MARIJUANA COCAINE PRESCRIPTION DRUGS

The Consumption and Consequences of Alcohol, Tobacco, and Drugs in Indiana: A State Epidemiological Profile 2013

Indiana State Epidemiology and Outcomes Workgroup

RICHARD M. FAIRBANKS SCHOOL OF PUBLIC HEALTH
INDIANA UNIVERSITY
Center for Health Policy
IUPUI

CHP CENTER FOR HEALTH POLICY

TOBACCO HEROIN METHAMPHETAMINE ALCOHOL

THE CONSUMPTION AND CONSEQUENCES OF ALCOHOL, TOBACCO, AND DRUGS IN INDIANA: A STATE EPIDEMIOLOGICAL PROFILE 2013

Developed by the Indiana State Epidemiology and Outcomes Workgroup, 2013

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.

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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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For additional copies of this document, contact:

Center for Health Policy
IU Richard M. Fairbanks School of Public Health
Indiana University-Purdue University Indianapolis (IUPUI)
714 N Senate Ave, Suite 220
Indianapolis, IN 46202
Phone: 317-278-5907
IUCHP@iupui.edu
www.healthpolicy.iupui.edu

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BOOK TEAM
Eric R. Wright, PhD
Dennis P. Watson, PhD
Marion S. Greene, MPH
Harold E. Kooreman, MA
Matthew J. Williams, MA
Victoria Buchanan, MS

Editor: Shawndra Miller
Cover Design and Layout: Susan Hill

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INDIANA STATE EPIDEMIOLOGY AND OUTCOMES WORKGROUP (SEOW)

Eric R. Wright, PhD, Co-Chair *
Professor of Sociology and Public Health
Georgia State University
Adjunct Professor, IU Richard M. Fairbanks School of Public Health at IUPUI

Dennis Watson, PhD, Co-Chair *
Interim Director, Center for Health Policy
Assistant Professor, Department of Health Policy & Management
IU Richard M. Fairbanks School of Public Health at IUPUI

David Bozell, MPA
Assistant Deputy Director,
Office of Recovery, Integration, Prevention and Policy
Division of Mental Health and Addiction

Sonya Carrico
Division Director,
Substance Abuse Services Division
Indiana Criminal Justice Institute

Niki Crawford
First Sergeant Commander,
Methamphetamine Suppression Section,
Indiana State Police

Craig Hanks
Director, Mental Health & Special Populations
Indiana Department of Correction

Julia Olsen, MSEd, CHES, CPP
Prevention Bureau Chief,
Bureau of Mental Health Promotion and Addiction Prevention
Division of Mental Health and Addiction

Gregory Pachmayr, JD, MPA
Director,
Indiana Board of Pharmacy

Pamela Pontones, MA
State Epidemiologist and
Director, Epidemiology Resource Center
Indiana State Department of Health

Katelin Ryan, MA
Director, Program Evaluation
Tobacco Prevention & Cessation Commission,
Indiana State Department of Health

NON-VOTING MEMBERS *

Ailes, Dennis
Bureau Chief, Addiction Treatment Services
Division of Mental Health and Addiction

Randi "Jeanie" Alter, PhD, MA, MCHES
Project Manager and Research Associate
Indiana Prevention Resource Center,
Indiana University

Mary A. Lay, MPH, MCHES, CPP
Project Manager, Indiana Problem Gambling Prevention Initiative
Indiana Prevention Resource Center

Kim Manlove
Director, Indiana Addictions Issues Coalition
Mental Health American of Indiana

Jennifer Phillips, BA
Special Projects Coordinator,
Division of Mental Health and Addiction

Barbara Seitz de Martinez, PhD, MLS, CPP
Deputy Director,
Indiana Prevention Resource Center,
Indiana University

Donna Wall, PharmD, RPh, BCPS, FASHP
Pharmacist
Indiana Board of Pharmacy

SEOW SUPPORT TEAM *

Marion Greene, MPH
Public Health Research Analyst,
Center for Health Policy
IU Richard M. Fairbanks School of Public Health at IUPUI

Harold Kooreman, MA
Policy Analyst,
Center for Health Policy
IU Richard M. Fairbanks School of Public Health at IUPUI

* Indicates non-voting member

Matthew Williams, MA
Research Assistant,
Center for Health Policy
IU Richard M. Fairbanks School of Public Health at IUPUI

Victoria Buchanan, MS
Research Assistant,
Center for Health Policy
IU Richard M. Fairbanks School of Public Health at IUPUI

* Indicates non-voting member

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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
Eric R. Wright, PhD, and **Dennis P. Watson, PhD.**

The other members of the SEOW Support Team are analysts at the Center for Health Policy, including:
Marion Greene, MPH, Public Health Research Analyst,
Harold Kooreman, MA, Policy Analyst,
Matthew Williams, MA, Research Assistant, and
Victoria Buchanan, MS, Research Assistant.

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 to encourage 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 helped to lay 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.

A federal requirement of the SPF SIG initiative stipulated that the State establish a State Epidemiology and Outcomes Workgroup (SEOW). This workgroup was to collate and analyze available epidemiological data and report findings to legislators and policymakers to facilitate data-based decision-making regarding substance abuse prevention programming across the state. While the Indiana SPF SIG officially came to an end in 2010, the State decided to continue to support the SEOW as part of its long-term efforts to improve substance abuse prevention policy.

This report represents the eighth official *State Epidemiological Profile* completed by the SEOW. As we have in past years, we 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. The State Board of Pharmacy also started collecting data on pharmacy thefts and robberies, which we included in this year's report.

The SEOW has begun to expand its scope in recent years at the request of Indiana policy makers. This is reflected in a special supplemental report published in 2013, which described prevention needs of four special populations: (1) lesbian, gay, bisexual, and transgender (LGBT) people; (2) veterans returning from recent conflicts; (3) people incarcerated and those reentering society after incarceration; and (4) people who are dually diagnosed with a mental illness and substance use disorder. The current report continues to build on these expansion efforts with the inclusion of a chapter looking at the prevention needs of those living with mental illness.

As with all of our prior reports, the 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 that 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/SEOW/epi).

Finally, this year we made an important change in the leadership of the SEOW support staff. We are delighted to welcome Dr. Dennis Watson as the co-chair of the SEOW. Over the past two-years, Dr. Watson has worked closely with Dr. Wright and the SEOW staff to complete its work, including the production of the last two annual epidemiological profiles. In January 2014, Dr. Wright assumed a new faculty position at Georgia State University in Atlanta. While Dr. Wright will continue to play an active leadership role in the coming years, the addition of Dr. Watson as a co-chair will ensure that the SEOW team can provide the same high quality service to the State of Indiana as it has since 2005.

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.

Eric R. Wright, PhD
Chair, Indiana State Epidemiology and
Outcomes Workgroup (SEOW)
Professor of Sociology and Public Health,
Georgia State University
Affiliated Faculty, Center for Health Policy,
IU Richard M. Fairbanks School of Public Health at IUPUI
Phone: (404) 413-6527
E-mail: ewright28@iupui.edu

Dennis P. Watson, PhD
Co-Chair, Indiana State Epidemiology and
Outcomes Workgroup (SEOW)
Interim Director, Center for Health Policy
Assistant Professor of Health Policy and Management
IU Richard M. Fairbanks School of Public Health at IUPUI
Phone: (317) 274-3245
E-mail: dpwatson@iu.edu

1 Data Highlights

ALCOHOL

Alcohol is the most frequently used drug in both Indiana and the United States. About half of the population 12 years and older reported current (past month) use (IN: 51.2%; U.S.: 51.9%) (Substance Abuse and Mental Health Services Administration, 2013b).

An estimated 63.4% of Indiana college students currently drink alcohol (King & Jun, 2013).[1] Potentially dangerous uses of alcohol include binge, heavy, and underage drinking, and combining alcohol with driving.

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 (24.0%) and the United States (22.8%). The highest rate was found among 18- to 25-year-olds (IN: 43.1%; U.S.: 39.6%) (Substance Abuse and Mental Health Services Administration, 2013b).

Among Indiana college students, the past-month binge drinking prevalence was an estimated 49.8% (King & Jun, 2013).

Heavy Drinking

Heavy drinking is defined differently for men and women by the Centers for Disease Control and Prevention. 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 similar in Indiana (5.1%) and the United States (6.1%). Hoosier men had a higher prevalence of heavy use (6.1%) than women (4.1%). Heavy use decreased with age, and adults 65 years and older reported the lowest prevalence (2.3%). Estimates were not available in Indiana for race/ethnicity other than white (5.4%) (Centers for Disease Control and Prevention, 2012).

Youth Consumption—Underage Drinking

The rates for underage drinking in Indiana and the nation were statistically similar. In Indiana, 11.3% of 12- to 17-year-old youths reported that they had consumed alcohol in the past 30 days (U.S.: 13.1%).

