0	
Indiana	**23,350**	**3.57**	**14,787**	**2.26**	**12,866**	**1.97**	**18,261**	**2.79**	**8,017**	**1.23**		

* Rates that are based on numbers lower than 20 are unreliable.
Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5.
The alcohol priority score was based on 10 indicators and ranged from 0 to 230. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2014

APPENDIX 12B

Marijuana Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015)

County	Marijuana Possession Arrests		Marijuana Sale Arrests		Marijuana Use Reported At Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate		
Adams	40	1.16	5	*0.15	128	3.72	50	
Allen	578	1.60	31	0.09	1114	3.09	167	Top 25
Bartholomew	152	1.92	16	*0.20	307	3.89	150	Top 25
Benton	7	*0.79	1	*0.11	38	4.30	33	
Blackford	21	1.67	1	*0.08	33	2.63	17	
Boone	49	0.83	9	*0.15	73	1.24	33	
Brown	12	*0.80	0	*0.00	49	3.25	17	
Carroll	35	1.74	2	*0.10	64	3.18	33	
Cass	59	1.52	9	*0.23	132	3.41	100	Top 50
Clark	276	2.46	40	0.36	58	0.52	150	Top 25
Clay	33	1.23	4	*0.15	77	2.87	0	
Clinton	35	1.06	3	*0.09	75	2.27	0	
Crawford	16	*1.50	5	*0.47	21	1.97	50	
Daviess	65	2.02	3	*0.09	111	3.45	83	Top 50
Dearborn	44	0.88	7	*0.14	250	5.01	100	Top 50
Decatur	33	1.26	6	*0.23	95	3.64	50	
DeKalb	50	1.18	17	*0.40	157	3.72	117	Top 50
Delaware	157	1.34	2	*0.02	430	3.66	100	Top 50
Dubois	43	1.02	3	*0.07	147	3.49	33	
Elkhart	299	1.50	10	*0.05	353	1.77	100	Top 50
Fayette	49	2.04	8	*0.33	95	3.96	133	Top 25
Floyd	184	2.44	21	0.28	13	*0.17	117	Top 50
Fountain	25	1.46	7	*0.41	27	1.58	67	
Franklin	1	*0.04	13	*0.57	69	3.00	67	
Fulton	41	1.98	4	*0.19	88	4.26	67	
Gibson	46	1.37	2	*0.06	120	3.58	50	
Grant	146	2.11	6	*0.09	334	4.82	167	Top 25
Greene	42	1.27	3	*0.09	90	2.73	0	
Hamilton	684	2.36	22	0.08	490	1.69	167	Top 25
Hancock	124	1.75	17	*0.24	126	1.78	83	Top 50
Harrison	13	*0.33	3	*0.08	<5	N/A	0	
Hendricks	334	2.21	26	0.17	150	0.99	133	Top 25
Henry	11	*0.22	52	1.06	145	2.95	133	Top 25
Howard	183	2.21	20	0.24	264	3.18	167	Top 25
Huntington	40	1.08	1	*0.03	75	2.03	0	
Jackson	131	3.04	11	*0.26	163	3.79	167	Top 25
Jasper	30	0.90	22	0.66	41	1.23	83	Top 50
Jay	66	3.09	4	*0.19	93	4.35	117	Top 50
Jefferson	56	1.72	9	*0.28	160	4.92	133	Top 25
Jennings	1	*0.04	24	0.85	114	4.05	133	Top 25
Johnson	325	2.27	16	*0.11	122	0.85	100	Top 50
Knox	56	1.47	51	1.34	108	2.84	150	Top 25
Kosciusko	148	1.91	39	0.50	173	2.23	150	Top 25
LaGrange	46	1.22	3	*0.08	96	2.55	17	
Lake	1,134	2.30	436	0.88	1002	2.03	233	Top 10
LaPorte	250	2.25	89	0.80	160	1.44	183	Top 10
Lawrence	63	1.37	4	*0.09	199	4.32	83	Top 50
Madison	148	1.14	28	0.21	602	4.62	183	Top 10
Marion	1,009	1.10	189	0.21	2024	2.20	167	Top 25
Marshall	136	2.89	1	*0.02	104	2.21	100	Top 50
Martin	14	*1.36	6	*0.58	20	1.95	67	
Miami	13	*0.36	6	*0.16	145	3.97	67	
Monroe	342	2.42	27	0.19	587	4.16	217	Top 10
Montgomery	94	2.46	10	*0.26	212	5.54	183	Top 10
Morgan	122	1.76	69	0.99	224	3.23	183	Top 10
Newton	29	2.06	2	*0.14	20	1.42	33	

(continued on next page)

County	Marijuana Possession Arrests		Marijuana Sale Arrests		Marijuana Use Reported At Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate		
Noble	88	1.85	10	*0.21	147	3.10	100	Top 50
Ohio	6	*0.99	1	*0.16	17	*2.80	0	
Orange	33	1.67	10	*0.51	67	3.40	83	Top 50
Owen	22	1.03	3	*0.14	95	4.45	33	
Parke	49	2.86	3	*0.18	48	2.81	83	Top 50
Perry	38	1.95	9	*0.46	61	3.13	83	Top 50
Pike	18	1.41	3	*0.23	18	*1.41	17	
Porter	394	2.38	22	0.13	274	1.65	150	Top 25
Posey	31	1.21	2	*0.08	61	2.38	0	
Pulaski	8	*0.61	2	*0.15	56	4.28	33	
Putnam	48	1.28	13	*0.35	99	2.63	67	
Randolph	33	1.28	2	*0.08	82	3.17	17	
Ripley	28	0.98	3	*0.11	102	3.58	33	
Rush	71	4.15	66	3.85	83	4.85	217	Top 10
Saint Joseph	464	1.74	29	0.11	751	2.82	150	Top 25
Scott	26	1.09	4	*0.17	26	1.09	17	
Shelby	19	*0.43	3	*0.07	62	1.39	0	
Spencer	24	1.15	3	*0.14	109	5.22	67	
Starke	38	1.64	13	*0.56	105	4.53	133	Top 25
Steuben	64	1.87	5	*0.15	141	4.13	83	Top 50
Sullivan	16	*0.75	4	*0.19	28	1.32	17	
Switzerland	12	*1.15	2	*0.19	28	2.69	17	
Tippecanoe	481	2.71	55	0.31	259	1.46	217	Top 10
Tipton	21	1.33	1	*0.06	34	2.16	0	
Union	8	*1.09	1	*0.14	20	2.72	0	
Vanderburgh	632	3.50	67	0.37	634	3.51	250	Top 10
Vermillion	11	*0.69	3	*0.19	57	3.57	33	
Vigo	164	1.51	16	*0.15	367	3.38	117	Top 50
Wabash	47	1.45	11	*0.34	159	4.90	150	Top 25
Warren	10	*1.19	1	*0.12	9	*1.07	0	
Warrick	111	1.84	18	*0.30	122	2.02	100	Top 50
Washington	29	1.04	3	*0.11	13	*0.47	0	
Wayne	96	1.41	18	*0.26	195	2.86	100	Top 50
Wells	14	*0.51	0	*0.00	78	2.81	0	
White	52	2.13	4	*0.16	76	3.11	67	
Whitley	39	1.17	4	*0.12	70	2.10	0	
Indiana	**11,385**	**1.74**	**1,839**	**0.28**	**16,722**	**2.56**		

* Rates that are based on numbers lower than 20 are unreliable.
Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5.
The marijuana priority score was based on six indicators and ranged from 0 to 250. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015

APPENDIX 12C

Cocaine and Heroin Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population
(Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015)

County	Cocaine-Heroin Possession Arrests		Cocaine-Heroin Sale Arrests		Cocaine Use Reported at Treatment Admission		Heroin Use Reported at Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Adams	5	*0.15	3	*0.09	21	0.61	19	*0.55	50	
Allen	85	0.24	42	0.12	345	0.96	169	0.47	200	Top 10
Bartholomew	4	*0.05	1	*0.01	42	0.53	82	1.04	75	Top 50
Benton	1	*0.11	1	*0.11	7	*0.79	<5	N/A	25	
Blackford	5	*0.40	3	*0.24	<5	N/A	26	2.07	113	Top 50
Boone	6	*0.10	5	*0.08	5	*0.08	36	0.61	50	
Brown	0	*0.00	0	*0.00	10	*0.66	21	1.39	50	
Carroll	0	*0.00	1	*0.05	6	*0.30	11	*0.55	0	
Cass	0	*0.00	9	*0.23	11	*0.28	18	*0.47	38	
Clark	91	0.81	84	0.75	17	*0.15	63	0.56	188	Top 25
Clay	2	*0.07	3	*0.11	<5	N/A	7	*0.26	13	
Clinton	8	*0.24	1	*0.03	12	*0.36	30	0.91	75	Top 50
Crawford	0	*0.00	0	*0.00	<5	N/A	<5	N/A	0	
Daviess	5	*0.16	5	*0.16	9	*0.28	24	0.75	50	
Dearborn	0	*0.00	1	*0.02	52	1.04	161	3.23	138	Top 25
Decatur	6	*0.23	4	*0.15	14	*0.54	16	*0.61	88	Top 50
DeKalb	4	*0.09	3	*0.07	27	0.64	15	*0.36	63	
Delaware	18	*0.15	17	*0.14	118	1.00	201	1.71	188	Top 25
Dubois	6	*0.14	3	*0.07	7	*0.17	6	*0.14	25	
Elkhart	40	0.20	58	0.29	69	0.35	33	0.17	150	Top 25
Fayette	7	*0.29	6	*0.25	24	1.00	73	3.04	200	Top 10
Floyd	2	*0.03	55	0.73	5	*0.07	33	0.44	88	Top 50
Fountain	3	*0.18	2	*0.12	5	*0.29	10	*0.58	25	
Franklin	1	*0.04	1	*0.04	7	*0.30	37	1.61	38	
Fulton	8	*0.39	2	*0.10	10	*0.48	12	*0.58	50	
Gibson	0	*0.00	0	*0.00	<5	N/A	<5	N/A	0	
Grant	37	0.53	24	0.35	51	0.74	70	1.01	188	Top 25
Greene	1	*0.03	4	*0.12	<5	N/A	20	0.61	38	
Hamilton	25	0.09	44	0.15	75	0.26	166	0.57	138	Top 25
Hancock	18	*0.25	15	*0.21	24	0.34	35	0.49	100	Top 50
Harrison	3	*0.08	1	*0.03	<5	N/A	5	*0.13	0	
Hendricks	41	0.27	17	*0.11	16	*0.11	84	0.56	100	Top 50
Henry	1	*0.02	1	*0.02	26	0.53	31	0.63	63	
Howard	78	0.94	72	0.87	79	0.95	161	1.94	300	Top 10
Huntington	0	*0.00	0	*0.00	7	*0.19	11	*0.30	0	
Jackson	12	*0.28	14	*0.33	21	0.49	55	1.28	150	Top 25
Jasper	3	*0.09	8	*0.24	11	*0.33	52	1.55	100	Top 50
Jay	14	*0.65	3	*0.14	10	*0.47	51	2.38	138	Top 25
Jefferson	8	*0.25	7	*0.22	27	0.83	47	1.45	138	Top 25
Jennings	0	*0.00	0	*0.00	14	*0.50	30	1.07	50	
Johnson	33	0.23	22	0.15	16	*0.11	54	0.38	100	Top 50
Knox	11	*0.29	14	*0.37	<5	N/A	10	*0.26	75	Top 50
Kosciusko	20	0.26	16	*0.21	23	0.30	30	0.39	100	Top 50
LaGrange	13	*0.35	70	1.86	7	*0.19	5	*0.13	113	Top 50
Lake	134	0.27	215	0.44	388	0.79	434	0.88	238	Top 10
LaPorte	43	0.39	119	1.07	67	0.60	132	1.19	238	Top 10
Lawrence	3	*0.07	1	*0.02	12	*0.26	32	0.69	38	
Madison	40	0.31	15	*0.12	108	0.83	109	0.84	175	Top 25
Marion	222	0.24	170	0.19	836	0.91	1,100	1.20	238	Top 10
Martin	1	*0.10	1	*0.10	<5	N/A	<5	N/A	0	
Miami	8	*0.22	40	1.10	11	*0.30	38	1.04	125	Top 50
Monroe	39	0.28	14	*0.10	82	0.58	190	1.35	188	Top 25