In the age category of 12- to 20-year-olds, the numbers were even higher: 24.2% of young Hoosiers reported current use of alcohol (U.S.: 24.7%), and 16.4% stated that they engaged in binge drinking (U.S.: 15.6%) (Substance Abuse and Mental Health Services Administration, 2013b).

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 (Centers for Disease Control and Prevention, 1991-2011).

Alcohol Abuse and Dependence

The population-based rates for alcohol abuse and/or dependence were similar in Indiana (6.8%) and the nation (6.6%). The most affected age group encompassed 18- to 25-year-olds (IN: 15.5%; U.S.: 14.4%). The percentages of individuals ages 12 and older needing but not receiving treatment for alcohol use in the past year were also comparable (IN: 6.6%; U.S.: 6.3%) (Substance Abuse and Mental Health Services Administration, 2013b).

According to treatment data, alcohol was responsible for the largest percentage of admissions to substance abuse treatment facilities in 2011. For the second time in the past 12 years, Indiana's percentage of alcohol treatment admissions (38.5%) was statistically lower than the nation's (39.3%). Within the treatment population, older adults and individuals classified as "other" races reported the highest percentage of alcohol use (Substance Abuse and Mental Health Data Archive, 2011).

Morbidity and Mortality

An estimated 8.0% of the deaths in Indiana and the nation are attributable to alcohol (Centers for Disease Control and Prevention, 2001-2005). Between 2000 and 2010, a total of 3,769 Hoosiers died from alcohol-related disease causes. In 2010, Indiana's age-adjusted mortality rate for alcohol-attributable deaths was 6.2 per 100,000 population (U.S.: 7.5 per 100,000 population) (Centers for Disease Control and Prevention, 2013a). Tables 1.1 and 1.2 list conditions that can be attributed to alcohol use.

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

Motor Vehicle Crashes

Among Indiana high school students, 5.3% admitted to drinking and driving in the past month (U.S.: 8.2%), and 21.7% rode with a driver who had been drinking (U.S.: 24.1%) (Centers for Disease Control and Prevention, 1991-2011).

In Indiana, the number of alcohol-related collisions decreased from 13,911 in 2003 to 8,761 in 2012. Also, the number of fatalities in crashes attributable to alcohol declined from 242 to 205 during those same years. The 2012 overall annual rate for alcohol-related collisions in Indiana was 1.3 per 1,000 population (Indiana State Police, 2013).

Legal Consequences

Indiana's 2011 arrest rates, per 1,000 population, were significantly higher than the nation's for public intoxication (IN: 2.9; U.S.: 1.5) and liquor law violations (IN: 2.0; U.S.: 1.6), but were similar for driving under the influence (IN: 3.9; U.S.: 4.0) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).

TOBACCO

Cigarette smoking remains the leading cause of preventable death in the United States, accounting for approximately one of every five deaths (Centers for Disease Control and Prevention, 2013b). In Indiana, one-third of the population ages 12 years and older (32.9%) said they used a tobacco product in the past month (U.S.: 26.6%). The age group with the highest rate of use was 18- to 25-year-olds (IN: 44.7%; U.S.: 38.8%). Most tobacco consumption involved cigarettes. Indiana's past-month cigarette smoking prevalence among individuals ages 12 years and older was 26.8% (U.S.: 22.1%). Again, the highest rate was found among 18- to 25-year-olds (IN: 36.7%; U.S.: 32.7%) (Substance Abuse and Mental Health Services Administration, 2013b).

Adult (18 years and older) smoking prevalence in Indiana (24.0%) was the sixth highest in the nation and significantly greater than the U.S. rate (19.6%) in 2012. 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: 40.1%; U.S.: 33.0%) and people whose household income was below $15,000 (IN: 39.6%; U.S.: 32.7%) (see Table 1.3) (Centers for Disease Control and Prevention, 2012).

Table 1.1 Conditions that are Completely Attributable to Alcohol Use in Indiana (Alcohol-Related Disease Impact Database, Based on Averages from 2001–2005)

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, 2001-2005

Table 1.2 Conditions that Are Partially Attributable to Alcohol Use in Indiana (Alcohol-Related Disease Impact Database, Based on Averages from 2001–2005)

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, 2001-2005

In regard to smoking, 27.5% of Indiana college students reported past-year cigarette use and 15.1% reported current use (King & Jun, 2013).

Youth Consumption

The percentages of young people (12 to 17 years) currently using a tobacco product (IN: 10.9%; U.S.: 9.3%) and currently smoking cigarettes (IN: 8.6%; U.S.: 7.2%) were similar between Indiana and the nation (Substance Abuse and Mental Health Services Administration, 2013b).

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%) (Centers for Disease Control and Prevention, 1991-2011).

Past-month cigarette use decreased significantly from 2000 through 2012 among Indiana students: from 9.8% to 3.7% for middle school students, and from 31.6% to 13.7% for high school students (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013).

Table 1.3 Adult Smoking Prevalence in Indiana, by Education and Income Levels (Behavioral Risk Factor Surveillance System, 2012)

	Smoking Prevalence (95% CI)
Education	
Less than high school	40.1% (35.7-44.5)
High school or GED	26.7% (24.7-28.7)
Some post-high school	24.0% (21.6-26.3)
College graduate	8.2% (6.9-9.5)
Income	
Less than $15,000	39.6% (35.3-43.9)
$15,000–$24,999	36.0% (32.6-39.4)
$25,000–$34,999	26.5% (22.5-30.4)
$35,000–$49,999	20.5% (17.5-23.5)
$50,000 and above	17.1% (15.2-19.0)

Note: CI = confidence interval
Source: Centers for Disease Control and Prevention, 2012

Morbidity and Mortality

Tobacco causes serious health consequences, including lung cancer, respiratory illness, and heart disease. Over 9,700 Hoosiers are estimated to die annually from smoking-attributable causes. The age-adjusted annual tobacco-attributable mortality rate (per 100,000 population) was higher among Hoosiers (308.9) than the rest of the nation (263.3) (Centers for Disease Control and Prevention, n.d.).

MARIJUANA

Marijuana is the most commonly used illicit substance. One-tenth of Indiana residents ages 12 and older (10.8%) reported past-year use (U.S.: 11.8%), and 6.2% reported past-month use (U.S.: 7.1%). Highest rates of use were found among 18- to 25-year-old Hoosiers (past-year use: 29.3%; past-month use: 16.8%); national rates were similar (Substance Abuse and Mental Health Services Administration, 2013b).

Marijuana use is also prevalent among Indiana college students, as 18.3% of college students reported current marijuana use and 33.5% reported past-year use (King & Jun, 2013).

Youth Consumption

Among Indiana youth ages 12 to 17, an estimated 5.5% had used marijuana for the first time during the past year (U.S.: 6.0%). Patterns of current use among young people in that age group were similar in Indiana and the nation (IN: 6.2%; U.S.: 7.5%) (Substance Abuse and Mental Health Services Administration, 2013b).

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%) (Centers for Disease Control and Prevention, 1991-2011).

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, Lee, Crane, Boyken, Oi, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013).

Marijuana Abuse and Dependence

In 2011, roughly one-half (46.9%) 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 (38.2%). In Indiana's treatment population, the highest percentages of marijuana use were found among males (49.2%), blacks (55.8%), and individuals under the age of 18 (71.9%). Over one-fifth of Hoosiers in treatment (20.9%) reported marijuana dependence,[2] a percentage significantly higher than the nation's (18.0%). Again, males (22.7%), blacks (32.9%), and individuals under the age of 18 (56.2%) had

Table 1.4 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use, by Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2002–2013)

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

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

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

statistically higher percentages (Substance Abuse and Mental Health Data Archive, 2011).

Legal Consequences

In 2011, the Indiana arrest rate for marijuana possession was 2.1 per 1,000 population (U.S.: 2.2); the Indiana arrest rate for marijuana sale/manufacture was 0.34 per 1,000 population (U.S.: 0.3). Indiana and national rates were comparable (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).

COCAINE

Population-based estimates on past-year cocaine use were similar between Indiana and the nation (IN: 1.2%; U.S.: 1.7%). Young adults ages 18 to 25 displayed the highest rates (IN: 3.4%; U.S.: 4.6%). Additional data based on annual averages from 2002–2004 show that 562,000 Indiana residents (11.1%) had used cocaine at least once in their life, and 33,000 Hoosiers (0.7%) were current users (Substance Abuse and Mental Health Services Administration, 2013b).

Additionally, 2.8% of Indiana college students used cocaine in the past year and 0.9% reported current use (King & Jun, 2013).

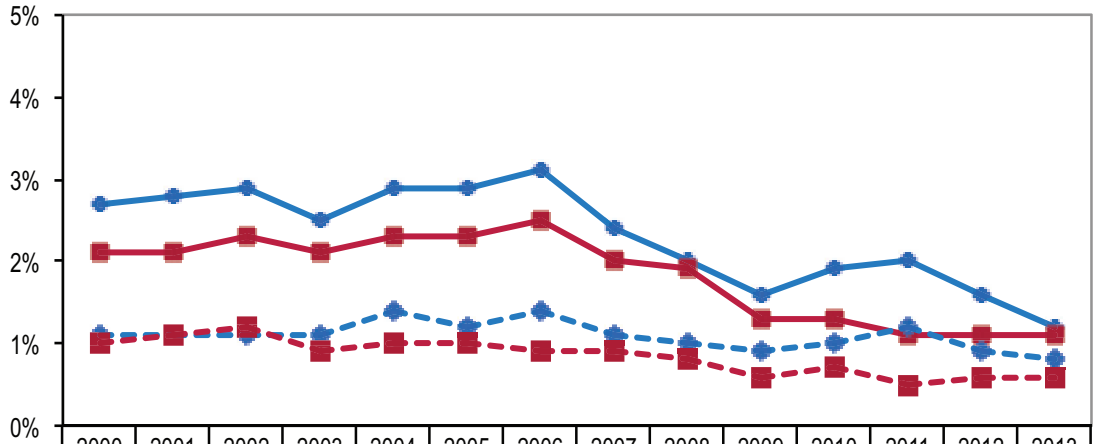
Youth Consumption

Past-year cocaine use prevalence among 12- to 17-year-olds was similar in Indiana (0.8%) and the United States (0.8%) (Substance Abuse and Mental Health Services Administration, 2013b).

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 (Centers for Disease Control and Prevention, 1991-2011).

From 2000 through 2013, rates for current cocaine and crack use among high school seniors seemed similar between Indiana and the nation; rates remained stable or even declined over the years (see Figure 1.1).

Figure 1.1 Percentage of Indiana and U.S. High School Seniors (Grade 12) Reporting Current Cocaine and Crack Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2000–2013)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana Cocaine	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%
U.S. Cocaine	2.1%	2.1%	2.3%	2.1%	2.3%	2.3%	2.5%	2.0%	1.9%	1.3%	1.3%	1.1%	1.1%	1.1%
Indiana Crack	1.1%	1.1%	1.1%	1.1%	1.4%	1.2%	1.4%	1.1%	1.0%	0.9%	1.0%	1.2%	0.9%	0.8%
U.S. Crack	1.0%	1.1%	1.2%	0.9%	1.0%	1.0%	0.9%	0.9%	0.8%	0.6%	0.7%	0.5%	0.6%	0.6%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

However, due to lack of detail in the publicly available data sets, statistical significance of the results could not be determined (Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013)

Cocaine Abuse and Dependence

In 2011, over 15.2% of Indiana's treatment episodes involved cocaine use; this figure was significantly lower than the U.S. percentage (22.1%). The percentages of treatment episodes with cocaine use were highest among females, blacks, and 45- to 54-year-olds.

In 6.3% of treatment episodes in Indiana, cocaine was reported as the primary drug of abuse; the U.S. percentage (7.8%) was significantly higher. The percentage of treatment episodes with cocaine dependence[3] has been significantly lower in Indiana than the nation for at least the past 11 years (2001 through 2011). Significant differences within Indiana's treatment population were seen by gender, race, and age group (see Table 1.5) (Substance Abuse and Mental Health Data Archive, 2011).

Table 1.5 Percentage of Treatment Episodes with Cocaine Dependence Reported at Treatment Admission in Indiana (Treatment Episode Data Set, 2011)

		Cocaine Dependence
Gender	Male	5.4%
	Female	7.8%
Race	White	4.5%
	Black	15.8%
	Other	6.1%
Age Group	Under 18	1.8%
	18-24	2.8%
	25-34	5.2%
	35-44	9.8%
	45-54	10.8%
	55 and over	7.4%
Total		**6.3%**

Source: Substance Abuse and Mental Health Data Archive, 2011

Legal Consequences

Indiana law enforcement made over 2,000 arrests for possession and over 2,300 arrests for sale/manufacture of opiates and cocaine in 2011, representing arrest rates of 0.3 and 0.4 per 1,000 population, respectively. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.8 and 0.3 per 1,000 population, respectively) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).[4]

HEROIN

Population data based on 2002–2004 annual averages reveal that among Indiana residents, 54,000 tried heroin at least once (1.1%), 9,000 used it in the past year (0.2%), and 1,000 were current users (less than 0.1%) of the substance. U.S. data were comparable. (Substance Abuse and Mental Health Services Administration, 2013b).

Among Indiana college students, 0.3% reported past-year heroin use and 0.1% reported use in the past month (King & Jun, 2013).

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 (Centers for Disease Control and Prevention, 1999-2011).

In 2013, reported heroin use among Indiana 12th grade students was as follows: 1.9% for lifetime use (U.S.: 1.0%) and 0.8% for monthly use (U.S.: 0.3%) (Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013).

Heroin Abuse and Dependence

In 2011, heroin use was reported in 9.0% of Indiana treatment episodes (U.S.: 18.5%), and heroin

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

dependence[5] was indicated in 6.7% (U.S.: 15.2%). 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 reported higher rates), and age group (young adults ages 18 to 34 were mostly affected) (Substance Abuse and Mental Health Data Archive, 2011).

Morbidity and Mortality

A potential consequence of injected heroin use is contraction of HIV and/or hepatitis (B or C) from contaminated needles. In 2012, 413 new HIV infections and 105 new AIDS cases were reported in Indiana. A total of 10,688 individuals were living in Indiana with HIV disease,[6] and 841 (or 7.9%) of these cases were attributable to injection drug use (IDU) (Indiana State Department of Health, 2012).

The estimated annual rate of AIDS diagnoses in Indiana adults and adolescents was 6.6 per 100,000 population in 2011 (U.S.: 12.4) (The Kaiser Family Foundation, 2013). Indiana's age-adjusted HIV/AIDS mortality rate for 2010 was 1.5 per 100,000 population (95% CI: 1.2–1.8), which was significantly lower than the U.S. rate of 2.6 per 100,000 population (95% CI: 2.6-2.7) (Centers for Disease Control and Prevention, 2013a).[7]

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 1.1 for HBV (U.S.: 0.9) and 1.3 for HCV (U.S.: 0.4) in 2011. Both HBV and HCV incidence rates have dropped in the past decades (Centers for Disease Control and Prevention, 2013c). The age-adjusted mortality rate (per 100,000 population) attributable to hepatitis B and hepatitis C (acute and chronic) was 1.3 in Indiana, which was statistically significantly lower than the national rate (U.S.: 2.1) (Centers for Disease Control and Prevention, 2013a).

Legal Consequences

Indiana law enforcement made over 2,000 arrests for possession and over 2,300 arrests for sale/manufacture of opiates and cocaine in 2011, representing arrest rates of 0.3 and 0.4 per 1,000 population, respectively. Indiana's arrest rates were lower for cocaine/opiate possession but comparable to the nation's for sale/manufacture (U.S.: 0.8 and 0.3 per 1,000 population, respectively) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).[8]

METHAMPHETAMINE (METH)

In Indiana, 4.5% of the population (225,000 residents) have used meth at least once in their life (U.S.: 4.7%). Meanwhile 0.8% (40,000 residents) used it in the past year (U.S.: 0.4%) and 0.2% (10,000 residents) used it in the past month (U.S.: 0.2%). The rate for past-year use was greatest among 18- to 25-year-old Hoosiers (1.9%) (Substance Abuse and Mental Health Services Administration, 2013b).

In 2013, an estimated 0.3% of Indiana college students had used meth in the past year and 0.1% had used it in the past month (King & Jun, 2013).

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 (Centers for Disease Control and Prevention, 1991-2011).

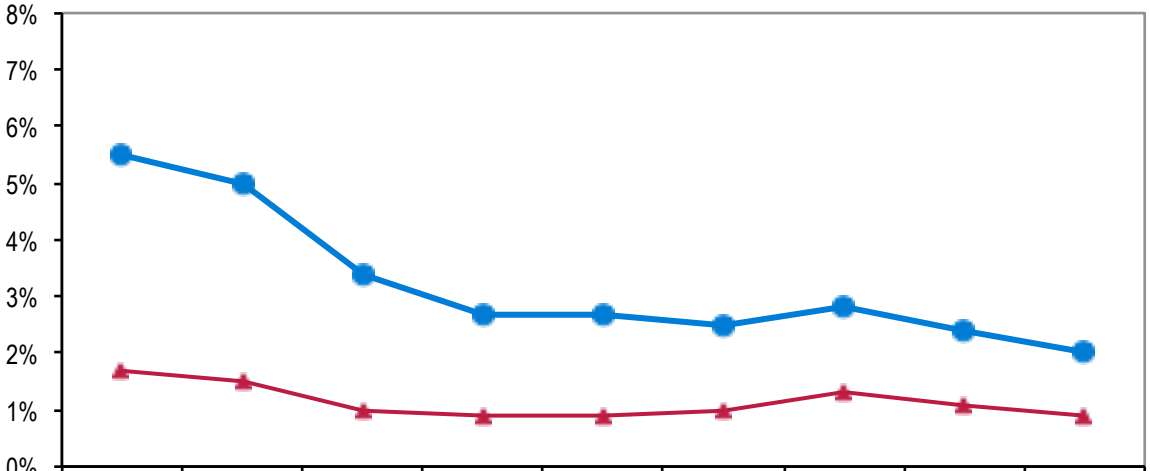
Lifetime and monthly meth use prevalence among 12th grade students in Indiana is depicted in Figure 1.2 (Gassman, et al., 2013).