Indiana University Center for Health Policy

County	Cocaine-Heroin Possession Arrests		Cocaine-Heroin Sale Arrests		Cocaine Use Reported at Treatment Admission		Heroin Use Reported at Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Montgomery	23	0.60	31	0.81	24	0.63	76	1.99	238	Top 10
Morgan	34	0.49	22	0.32	18	*0.26	90	1.30	163	Top 25
Newton	11	*0.78	0	*0.00	5	*0.36	15	*1.07	75	Top 50
Noble	9	*0.19	8	*0.17	18	*0.38	6	*0.13	75	Top 50
Ohio	1	*0.16	1	*0.16	<5	N/A	6	*0.99	50	
Orange	0	*0.00	0	*0.00	<5	N/A	10	*0.51	0	
Owen	3	*0.14	3	*0.14	5	*0.23	16	*0.75	38	
Parke	5	*0.29	5	*0.29	7	*0.41	8	*0.47	75	Top 50
Perry	4	*0.21	2	*0.10	7	*0.36	<5	N/A	25	
Pike	3	*0.23	2	*0.16	<5	N/A	<5	N/A	25	
Porter	44	0.27	9	*0.05	86	0.52	199	1.20	175	Top 25
Posey	2	*0.08	3	*0.12	6	*0.23	<5	N/A	25	
Pulaski	1	*0.08	0	*0.00	5	*0.38	14	*1.07	25	
Putnam	7	*0.19	11	*0.29	5	*0.13	16	*0.43	63	
Randolph	4	*0.15	8	*0.31	12	*0.46	36	1.39	100	Top 50
Ripley	5	*0.18	3	*0.11	14	*0.49	47	1.65	88	Top 50
Rush	14	*0.82	1	*0.06	16	*0.93	17	*0.99	113	Top 50
Saint Joseph	66	0.25	27	0.10	359	1.35	235	0.88	200	Top 10
Scott	2	*0.08	1	*0.04	<5	N/A	11	*0.46	0	
Shelby	6	*0.13	1	*0.02	17	*0.38	32	0.72	63	
Spencer	4	*0.19	3	*0.14	6	*0.29	<5	N/A	38	
Starke	16	*0.69	10	*0.43	16	*0.69	71	3.06	200	Top 10
Steuben	19	*0.56	12	*0.35	12	*0.35	11	*0.32	125	Top 50
Sullivan	3	*0.14	3	*0.14	<5	N/A	<5	N/A	25	
Switzerland	2	*0.19	1	*0.10	<5	N/A	11	*1.06	25	
Tippecanoe	67	0.38	26	0.15	44	0.25	71	0.40	150	Top 25
Tipton	0	*0.00	2	*0.13	<5	N/A	9	*0.57	13	
Union	1	*0.14	1	*0.14	<5	N/A	14	*1.91	50	
Vanderburgh	32	0.18	36	0.20	63	0.35	29	0.16	125	Top 50
Vermillion	0	*0.00	0	*0.00	<5	N/A	7	*0.44	0	
Vigo	10	*0.09	4	*0.04	22	0.20	18	*0.17	38	
Wabash	7	*0.22	6	*0.19	8	*0.25	44	1.36	88	Top 50
Warren	2	*0.24	1	*0.12	<5	N/A	<5	N/A	25	
Warrick	2	*0.03	0	*0.00	9	*0.15	8	*0.13	0	
Washington	3	*0.11	3	*0.11	<5	N/A	17	*0.61	25	
Wayne	29	0.42	21	0.31	79	1.16	139	2.04	238	Top 10
Wells	2	*0.07	3	*0.11	16	*0.58	22	0.79	75	Top 50
White	1	*0.04	0	*0.00	<5	N/A	7	*0.29	0	
Whitley	6	*0.18	3	*0.09	8	*0.24	5	*0.15	38	
Indiana	1,599	0.25	1,510	0.23	3,682	0.56	5,404	0.83		
Indiana	**2,122**	**0.32**	**897**	**0.14**	**4,975**	**0.76**	**1,423**	**0.22**		

* Rates that are based on numbers lower than 20 are unreliable.
Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5. The cocaine-heroin priority score was based on eight indicators and ranged from 0 to 300. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015

APPENDIX 12D

Methamphetamine (Meth) Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population
(Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015; Methamphetamine Lab Statistics, 2015)

County	Synthetic Possession Arrests		Synthetic Sale Arrests		Meth Use Reported at Treatment Admission		Meth Lab Seizures		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Adams	14	*0.41	6	*0.17	18	*0.52	10	*0.29	75	Top 50
Allen	0	*0.00	0	*0.00	128	0.36	59	0.16	63	
Bartholomew	110	1.42	8	*0.10	269	3.46	18	*0.23	188	Top 10
Benton	2	*0.23	1	*0.11	5	*0.56	5	*0.56	25	
Blackford	19	*1.52	12	*0.96	9	*0.72	10	*0.80	163	Top 25
Boone	7	*0.12	3	*0.05	12	*0.21	1	*0.02	0	
Brown	6	*0.40	7	*0.46	26	1.72	2	*0.13	63	
Carroll	2	*0.10	0	*0.00	25	1.24	3	*0.15	13	
Cass	4	*0.10	0	*0.00	50	1.28	30	0.77	75	Top 50
Clark	201	1.80	33	0.29	17	*0.15	9	*0.08	150	Top 25
Clay	13	*0.48	8	*0.30	72	2.67	6	*0.22	100	Top 50
Clinton	1	*0.03	2	*0.06	18	*0.54	7	*0.21	0	
Crawford	6	*0.56	2	*0.19	13	*1.22	6	*0.56	75	Top 50
Daviess	29	0.90	16	*0.50	119	3.71	16	*0.50	200	Top 10
Dearborn	1	*0.02	3	*0.06	16	*0.32	2	*0.04	0	
Decatur	13	*0.50	6	*0.23	52	2.00	36	1.38	150	Top 25
DeKalb	15	*0.35	22	0.52	83	1.95	37	0.87	200	Top 10
Delaware	63	0.53	0	*0.00	184	1.56	234	1.98	163	Top 25
Dubois	31	0.73	9	*0.21	45	1.06	1	*0.02	88	Top 50
Elkhart	17	*0.08	8	*0.04	97	0.48	41	0.20	75	Top 50
Fayette	10	*0.41	5	*0.21	13	*0.53	10	*0.41	50	
Floyd	23	0.31	2	*0.03	14	*0.19	9	*0.12	38	
Fountain	10	*0.58	5	*0.29	8	*0.46	4	*0.23	50	
Franklin	0	*0.00	0	*0.00	15	*0.70	6	*0.28	13	
Fulton	10	*0.48	4	*0.19	40	1.91	13	*0.62	100	Top 50
Gibson	34	1.01	19	*0.57	76	2.26	6	*0.18	163	Top 25
Grant	23	0.33	5	*0.07	20	0.29	15	*0.21	38	
Greene	12	*0.36	17	*0.52	50	1.52	7	*0.21	100	Top 50
Hamilton	88	0.31	10	*0.04	20	0.07	3	*0.01	50	
Hancock	22	0.30	9	*0.12	13	*0.18	5	*0.07	25	
Harrison	7	*0.18	4	*0.10	<5	N/A	17	*0.43	38	
Hendricks	56	0.38	16	*0.11	34	0.23	2	*0.01	75	Top 50
Henry	0	*0.00	0	*0.00	23	0.47	9	*0.18	13	
Howard	1	*0.01	6	*0.07	93	1.12	26	0.31	88	Top 50
Huntington	0	*0.00	0	*0.00	19	*0.51	15	*0.40	25	
Jackson	17	*0.39	6	*0.14	149	3.46	9	*0.21	138	Top 25
Jasper	7	*0.21	10	*0.30	26	0.78	13	*0.39	63	
Jay	24	1.12	20	*0.93	23	1.07	13	*0.60	175	Top 25
Jefferson	13	*0.40	7	*0.22	106	3.28	4	*0.12	113	Top 50
Jennings	0	*0.00	0	*0.00	111	3.92	15	*0.53	100	Top 50
Johnson	8	*0.06	2	*0.01	35	0.25	4	*0.03	13	
Knox	28	0.72	9	*0.23	108	2.80	16	*0.41	163	Top 25
Kosciusko	34	0.44	23	0.30	66	0.86	58	0.75	175	Top 25
LaGrange	7	*0.19	2	*0.05	65	1.73	16	*0.43	50	
Lake	42	0.08	13	*0.03	18	0.04	5	*0.01	50	
LaPorte	19	*0.17	3	*0.03	7	*0.06	7	*0.06	13	
Lawrence	20	0.43	10	*0.22	152	3.28	6	*0.13	125	Top 50
Madison	10	*0.08	15	*0.11	99	0.75	26	0.20	75	Top 50
Marion	176	0.19	49	0.05	281	0.31	9	*0.01	125	Top 50
Marshall	64	1.36	8	*0.17	37	0.78	24	0.51	163	Top 25

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County	Synthetic Possession Arrests		Synthetic Sale Arrests		Meth Use Reported at Treatment Admission		Meth Lab Seizures		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate		
Martin	16	*1.54	2	*0.19	18	*1.74	4	*0.39	88	Top 50
Miami	4	*0.11	16	*0.44	68	1.85	52	1.42	150	Top 25
Monroe	16	*0.11	17	*0.12	205	1.46	35	0.25	125	Top 50
Montgomery	9	*0.23	6	*0.16	73	1.89	12	*0.31	75	Top 50
Morgan	12	*0.17	6	*0.09	153	2.20	2	*0.03	88	Top 50
Newton	2	*0.14	0	*0.00	7	*0.49	2	*0.14	0	
Noble	31	0.65	11	*0.23	105	2.20	70	1.47	200	Top 10
Ohio	1	*0.16	1	*0.16	<5	N/A	1	*0.16	13	
Orange	39	1.95	14	*0.70	39	1.95	11	*0.55	200	Top 10
Owen	5	*0.23	2	*0.09	59	2.74	5	*0.23	38	
Parke	23	1.33	19	*1.10	20	1.16	4	*0.23	138	Top 25
Perry	18	*0.93	6	*0.31	42	2.16	21	1.08	175	Top 25
Pike	5	*0.39	3	*0.23	9	*0.70	5	*0.39	38	
Porter	12	*0.07	2	*0.01	10	*0.06	5	*0.03	13	
Posey	11	*0.43	3	*0.12	40	1.55	4	*0.16	38	
Pulaski	11	*0.82	2	*0.15	15	*1.12	9	*0.67	88	Top 50
Putnam	20	0.53	16	*0.42	60	1.58	0	*0.00	100	Top 50
Randolph	5	*0.19	1	*0.04	11	*0.42	12	*0.46	25	
Ripley	11	*0.36	6	*0.20	26	0.85	2	*0.07	38	
Rush	2	*0.12	0	*0.00	31	1.79	1	*0.06	13	
Saint Joseph	70	0.26	2	*0.01	138	0.52	42	0.16	100	Top 50
Scott	28	1.16	6	*0.25	27	1.12	1	*0.04	100	Top 50
Shelby	8	*0.18	6	*0.14	28	0.63	1	*0.02	25	
Spencer	9	*0.43	5	*0.24	76	3.61	5	*0.24	100	Top 50
Starke	13	*0.56	14	*0.60	76	3.27	42	1.80	238	Top 10
Steuben	1	*0.03	6	*0.18	67	1.96	27	0.79	125	Top 50
Sullivan	3	*0.14	1	*0.05	23	1.07	13	*0.61	50	
Switzerland	4	*0.38	3	*0.28	<5	N/A	3	*0.28	50	
Tippecanoe	142	0.81	29	0.17	86	0.49	45	0.26	188	Top 10
Tipton	13	*0.82	14	*0.88	<5	N/A	3	*0.19	100	Top 50
Union	2	*0.27	1	*0.13	<5	N/A	2	*0.27	13	
Vanderburgh	76	0.42	99	0.55	420	2.32	45	0.25	225	Top 10
Vermillion	0	*0.00	0	*0.00	45	2.76	6	*0.37	50	
Vigo	61	0.56	81	0.75	253	2.33	53	0.49	238	Top 10
Wabash	11	*0.34	6	*0.18	40	1.22	23	0.70	113	Top 50
Warren	3	*0.35	2	*0.24	5	*0.59	3	*0.35	38	
Warrick	70	1.16	54	0.89	99	1.64	8	*0.13	188	Top 10
Washington	5	*0.18	3	*0.11	14	*0.50	7	*0.25	13	
Wayne	13	*0.19	3	*0.04	10	*0.15	9	*0.13	25	
Wells	0	*0.00	0	*0.00	22	0.79	11	*0.40	25	
White	6	*0.24	1	*0.04	34	1.37	14	*0.57	63	
Whitley	12	*0.36	3	*0.09	25	0.75	5	*0.15	25	
Indiana	**2,122**	**0.32**	**897**	**0.14**	**5,471**	**0.84**	**1,530**	**0.23**		