Methamphetamine Abuse and Dependence

Between 2000 and 2011, the percentage of treatment admissions in Indiana reporting meth dependence[9] increased significantly from 1.5% to 5.8%. Until 2010, Indiana's percentages were significantly lower than the nation's; however, this changed in 2011 when Indiana and U.S. percentages became comparable (see Figure 1.3). 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) (Substance Abuse and Mental Health Data Archive, 2011).

[5]We defined heroin dependence as "individuals in substance abuse treatment listing heroin as their primary substance at admission."
[6]HIV disease includes both HIV infections and AIDS cases.
[7]Mortality rates for HIV/AIDS are based on ICD-10 codes B20-B24 (Human immunodeficiency virus [HIV] disease).
[8]The Uniform Crime Reporting Program data set combines arrests for cocaine and opiates; arrest information is not available for cocaine or opiates alone.
[9]We defined methamphetamine dependence as "individuals in substance abuse treatment listing methamphetamine as their primary substance at admission."

Figure 1.2 Percentage of Indiana 12th Grade Students Reporting Lifetime and Monthly Methamphetamine Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2005–2013)



	2005	2006	2007	2008	2009	2010	2011	2012	2013
Lifetime	5.5%	5.0%	3.4%	2.7%	2.7%	2.5%	2.8%	2.4%	2.0%
Monthly	1.7%	1.5%	1.0%	0.9%	0.9%	1.0%	1.3%	1.1%	0.9%

Source: Gassman, et al., 2013

Legal Consequences

The Indiana State Police seized 1,721 clandestine methamphetamine labs in 2013; this represents the highest number of lab seizures thus far (Indiana State Police, 2014).

In Indiana, over 2,400 arrests were made for possession and over 1,000 for the sale/manufacture of synthetic drugs[10] in 2011; this represents annual arrest rates of 0.4 (U.S.: 0.2) and 0.2 (U.S.: 0.1), per 1,000 population, respectively (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).

PRESCRIPTION DRUG ABUSE

In 2012, nearly 10.7 million controlled prescription drugs were dispensed in Indiana. The most widely dispensed prescription drugs were opioids[11] (51.9%), followed by depressants of the central nervous system[12] (30.2%) and stimulants[13] (14.0%) (Indiana Board of Pharmacy, 2013).

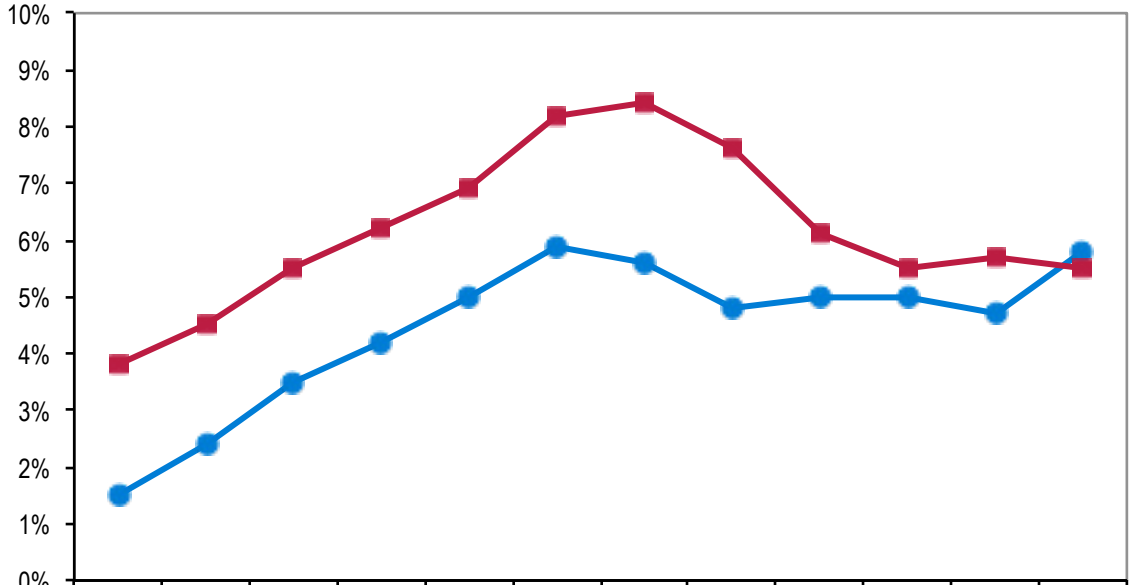
In Indiana, over a million residents (20.7%) have misused psychotherapeutics at least once in their life (U.S.: 20.9%). Additionally, an estimated 383,000 Hoosiers (7.6%) abused prescription drugs in the past year (U.S.: 6.4%), and 138,000 residents (2.7%) did so in the past month (U.S.: 2.6%).[14] The psychotherapeutics that were primarily abused included pain relievers, tranquilizers, sedatives, and stimulants (see Table 1.6) (Substance Abuse and Mental Health Services Administration, 2013b).

Young people between the ages of 18 and 25 had the highest rate of past-year pain medication abuse in 2012 (IN: 13.5%; U.S.: 10.0%) (Substance Abuse and Mental Health Services Administration, 2013b).

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 2013 survey: (a) 12.7% of Indiana college students used prescription medications

[10]The Uniform Crime Reporting Program collects arrest information on synthetic drugs. The category includes methamphetamine, methadone, and Demerol.
[11]Opioids include pain relievers, such as oxycodone and hydrocodone.
[12]CNS depressants include sedatives, tranquilizers, and hypnotics.
[13]Stimulants include Ritalin®, Adderall®, and dextroamphetamine.
[14]The terms “prescription drug misuse,” “prescription drug abuse,” and “nonmedical use of prescription drugs” are used interchangeably.

Figure 1.3 Percentage of Treatment Episodes with Methamphetamine Dependence Reported at Treatment Admission in Indiana and U.S. (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

not prescribed to them in the past year, with 4.9% currently using; and (b) 3.1% of Indiana college students misused their prescription medication in the past year, with 1.0% of students reporting current misuse (King & Jun, 2013).

Youth Consumption

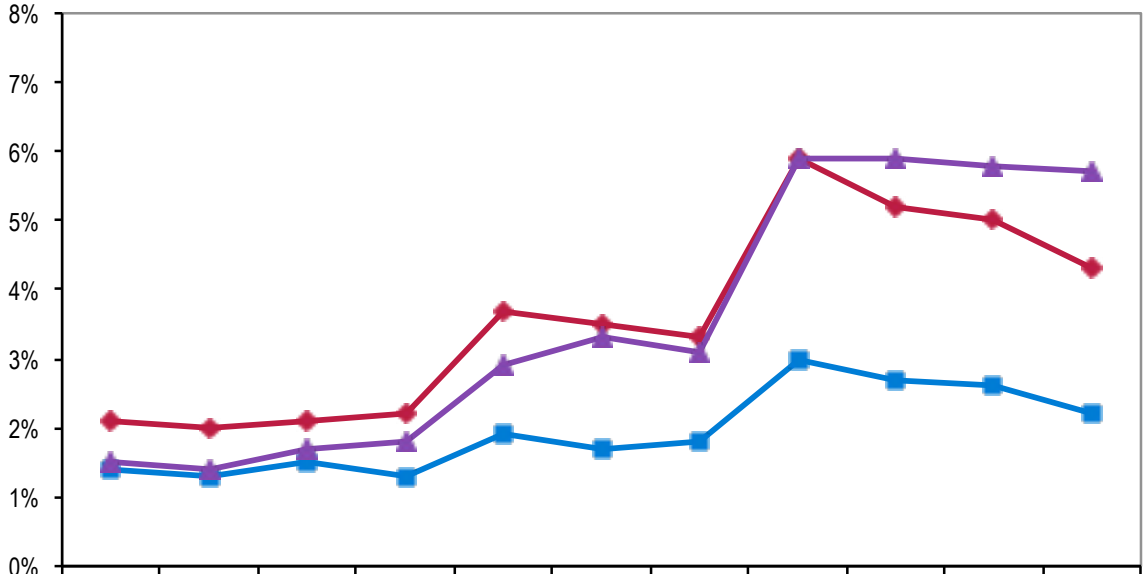
Among Hoosiers ages 12 to 17, 6.8% used prescription pain medications for nonmedical purposes in the past year; Indiana's percentage was statistically similar to the nation's, 5.6% (Substance Abuse and Mental Health Services Administration, 2013b).