* Rates that are based on numbers lower than 20 are unreliable.
Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five are not specified, but marked <5.
The methamphetamine priority score was based on eight indicators and ranged from 0 to 238. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2015

Prescription Drug (Rx) Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (except rate for controlled substances dispensed is per capita) (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015; INSPECT Data, 2015)

County	"Other" Drug Possession Arrests		"Other" Drug Sale Arrests		Rx Drug Abuse Reported at Treatment Admission		Controlled Substances Dispensed		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate (per capita)		
Adams	8	*0.23	2	*0.06	47	1.37	24,155	0.70	0	
Allen	106	0.29	60	0.17	335	0.93	288,017	0.80	163	Top 25
Bartholomew	27	0.34	0	*0.00	183	2.32	83,938	1.06	100	Top 50
Benton	2	*0.23	1	*0.11	15	*1.70	7,555	0.85	25	
Blackford	2	*0.16	3	*0.24	33	2.63	21,666	1.73	100	Top 50
Boone	9	*0.15	4	*0.07	47	0.80	53,333	0.90	25	
Brown	0	*0.00	0	*0.00	33	2.19	8,243	0.55	13	
Carroll	8	*0.40	0	*0.00	29	1.44	14,018	0.70	13	
Cass	35	0.90	32	0.83	50	1.29	34,194	0.88	125	Top 25
Clark	20	0.18	4	*0.04	108	0.96	140,438	1.25	88	Top 50
Clay	7	*0.26	3	*0.11	28	1.04	29,612	1.10	38	
Clinton	11	*0.33	15	0.45	46	1.40	38,775	1.18	113	Top 50
Crawford	3	*0.28	0	*0.00	14	*1.31	15,139	1.42	25	
Daviess	23	0.71	3	*0.09	102	3.17	30,084	0.93	88	Top 50
Dearborn	2	*0.04	9	*0.18	191	3.83	39,680	0.80	100	Top 50
Decatur	29	1.11	28	1.07	48	1.84	45,968	1.76	175	Top 10
DeKalb	13	*0.31	8	*0.19	36	0.85	27,789	0.66	38	
Delaware	1	*0.01	1	*0.01	441	3.76	137,386	1.17	113	Top 50
Dubois	8	*0.19	2	*0.05	77	1.83	39,821	0.95	38	
Elkhart	12	*0.06	1	*0.01	107	0.54	147,738	0.74	63	
Fayette	12	*0.50	4	*0.17	114	4.75	36,469	1.52	163	Top 25
Floyd	162	2.15	144	1.91	48	0.64	83,024	1.10	188	Top 10
Fountain	6	*0.35	4	*0.23	14	*0.82	19,601	1.15	63	
Franklin	6	*0.26	9	*0.39	51	2.22	17,976	0.78	50	
Fulton	14	*0.68	8	*0.39	33	1.60	20,156	0.98	88	Top 50
Gibson	32	0.95	2	*0.06	53	1.58	40,636	1.21	75	
Grant	1	*0.01	2	*0.03	196	2.83	88,350	1.27	100	Top 50
Greene	4	*0.12	1	*0.03	72	2.18	40,380	1.22	50	
Hamilton	16	*0.06	7	*0.02	204	0.70	172,914	0.60	88	Top 50
Hancock	29	0.41	12	*0.17	74	1.04	69,084	0.97	88	Top 50
Harrison	3	*0.08	0	*0.00	8	*0.20	42,936	1.10	25	
Hendricks	57	0.38	15	*0.10	83	0.55	109,395	0.73	100	Top 50
Henry	36	0.73	12	*0.24	189	3.84	69,662	1.42	200	Top 10
Howard	92	1.11	10	*0.12	238	2.87	105,232	1.27	213	Top 10
Huntington	6	*0.16	0	*0.00	52	1.41	38,312	1.04	25	
Jackson	57	1.32	28	0.65	102	2.37	51,142	1.19	175	Top 10
Jasper	9	*0.27	12	*0.36	50	1.50	40,429	1.21	75	
Jay	8	*0.37	1	*0.05	58	2.71	17,555	0.82	50	
Jefferson	14	*0.43	5	*0.15	159	4.89	39,673	1.22	138	Top 25
Jennings	1	*0.04	6	*0.21	93	3.30	35,701	1.27	100	Top 50
Johnson	51	0.36	45	0.31	81	0.57	143,914	1.00	138	Top 25
Knox	37	0.97	11	*0.29	80	2.10	53,980	1.42	150	Top 25
Kosciusko	35	0.45	29	0.37	91	1.17	67,453	0.87	113	Top 50
LaGrange	3	*0.08	0	*0.00	28	0.75	130,324	3.47	63	
Lake	395	0.80	81	0.16	363	0.74	18,776	0.04	150	Top 25
LaPorte	18	*0.16	3	*0.03	112	1.01	407,027	3.66	113	Top 50
Lawrence	19	*0.41	3	*0.07	212	4.60	67,900	1.47	150	Top 25
Madison	137	1.05	55	0.42	452	3.47	175,986	1.35	288	Top 10
Marion	31	0.03	39	0.04	1,311	1.43	822,441	0.90	138	Top 25
Marshall	29	0.62	10	*0.21	53	1.13	40,514	0.86	75	