Table 1.6 Lifetime, Past-Year, and Past-Month Nonmedical Use of Psychotherapeutics, Indiana and United States (National Survey on Drug Use and Health)

	Lifetime Use		Past Year Use		Past Month Use	
	Indiana	**U.S.**	**Indiana**	**U.S.**	**Indiana**	**U.S.**
All Psychotherapeutics	20.7%	20.9%	7.6%	6.4%	2.7%	2.6%
Pain Relievers	15.0%	14.2%	6.1%	4.8%	2.0%	1.9%
OxyContin	2.5%	2.5%	0.8%	0.6%	0.3%	0.1%
Tranquilizers	9.1%	9.1%	2.8%	2.3%	0.8%	0.8%
Sedatives	3.9%	3.1%	0.4%	0.2%	0.1%	0.1%
Stimulants	8.3%	8.3%	1.7%	1.3%	0.8%	0.5%

Note: Indiana rates are based on 2002–2004 averages; U.S. rates are based on the 2012 findings.
Source: Substance Abuse and Mental Health Services Administration 2013

Figure 1.4 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2003-2013)



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
8th	1.4%	1.3%	1.5%	1.3%	1.9%	1.7%	1.8%	3.0%	2.7%	2.6%	2.2%
10th	2.1%	2.0%	2.1%	2.2%	3.7%	3.5%	3.3%	5.9%	5.2%	5.0%	4.3%
12th	1.5%	1.4%	1.7%	1.8%	2.9%	3.3%	3.1%	5.9%	5.9%	5.8%	5.7%

Source: Gassman, et al., 2013

For Indiana prevalence rates of current nonmedical use of prescription drugs[15] among 8th, 10th, and 12th grade students, see Figure 1.4.

Prescription Drug Abuse and Dependence

In 2011, nonmedical prescription drug use was reported in 25.4% of Indiana treatment episodes (U.S.: 21.0%). Most of these treatment episodes were due to pain relievers (IN: 19.0%; U.S.: 16.0%), followed by sedatives and tranquilizers (IN: 8.4%; U.S.: 6.6%) and stimulants (IN: 2.2%; U.S.: 1.5%). Compared to the nation, Indiana's rates were significantly higher for overall prescription drug, pain reliever, sedative/tranquilizer, and stimulant abuse.

In 13.4% of Indiana treatment episodes in 2011, prescription drug dependence[16] was indicated (U.S.: 11.8%). Most of these were due to pain relievers (IN: 11.0%; U.S.: 10.1%), followed by sedatives and tranquilizers (IN: 1.7%; U.S.: 1.2%) and stimulants (IN: 0.8%; U.S.: 0.5%). Compared to the nation, Indiana's percentages were significantly higher for overall prescription drugs, as well as each individual prescription drug category. In Indiana, significant differences were seen by gender, race, and age group (see Table 1.7). Rates for prescription drug dependence have increased significantly in Indiana from 2000 through 2011 (Substance Abuse and Mental Health Data Archive, 2011).

Legal Consequences

In 2011, law enforcement made over 3,200 arrests for possession and over 1,000 arrests for sale/manufacture of "other drugs" in Indiana. This represents arrest rates of 0.5 and 0.2 per 1,000 population, respectively. U.S. rates were significantly higher for possession (0.8) but similar for sale/manufacture (0.2) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011).

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 2011 revealed that over half of the individuals seeking substance abuse treatment reported using at least two

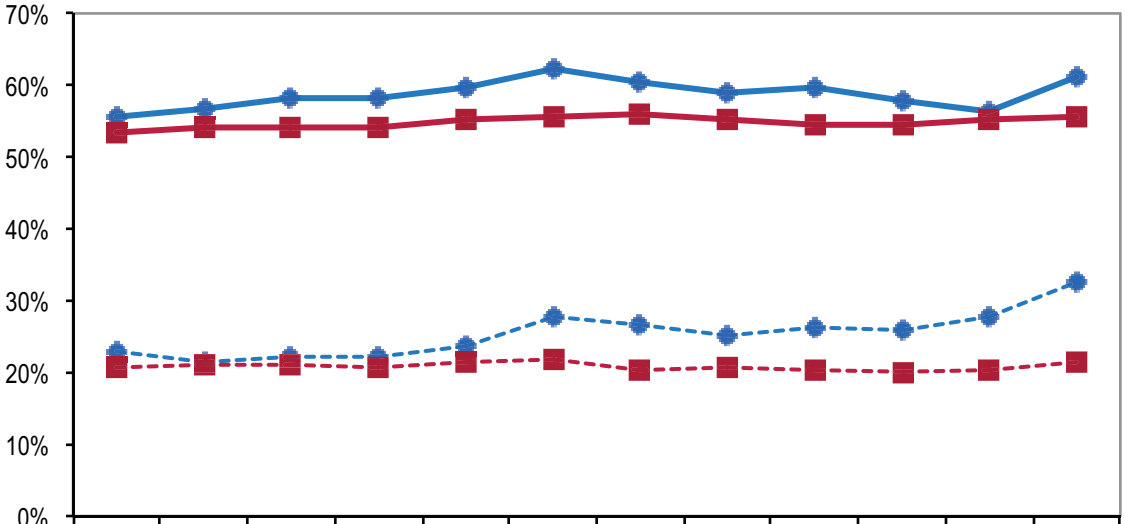
[15]Includes Ritalin, Oxycontin, and Xanax
[16]We defined prescription drug dependence as "individuals in substance abuse treatment listing prescription drugs as their primary substance at admission."

Table 1.7 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, 2011)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
GGender	Male	9.9%	8.0%	1.2%	0.7%
	Female	19.7%	16.2%	2.6%	0.9%
Race	White	15.3%	12.5%	1.9%	0.1%
	Black	2.5%	1.8%	0.6%	0.9%
	Other	7.6%	6.5%	1.0%	0.2%
Age Group	Under 18	4.1%	2.2%	1.1%	0.8%
	18 to 24	13.4%	10.7%	1.8%	0.9%
	25 to 34	18.7%	16.0%	1.8%	0.8%
	35 to 44	11.8%	9.3%	1.7%	0.7%
	45 to 54	7.6%	5.7%	1.3%	0.6%
	55 and over	7.3%	5.4%	1.5%	0.4%
Total		**13.4%**	**11.0%**	**1.7%**	**0.8%**

Source: Substance Abuse and Mental Health Data Archive, 2011

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, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

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 61.1% in 2011 (see Figure 1.5). Furthermore, in nearly one-third of Indiana treatment episodes, use of three or more substances was reported; again, Indiana's rate increased significantly from 23.0% in 2000 to 32.6% in 2011 (see Figure 1.5). The percentages of polysubstance abuse were slightly higher for females, whites, and adults under 35 (Substance Abuse and Mental Health Data Archive, 2011).

Cluster Analysis

We conducted a cluster analysis of 2011 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, cocaine, and marijuana (Substance Abuse and Mental Health Data Archive, 2011).

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 were no significant differences in current rates of mental illness (MI) between Indiana (19.9%) and the United States 18.2% (Substance Abuse and Mental Health Services Administration, 2013b). However, Hoosiers were more likely to report lifetime incidence of depression (IN: 19.5%; U.S.: 18.0%) (Centers for Disease Control and Prevention, 2012).

Within Indiana, a history of depression was more likely among white-non-Hispanics, females, and individuals between the ages of 45 and 64 (Centers for Disease Control and Prevention, 2012). 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 (Centers for Disease Control and Prevention, 2011).

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 (Substance Abuse and Mental Health Services Administration, 2013a).

Table 1.8 Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2013)

		SMI	SUD	COD
Gender	Male	50.2% (49.8-50.5)	37.9% (37.5-38.2)	15.5% (15.2-15.7)
	Female	69.1% (68.7-69.4)	27.0% (26.7-27.3)	15.2% (14.9-15.4)
Race/Ethnicity	White	60.2% (59.9-60.5)	33.1% (32.8-33.3)	15.6% (15.4-15.8)
	Black	56.8% (56.1-57.4)	31.9% (31.3-32.5)	14.7% (14.2-15.1)
	Other	56.2% (55.1-57.4)	24.7% (23.7-25.7)	12.1% (11.3-12.9)
	Hispanic	51.0% (50.0-52.1)	26.4% (25.5-27.3)	9.8% (9.2-10.5)
Age Group	Under 18	39.2% (38.7-39.6)	6.8% (6.6-7.0)	2.3% (2.2-2.4)
	18-24	55.4% (54.6-56.1)	52.0% (51.3-52.8)	17.5% (16.9-18.1)
	25-34	61.3% (60.8-61.9)	54.3% (53.7-54.9)	23.1% (22.6-23.6)
	35-44	71.8% (71.3-72.4)	45.7% (45.1-46.4)	24.2% (23.6-24.8)
	45-54	79.3% (78.7-79.8)	41.0% (40.3-41.7)	25.1% (24.6-25.7)
	55-64	85.2% (84.5-85.9)	27.8% (26.9-28.6)	18.1% (17.4-18.9)
	65+	89.0% (87.8-90.0)	12.0% (10.8-13.1)	7.4% (6.6-8.4)
Total		**59.5% (59.3-59.8)**	**32.5% (32.3-32.7)**	**15.3% (15.1-15.5)**

Source: Indiana Division of Mental Health and Addiction, 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 (59.5%) than Substance Use Disorder (SUD) (32.5%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (15.3%). Males had a higher percentage (50.2%) of both SMI and SUD (37.9%), but COD did not differ by gender. The percent of those in DARMHA with SMI and SUD increased significantly with age, while COD rates peaked at ages 45-54 (see Table 1.8) (Indiana Division of Mental Health and Addiction, 2014).

Finally, the percentage of attempted suicides among high school students were significantly higher in Indiana (11.0%) than the broader United States (7.8%) (Centers for Disease Control and Prevention, 2011), and suicide deaths in Indiana have increased significantly between 1999 and 2010 (Centers for Disease Control and Prevention, 2013a).

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[17] 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 1.9.

Table 1.9 Counties with Total Priority Scores in the Top 10 Percent

Top 10 Percent	Overall Priority Score
Vanderburgh	225
Marion	201
Monroe	199
Lake	199
Knox	182
Howard	163
Tippecanoe	163
Madison	163
Allen	159

Note: Overall substance abuse priority scores ranged from 11 to 225, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana State Police, 2013, 2014; Indiana Board of Pharmacy, 2013

[17]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.

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2 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.

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 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. We set priority indicators based on consumption behaviors or drug-use consequences trending toward increased 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.

Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) Survey

ATOD is an annual survey 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 lifetime use (use of drug at least once in the respondent's life) and monthly use (use of drug at least once in the 30 days prior to the survey) of a wide range of substances. However, results should be interpreted with caution as the survey uses a nonrandom convenience sample[2] of students and may not be representative of Indiana's entire student population. ATOD survey results can be compared to findings from the Monitoring the Future survey (see page 20) conducted by the National Institute on Drug Abuse.

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

The 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 the Fatality Analysis Reporting System (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 (Raking).

Even though the 2012 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 compare previous year estimates with current estimates, because of different data adjustment methods and different sampling frames.

Data Assessment Registry for Mental Health and Addiction (DARMHA)

The 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

[2]Respondents for a survey can be drawn from a random sample or convenience sample. In a random sample, each member of that population has an equal probability of being selected and results will be more likely to be representative of the underlying population. In convenience sampling, individuals that are easiest to reach are selected at the convenience of the researcher. It is not guaranteed that the sample is an accurate representation of the population under study.

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.

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

The CDC developed NYTS 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. In order to compare Indiana with the rest of the nation, the Indiana Tobacco Prevention and Cessation Agency conducts the statewide survey that includes CDC core and recommended questions, as well as state-specific questions. IYTS is conducted every other year (even years); findings allow comparisons between Indiana and the nation 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.

Prevalence rates for alcohol, tobacco, and other drug use are provided for the nation and each state. State-level rates are based on statistical algorithms, not on data collected within specific states. 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.

Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)

The CDC's SAMMEC is an online application that allows the user to estimate the health impacts and health-related economic consequences of smoking for adults and infants. Users can compute outcomes such as smoking-attributable mortality, years of potential life lost (YPLL), productivity losses, and expenditures.

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. TEDS data become publicly available one to 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. Because Indiana has a rather low reporting rate, UCR results should be interpreted with caution (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.

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
Availability: The database can be accessed at http://apps.nccd.cdc.gov/ardi/HomePage.aspx.
Trend: 2001–2005 (all estimates are based on data averages from 2001 through 2005)
Strengths/Weaknesses: ARDI may underestimate the actual number of alcohol-related deaths and years of potential life lost.

Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) Survey

Description: The Indiana Prevention Resource Center (IPRC) manages the survey on alcohol, tobacco, and other drug use among children and adolescents (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/data-survey_monograph.html.
Trend: 1993–2013
Strengths/Weaknesses: School-specific survey results are valuable to participating schools. Statewide findings provide prevalence estimates but may not be representative of all Hoosier students due to sampling method.

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/Main/index.aspx and upon request from the Indiana State Police.
Trend: 1994–2011
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: 2013
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; selected metropolitan/micropolitan areas
Availability: National and state data are available from the CDC at http://apps.nccd.cdc.gov/brfss/; selected area data can be accessed at http://apps.nccd.cdc.gov/brfss-smart/index.asp.
Trend: 1995–2012

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: 1999–2011
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
Trend: 2009–2013
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 Tobacco Prevention and Cessation Agency (ITPC)
Geographic Level: Indiana and regions
Availability: Datasets can be requested from ITPC; reports are available at http://www.in.gov/itpc/.
Trend: 2002, 2006–2012
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); and 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.justice.gov/dea/clan-lab/clan-lab.shtml.
Trend: 1995–2013
Strengths/Weaknesses: The data contains all clandestine lab seizures, arrests made, and children identified in clandestine lab environments by the Indiana State Police.

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: 1999–2010 (online from CDC). Indiana data for other years are available on request from Indiana State Department of Health.

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 may register for a secured account at www.in.gov/INSPECT.
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 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/itpc/. National data are available at http://www.cdc.gov/tobacco/data_statistics/surveys/NYTS/.
Trend: 2000 through 2012 (NYTS) / 2000 through 2012 (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. 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: 1991–2013
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 information on the prevalence, patterns, and consequences of alcohol, tobacco, and illegal drug use in the general population (ages 12 and older).
Sponsoring Organization/Source: Substance Abuse and Mental Health Services Administration (SAMHSA)/ Office of Applied Studies (OAS)
Geographic Level: National and state; sub-state data are available using small-area estimation techniques.
Availability: National and state data tables are available at the NSDUH website at http://nsduhweb.rti.org/.
Trend: State estimates are available for 1999–2012.
Strengths/Weaknesses: State-level data do not allow for comparisons by gender or race/ethnicity.

Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)

Description: SAMMEC generates estimates on smoking-attributable outcomes, such as mortality, years of potential life lost (YPLL), productivity losses, and expenditures.
Sponsoring Organization/Source: Centers for Disease Control and Prevention (CDC)
Geographic Level: National and state
Availability: The database can be accessed at http://apps.nccd.cdc.gov/sammec/index.asp.
Trend: Based on 2004 data
Strengths/ Weaknesses: During periods where smoking prevalence is declining, the attributable-fraction (AF) methodology tends to understate the number of deaths caused by smoking. Conversely, when smoking prevalence is increasing, the AF formula may overstate the number of deaths. The relative risk estimates have been adjusted to account for the influence of age, but not for other risk factors, such as alcohol consumption. Although the sample population includes more than

1.2 million people, it is not representative of the U.S. population; it is somewhat more white and middle class. Productivity loss estimates are also understated because they do not include the value of work missed due to smoking-related illness, other smoking-related absenteeism, excess work breaks, or the effects of secondhand smoke.

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 the Inter-university Consortium for Political and Social Research at http://webapp.icpsr.umich.edu/.
Trend: 1999–2011 national and state TEDS data; county-level data reported for 2013
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/NACJD/ucr.html).
Trend: 1994–2011
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://apps.nccd.cdc.gov/yrbss/.
Trend: For the nation, the survey tracks every other year from 1991 through 2009; 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 2011 Uniform Crime Reporting Data, by County (in Percent)

County	Coverage Indicator	County	Coverage Indicator
Adams	39.0	Lawrence	90.6
Allen	100.0	Madison	55.0
Bartholomew	89.4	Marion	94.9
Benton	26.2	Marshall	90.2
Blackford	100.0	Martin	48.9
Boone	72.1	Miami	30.9
Brown	100.0	Monroe	100.0
Carroll	82.1	Montgomery	41.7
Cass	100.0	Morgan	30.7
Clark	100.0	Newton	100.0
Clay	29.4	Noble	9.3
Clinton	100.0	Ohio	0.0
Crawford	100.0	Orange	0.0
Daviess	100.0	Owen	0.0
Dearborn	63.3	Parke	91.7
Decatur	44.6	Perry	37.6
DeKalb	32.9	Pike	0.0
Delaware	100.0	Porter	90.9
Dubois	49.2	Posey	25.8
Elkhart	74.3	Pulaski	100.0
Fayette	0.0	Putnam	36.4
Floyd	96.1	Randolph	95.8
Fountain	0.0	Ripley	17.8
Franklin	100.0	Rush	73.5
Fulton	70.2	Saint Joseph	99.8
Gibson	100.0	Scott	32.3
Grant	100.0	Shelby	71.1
Greene	77.0	Spencer	83.3
Hamilton	86.7	Starke	96.0
Hancock	0.0	Steuben	100.0
Harrison	100.0	Sullivan	80.2
Hendricks	48.4	Switzerland	0.0
Henry	63.4	Tippecanoe	99.8
Howard	99.3	Tipton	100.0
Huntington	95.6	Union	0.0
Jackson	93.0	Vanderburgh	65.3
Jasper	17.5	Vermillion	88.4
Jay	89.0	Vigo	98.4
Jefferson	0.0	Wabash	0.0
Jennings	100.0	Warren	0.0
Johnson	92.7	Warrick	100.0
Knox	92.4	Washington	0.0
Kosciusko	24.0	Wayne	97.3
LaGrange	100.0	Wells	100.0
Lake	82.4	White	21.8
LaPorte	96.2	Whitley	29.4