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County	"Other" Drug Possession Arrests		"Other" Drug Sale Arrests		Rx Drug Abuse Reported at Treatment Admission		Controlled Substances Dispensed		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate	Number	Rate (per capita)		
Martin	3	*0.29	2	*0.19	18	*1.75	14,777	1.44	63	
Miami	4	*0.11	0	*0.00	85	2.33	35,183	0.96	25	
Monroe	121	0.86	31	0.22	352	2.49	96,548	0.68	213	Top 10
Montgomery	59	1.54	3	*0.08	99	2.59	41,212	1.08	138	Top 25
Morgan	70	1.01	16	*0.23	126	1.82	84,135	1.21	188	Top 10
Newton	0	*0.00	1	*0.07	10	*0.71	11,610	0.83	0	
Noble	22	0.46	6	*0.13	38	0.80	45,358	0.96	63	
Ohio	2	*0.33	1	*0.16	8	*1.32	6,745	1.11	38	
Orange	2	*0.10	0	*0.00	63	3.20	26,795	1.36	63	
Owen	7	*0.33	3	*0.14	56	2.62	28,753	1.35	100	Top 50
Parke	3	*0.18	1	*0.06	16	*0.94	13,094	0.77	0	
Perry	11	*0.57	2	*0.10	36	1.85	18,213	0.94	50	
Pike	5	*0.39	2	*0.16	9	*0.70	17,662	1.38	50	
Porter	122	0.74	14	*0.08	231	1.39	165,598	1.00	150	Top 25
Posey	7	*0.27	3	*0.12	42	1.64	26,593	1.04	50	
Pulaski	4	*0.31	4	*0.31	40	3.06	16,098	1.23	88	Top 50
Putnam	6	*0.16	3	*0.08	48	1.28	34,665	0.92	13	
Randolph	10	*0.39	3	*0.12	55	2.13	29,915	1.16	88	Top 50
Ripley	10	*0.35	2	*0.07	59	2.07	32,268	1.13	63	
Rush	43	2.51	24	1.40	54	3.15	18,645	1.09	163	Top 25
Saint Joseph	73	0.27	8	*0.03	238	0.89	230,576	0.87	125	Top 25
Scott	2	*0.08	1	*0.04	70	2.94	39,759	1.67	88	Top 50
Shelby	1	*0.02	0	*0.00	49	1.10	44,474	1.00	13	
Spencer	8	*0.38	2	*0.10	50	2.39	20,541	0.98	25	
Starke	1	*0.04	2	*0.09	139	5.99	35,207	1.52	100	Top 50
Steuben	57	1.67	6	*0.18	21	0.61	28,890	0.85	88	Top 50
Sullivan	2	*0.09	1	*0.05	23	1.08	24,965	1.18	13	
Switzerland	4	*0.38	1	*0.10	28	2.69	10,370	1.00	38	
Tippecanoe	29	0.16	12	*0.07	129	0.73	126,980	0.71	88	Top 50
Tipton	10	*0.63	4	*0.25	25	1.59	14,746	0.94	88	Top 50
Union	2	*0.27	1	*0.14	14	*1.91	5,733	0.78	25	
Vanderburgh	129	0.71	44	0.24	393	2.17	226,645	1.25	238	Top 10
Vermillion	0	*0.00	0	*0.00	30	1.88	15,613	0.98	13	
Vigo	30	0.28	5	*0.05	148	1.36	104,053	0.96	88	Top 50
Wabash	12	*0.37	4	*0.12	104	3.21	37,995	1.17	100	Top 50
Warren	3	*0.36	1	*0.12	6	*0.72	5,892	0.70	25	
Warrick	25	0.41	31	0.51	83	1.37	61,804	1.02	125	Top 25
Washington	9	*0.32	3	*0.11	29	1.04	31,082	1.11	38	
Wayne	7	*0.10	2	*0.03	113	1.65	85,312	1.25	88	Top 50
Wells	12	*0.43	12	*0.43	52	1.88	24,148	0.87	100	Top 50
White	2	*0.08	0	*0.00	34	1.39	27,097	1.11	13	
Whitley	15	*0.45	5	*0.15	36	1.08	34,431	1.03	50	
Indiana	**2,590**	**0.40**	**1,000**	**0.15**	**9,903**	**1.51**	**6,294,671**	**0.96**		

* Rates that are based on numbers lower than 20 are unreliable.
Note: Due to confidentiality concerns, health data (such as treatment data) with numbers less than five, are not specified but marked <5.
The prescription drug priority score was based on eight indicators and ranged from 0 to 288. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015; Indiana Professional Licensing Agency, 2015

APPENDIX 12F

Total Priority Scores by County, Ranked in Descending Order (Uniform Crime Reporting Program, 2012; Treatment Episode Data Set, 2015; Indiana Automated Reporting Information Exchange System, 2014; Methamphetamine Lab Statistics, 2015; INSPECT data, 2015)

County	Total Priority Score	Rank
Vanderburgh	206	Top 10
Monroe	192	Top 10
Lake	180	Top 10
Madison	176	Top 10
Howard	175	Top 10
Marion	169	Top 10
Tippecanoe	166	Top 10
Allen	156	Top 10
LaPorte	149	Top 10
Montgomery	149	Top 10
Jackson	148	Top 25
Clark	147	Top 25
Saint Joseph	143	Top 25
Delaware	143	Top 25
Morgan	140	Top 25
Porter	140	Top 25
Kosciusko	138	Top 25
Starke	136	Top 25
Bartholomew	133	Top 25
Vigo	132	Top 25
Knox	132	Top 25
Marshall	130	Top 25
Fayette	125	Top 25
Jefferson	124	Top 50
Hamilton	122	Top 50
Grant	120	Top 50
Rush	115	Top 50
Steuben	114	Top 50
Wabash	114	Top 50
Floyd	114	Top 50
Wayne	112	Top 50
Jay	112	Top 50
Noble	112	Top 50
Decatur	105	Top 50
Elkhart	104	Top 50
DeKalb	103	Top 50
Hendricks	102	Top 50
Lawrence	101	Top 50
Cass	98	Top 50
Daviess	96	Top 50
Johnson	94	Top 50
Henry	94	Top 50
Warrick	93	Top 50
Dearborn	92	Top 50
Perry	91	Top 50
Gibson	84	Top 50
Miami	83	Top 50