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: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

3 Alcohol Use in Indiana: Consumption Patterns and Consequences

ALCOHOL CONSUMPTION

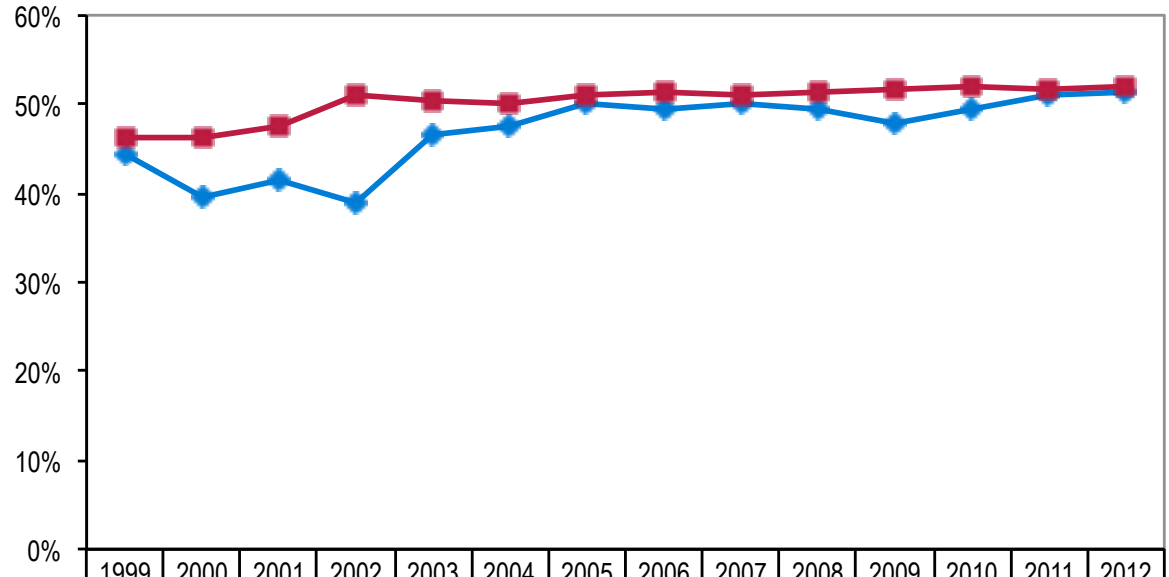
General Consumption Patterns

Alcohol is the most frequently used substance in both Indiana and the United States. In 2011, 10.7 million gallons of ethanol (the intoxicating agent in alcoholic beverages) were consumed in Indiana; this included, by volume, 119.2 million gallons of beer, 11.2 million gallons of wine, and 9.4 million gallons of spirits. The annual per capita consumption of ethanol for the population 14 years and older was 2.0 gallons in Indiana and 2.3 gallons in the nation (National Institute on Alcohol Abuse and Alcoholism, 2013).

In 2013, a total of 12,593 permits for the sale of alcoholic beverages were on file in Indiana, representing a rate of 1.9 licenses per 1,000 Hoosiers. Most licenses were in Marion (1,766) and Lake (1,054) Counties (Alcohol and Tobacco Commission, 2013).

Based on 2011–2012 averages calculated from the National Survey on Drug Use and Health (NSDUH), the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 51.2% (95% Confidence Interval [CI]: 47.9–54.5) 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 51.9% (95% CI: 51.4–52.5). Prevalence rates of current use seemed to have increased from 1999 to 2012 in Indiana; however, the difference was statistically not significant (see Figure 3.1) (Substance Abuse and Mental Health Services Administration, 2013).

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, 1999–2012)



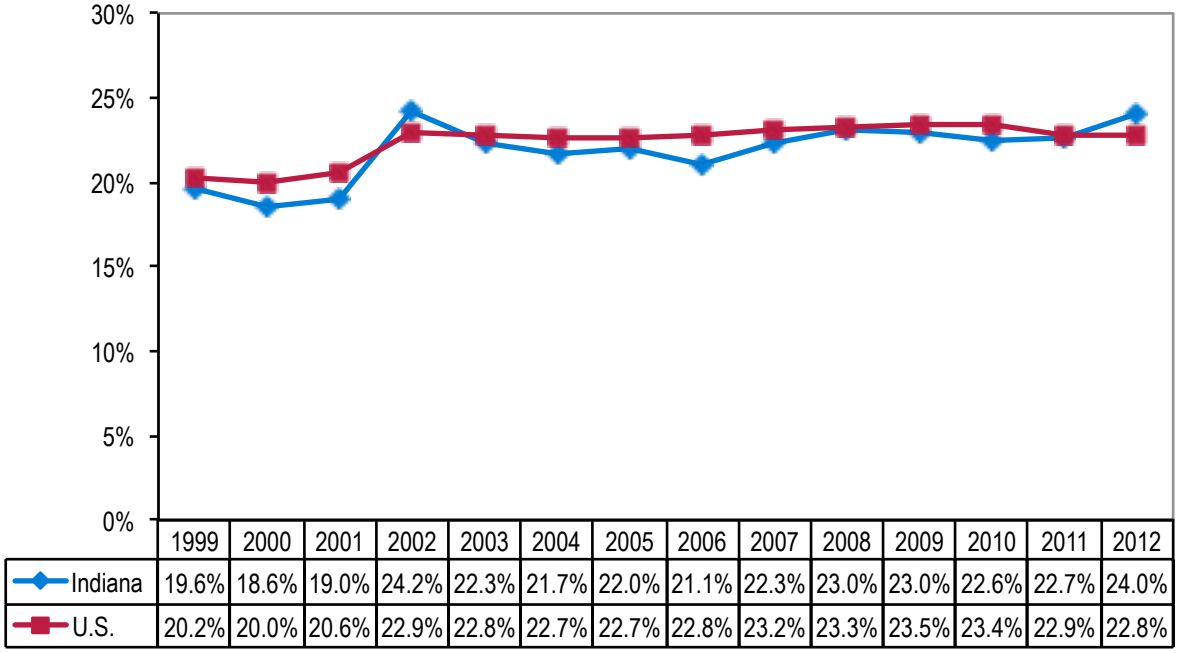
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	44.4%	39.7%	41.6%	38.9%	46.6%	47.4%	49.9%	49.4%	50.1%	49.3%	48.0%	49.4%	51.0%	51.2%
U.S.	46.4%	46.3%	47.6%	51.0%	50.5%	50.2%	51.1%	51.4%	51.0%	51.4%	51.8%	51.8%	51.8%	51.9%

Source: Substance Abuse and Mental Health Services Administration, 2013

[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 2012, 24.0% of the Indiana population 12 years of age or older reported binge drinking (95% CI: 21.7–26.5), similar to that of the national average of 22.8% (95% CI: 22.4–23.2) (see Figure 3.2) (Substance Abuse and Mental Health Services Administration, 2013).