County	Total Priority Score	Rank
Orange	83	Top 50
Hancock	79	Bottom 50
Jennings	79	Bottom 50
Blackford	78	Bottom 50
Parke	75	Bottom 50
Fulton	73	Bottom 50
Jasper	70	Bottom 50
Putnam	62	Bottom 50
Dubois	61	Bottom 50
Pulaski	61	Bottom 50
LaGrange	58	Bottom 50
Ripley	58	Bottom 50
Spencer	54	Bottom 50
Clinton	54	Bottom 50
Scott	53	Bottom 50
Fountain	51	Bottom 50
Randolph	50	Bottom 50
Owen	48	Bottom 50
Martin	47	Bottom 50
Adams	47	Bottom 50
Tipton	44	Bottom 50
Greene	44	Bottom 50
Clay	42	Bottom 50
Franklin	41	Bottom 50
Wells	40	Bottom 50
Brown	38	Bottom 50
White	36	Bottom 50
Crawford	36	Bottom 50
Newton	36	Bottom 50
Pike	34	Bottom 50
Vermillion	33	Bottom 50
Boone	30	Bottom 50
Washington	27	Bottom 50
Posey	27	Bottom 50
Switzerland	26	Bottom 50
Benton	26	Bottom 50
Huntington	24	Bottom 50
Whitley	23	Bottom 50
Ohio	22	Bottom 50
Shelby	22	Bottom 50
Sullivan	21	Bottom 50
Carroll	20	Bottom 50
Harrison	19	Bottom 50
Union	18	Bottom 50
Warren	18	Bottom 50

Note: Total priority scores ranged from 14 to 206. Higher priority scores indicate a more severe problem.
Source: FBI, 2012; Indiana Family and Social Services Administration, 2015; Indiana State Police, 2014, 2015; Indiana Professional Licensing Agency, 2015

REFERENCES, CHAPTER 12

Federal Bureau of Investigation. (2012). U*niform Crime Reporting (UCR) program data: County-level detailed arrest and offense data, 2012.* ICPSR35019-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2014-06-12. Retrieved from http://doi.org/10.3886/ICPSR35019.v1

Indiana Family and Social Services Administration. (2015). *Treatment Episode Data System (TEDS), 2015.* Indianapolis, IN: Indiana Family and Social Services Administration.

Indiana Professional Licensing Agency. (2015). *INSPECT, 2015 data.* Information received February 11, 2016, from Amanda Garrett, Indiana Professional Licensing Agency.

Indiana State Police. (2014). *Automated Reporting Information Exchange System (ARIES), Vehicle Crash Records System, 2014.* Data received December 8, 2015, from the Center for Criminal Justice Research, Public Policy Institute, School of Public and Environmental Affairs, Indiana University–Purdue University Indianapolis.

Indiana State Police, Methamphetamine Suppression Section. (2015). *Indiana meth lab statistics, 2015.* Data received on January 14, 2016, from Sergeant Katrina Smith.

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APPENDIX I: Data Sources Recommended by the State Epidemiology and Outcomes Work Group (SEOW)

Data Set	Source	Years	How to Access	Coverage	Target
Alcohol-Related Disease Impact (ARDI) Database	CDC	Based on averages 2006-2010	http://nccd.cdc.gov/DPH_ARDI/default/default.aspx	U.S. and states	General population
Automated Reporting Information Exchange System (ARIES)	ISP	Annual Most recent 2014	On request from ISP	Indiana and counties	Vehicle collisions in general population
Behavioral Risk Factor Surveillance System (BRFSS)	CDC	Annual 1995-2013	http://www.cdc.gov/brfss/brfssprevalence/index.html	U.S. and states	Adults 18 and older
Data Assessment Registry Mental Health and Addiction (DARMHA) System	DMHA	Annual Most recent 2015	On request from DMHA	Indiana	Substance abuse & mental health treatment population eligible for public services (200% FPL)
Fatality Analysis Reporting System (FARS)	NHTSA	Annual 1994-2013	http://www-fars.nhtsa.dot.gov/	U.S., states, and counties	General population
Hospital Discharge Database	ISDH	Annual 1999-2014	http://www.in.gov/isdh/20624.htm	Indiana and counties	General population
Indiana Adult Tobacco Survey (IATS)	ISDH/TPCC	Bi-annual 2002-2015	On request from ISDH	Indiana	Adults
Indiana College Substance Use Survey	ICAN/IPRC	Annual 2009-2015	http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey	Indiana	College students
Indiana Clandestine Meth Lab Seizures	ISP	Annual 1995-2015	On request from ISP	Indiana and counties	General population
Indiana Youth Survey	IPRC	Annual 1993-2015	http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey	Indiana and regions	6th – 12th grade students
Indiana Youth Tobacco Survey (IYTS)	ISDH/TPCC	Bi-annual 2000-2014	On request from ISDH	Indiana	6th – 12th grade students

Data Set	Source	Years	How to Access	Coverage	Target
Monitoring the Future (MTF) Survey	NIDA	Annual 1999–2015	http://www.monitoringthefuture.org/data/data.html	U.S.	8th, 10th, and 12th grade students
Mortality data (e.g., alcohol-, smoking-, and drug-related mortality)	ISDH	Annual Most recent 2014	On request from ISDH	Indiana and counties	General population
	CDC	Annual 1999–2014	http://wonder.cdc.gov/mortSQL.html	U.S., states, and counties	General population
National Survey on Drug Use and Health (NSDUH)	SAMHSA	Annual 1994–2014	http://www.samhsa.gov/data/sites/default/files/NSDUHsaePercents2014.pdf http://www.samhsa.gov/data/population-data-nsduh	U.S., states, and some sub-state estimates	Population 12 years and older
Population Estimates	U.S. Census Bureau	Annual	http://www.census.gov/	U.S., states, and counties	General population
Treatment Episode Data Set (TEDS)	SAMHSA	Annual 1992–2013	http://wwwdasis.samhsa.gov/dasis2/teds.htm	U.S. and states; for county-level data contact Indiana DMHA	Substance abuse treatment population eligible for public services (200% FPL)
	DMHA	Annual 2015			
Uniform Crime Reporting Program (UCR)	FBI/NACJD	Annual 1994–2012	http://www.icpsr.umich.edu/icpsrweb/content/NACJD/guides/ucr.html	U.S. and states	Arrests within general population
Uniform Reporting System (URS) - Mental Health National Outcomes Measures	SAMHSA	Annual	http://www.samhsa.gov/data/reports-by-geography?tid=633&map=1	U.S. and states	Treatment population eligible for public services (200% FPL)
Youth Risk Behavior Surveillance System (YRBSS)	CDC	Bi-annual Indiana: 2003–2011	http://nccd.cdc.gov/YouthOnline/App/Default.aspx	U.S. and states	High school students

Abbreviations used: ARIES = Automated Reporting Information Exchange System; CDC = Centers for Disease Control and Prevention; DMHA = Division of Mental Health & Addiction; FBI = Federal Bureau of Investigation; ICAN = Indiana Collegiate Action Network; IPRC = Indiana Prevention Resource Center; ISDH = Indiana State Department of Health; ISP = Indiana State Police; NACJD = National Archive of Criminal Justice Data; NHTSA = National Highway Traffic Safety Administration; NIDA = National Institute on Drug Abuse; SAMHSA = Substance Abuse and Mental Health Services Administration; TPCC = Tobacco Prevention & Cessation Commission.

APPENDIX II: SUBSTANCE USE INDICATORS AT-A-GLANCE

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET
Alcohol	Past-month use Past-month binge drinking Alcohol dependence or abuse in the past year Needing but not receiving treatment for alcohol use in the past year	General population ages 12+	NSDUH
	Past-month alcohol use Past-month binge drinking Past-month heavy drinking	Adults ages 18+	BRFSS
	Lifetime alcohol use Past-month alcohol use Past-month binge drinking Drank alcohol before age 13	Grades 9-12	YRBSS
	Past-month use Past-month binge drinking	Grades 6-12	Indiana Youth Survey
	Use reported at treatment admission Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS

	Arrests for
	  DUI
	  Public intoxication
	  Liquor law violation
		General population	UCR

	Alcohol-related crashes Alcohol-related fatal crashes	General population	ARIES
	Alcohol-attributable deaths Alcohol-attributable fractions	General population	ARDI

Tobacco	Past-month use of
	  Tobacco product
	  Cigarettes
		General population ages 12+	NSDUH

	Past-month smoking Past-month smokeless tobacoo Four-level smoking status (smoked every day)	Adults ages 18+	BRFSS

	Past-month use of
	  Tobacco
	  Cigarettes
	  E-cigarettes
	  Smokeless tobacco
		Middle and high school students	IYTS

	Lifetime use of cigarettes
	Past-month use of
	  Any tobacco
	  Cigarettes
	  Cigars
	  Smokeless tobacco
	Daily cigarette use
	Smoked cigarette befroe age 13
		Grades 9-12	YRBSS

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET

Tobacco (cont.)	Past-month use of
	    Cigarettes
	    Smokeless tobacco
	    Cigars
	    Pipes
	    Electronic vapor products (e-cigarettes)
		Grades 6-12	Indiana Youth Survey

	Percentage of smoke-free homes and work places	General population	IATS
Marijuana	Past-year use Past-month use	General population ages 12+	NSDUH
	Lifetime use Past-month use Tried marijuana before age 13	Grades 9-12	YRBSS

	Past-month use
	    Marijuana
	    Synthetic marijuana
		Grades 6-12	Indiana Youth Survey

	Use reported at treatment admission Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS

	Arrests for
	    Possession of marijuana
	    Sale of marijuana
		General population	UCR

Cocaine	Past-year use Lifetime use	General population ages 12+	NSDUH
	Lifetime use	Grades 9-12	YRBSS
	Past-month use of cocaine/crack	Grades 6-12	Indiana Youth Survey
	Use reported at treatment admission Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS

	Arrests for
	    Possession of cocaine/opiates
	    Sale of cocaine/opiates
		General population	UCR

Heroin	Lifetime use of heroin	Grades 9-12	YRBSS
	Past-month use	Grades 6-12	Indiana Youth Survey
	Use reported at treatment admission Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS

	Arrests for
	    Possession of cocaine/opiates
	    Sale of cocaine/opiates
		General population	UCR

APPENDIX II (continued)

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET
Methamphetamine	Lifetime use	Grades 9-12	YRBSS
	Past-month use	Grades 6-12	Indiana Youth Survey
	Use reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Primary use (dependence) reported at treatment admission		
	Arrests for	General population	UCR
	Possession of synthetic drugs		
	Sale of synthetic drugs		
	Clandestine meth lab seizures	General population	ISP Meth Lab Seizures
	Children identified/rescued in lab homes		
	Arrests made during lab seizures		
Prescription Drugs	Past-year nonmedical use of pain relievers	General population ages 12+	NSDUH
	Past-month use of prescription drugs	Grades 6-12	Indiana Youth Survey
	Past-year dispensation of controlled substances	General population	INSPECT
	Use reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
	Primary use (dependence) reported at treatment admission		
	Arrests for	General population	UCR
	Possession of 'other drugs'		
	Sale of 'other drugs'		
Polysubstance Abuse	Use of 2+ substances reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
Miscellaneous	Ever injected any illegal drug	Grades 9-12	YRBSS
	Were offerend an illegal drug on school property		

Abbreviations used: ARDI = Alcohol-Related Disease Impact database; ARIES = Automated Reporting Information Exchange System; BRFSS = Behavioral Risk Factor Surveillance System; IATS = Indiana Adult Tobacco Survey; INSPECT = Indiana Scheduled Prescription Drug Electronic Collection and Tracking system; ISP = Indiana State Police; IYTS = Indiana Youth Tobacco Survey; NSDUH = National Survey on Drug Use and Health; TEDS = Treatment Episode Data Set; UCR = Uniform Crime Reporting program; YRBSS = Youth Risk Behavior Surveillance System.

Additional information on these datasets, including how to access them, can be found in Chapter 2 and Appendix I.

Indiana University Center for Health Policy

MARIJUANA COCAINE
PRESCRIPTION DRUGS

The Consumption and Consequences of Alcohol, Tobacco, and Drugs in Indiana: A State Epidemiological Profile
2015

Indiana State Epidemiology and Outcomes Workgroup

The Indiana State Epidemiology and Outcomes Workgroup (SEOW) was established in April 2006 to review epidemiological data on the patterns and consequences of substance use and abuse in Indiana and to make recommendations to the State of Indiana regarding priorities for prevention funding for the following year. The priorities were developed based on a systematic analysis of available data, the results of which are detailed in this report.

RICHARD M. FAIRBANKS SCHOOL OF PUBLIC HEALTH
INDIANA UNIVERSITY
Center for Health Policy
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CHP CENTER FOR HEALTH POLICY

TOBACCO HEROIN

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

METHAMPHETAMINE

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

ALCOHOL

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