Figure 3.2 Percentage of Indiana and U.S. Population (12 years and older) Reporting Binge Drinking in the Past 30 Days (National Survey on Drug Use and Health, 1999–2012)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	19.6%	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%
U.S.	20.2%	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%

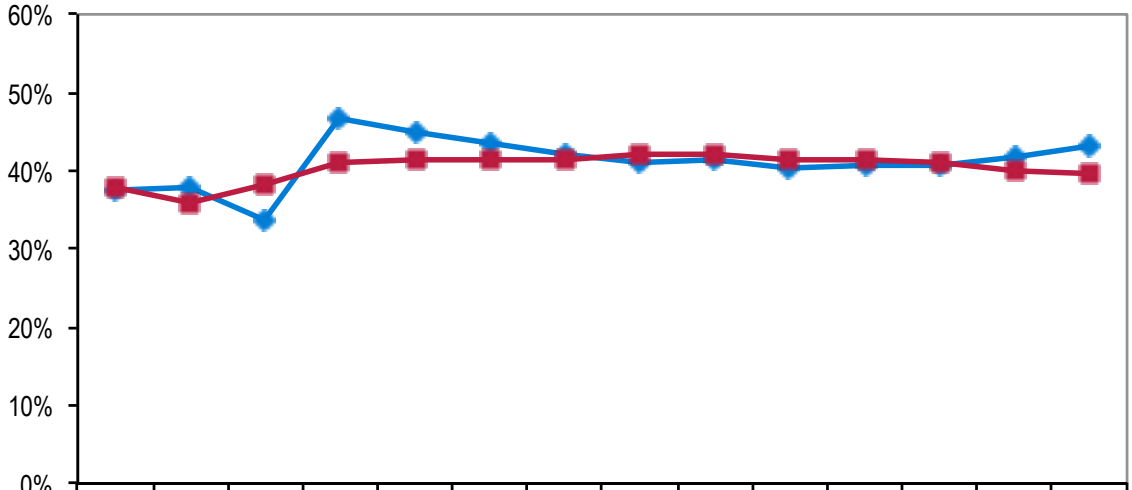
Source: Substance Abuse and Mental Health Services Administration, 2013

Adult Alcohol Consumption Patterns

According to 2011–2012 NSDUH results, 61.8% of Hoosiers (95% CI: 58.0–65.5) between the ages of 18 and 25 reported current alcohol use; the U.S. rate was similar at 60.5% (95% CI: 59.7–61.2). Past-month alcohol consumption was also similar among Indiana and U.S. adults 26 years and older with rates of 54.5% (95% CI: 50.4–58.6) and 55.3% respectively (95% CI: 54.7-56.0) (Substance Abuse and Mental Health Services Administration, 2013).

Binge drinking was particularly widespread among young adults. The highest prevalence rate was found among 18- to 25year-olds, with the Indiana rate (43.1%; 95% CI: 39.4–46.9) and U.S. rate (39.6%; 95% CI: 38.8–40.5) being statistically similar (see Figure 3.3). Among adults, binge drinking rates decreased with age; 22.8% (95% CI: 20.1–25.9) 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.: 21.8%, 95% CI: 21.3–22.3) (Substance Abuse and Mental Health Services Administration, 2013).

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, 1999–2012)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	37.6%	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%
U.S.	37.8%	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%

Source: Substance Abuse and Mental Health Services Administration, 2013

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, 2012)

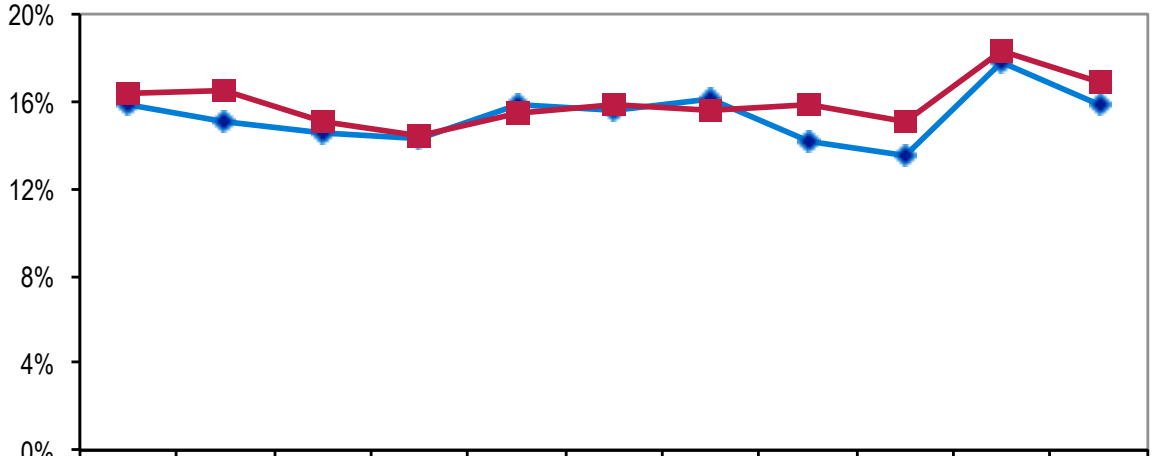
		Indiana % (95% CI)	U.S. %
Gender	Male	57.9% (55.8-60.1)	61.2%
	Female	42.4% (40.5-44.2)	49.1%
Race/Ethnicity	White	50.3% (48.8-51.8)	58.5%
	Black	51.9% (46.6-57.2)	46.4%
	Hispanic	44.5% (37.0-52.0)	47.4%
Age Group	18-24	52.8% (47.7-57.9)	52.6%
	25-34	61.8% (58.1-65.6)	64.3%
	35-44	57.4% (53.8-60.9)	59.1%
	45-54	50.5% (47.4-53.6)	57.3%
	55-64	46.9% (44.1-49.8)	53.1%
	65+	32.5% (30.3-34.7)	42.9%
Total		**49.9% (48.5-51.3)**	**55.3%**

Source: Centers for Disease Control and Prevention, 2012

The 2012 Behavioral Risk Factor Surveillance System (BRFSS) reported that Indiana's adult prevalence rate for current alcohol use (49.9%; 95% CI: 48.5-51.3) was significantly lower than the nation's (55.3 %). In Indiana, rates were significantly higher among males and among younger age groups (see Table 3.1) (Centers for Disease Control and Prevention, 2012).

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 comparable between Indiana (15.9%; 95% CI: 14.8–17.0) and the United States (16.9%). 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, 2012). 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. (For more detailed information, see Chapter 2 "Methods".)

Figure 3.4 Percentage of Indiana and U.S. Adults Reporting Binge Drinking in the Past 30 Days (Behavioral Risk Factor Surveillance System, 2002–2012)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	15.9%	15.1%	14.5%	14.3%	15.9%	15.6%	16.1%	14.2%	13.5%	17.8%	15.9%
U.S.	16.3%	16.5%	15.1%	14.4%	15.4%	15.8%	15.6%	15.8%	15.1%	18.3%	16.9%

Note: Prevalence rates, starting with 2011, should not be compared to previous years due to changes in methodology.
Source: Centers for Disease Control and Prevention, 2012

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 significantly lower in Indiana (5.1%; 95% CI: 4.4–5.7) than in the United States (6.1%) in 2012. A higher prevalence was found among Hoosier men (6.1%; 95% CI: 5.1–7.2) than women (4.1%; 95% CI: 3.3–4.8) (Centers for Disease Control and Prevention, 2012).

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, 2012)

		Indiana % (95% CI)	U.S. %
Gender	Male	21.6% (19.7-23.4)	22.9%
	Female	10.6% (9.4-11.9)	11.4%
Race/Ethnicity	White	15.8% (14.6-17.0)	17.7%
	Black	16.4% (12.0-20.8)	13.1%
	Hispanic	19.0% (13.1-24.9)	19.0%
Age Group	18-24	27.3% (22.9-31.7)	27.5%
	25-34	25.6% (22.2-29.1)	27.3%
	35-44	19.3% (16.4-22.2)	19.6%
	45-54	14.5% (12.2-16.8)	15.4%
	55-64	9.7% (8.0-11.4)	10.8%
	65+	2.9% (2.1-3.7)	4.4%
Total		**15.9% (14.8-17.0)**	**16.9%**

Source: Centers for Disease Control and Prevention, 2012

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 (Centers for Disease Control and Prevention, 1991-2011).

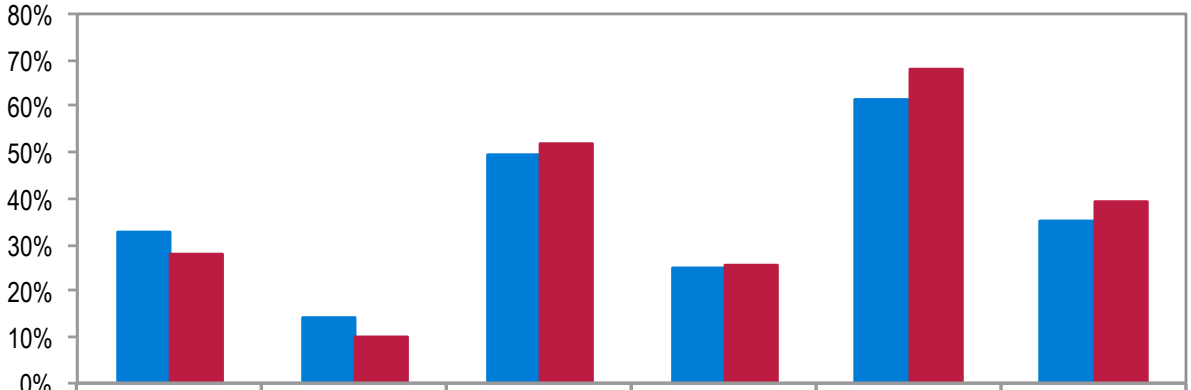
According to 2011–2012 NSDUH estimates, 11.3% (95% CI: 9.3–13.6) of young people ages 12 to 17 consumed alcohol in the past 30 days in Indiana; the rate was similar on the national level (13.1%; 95% CI: 12.7–13.5). Additionally, 7.2% (95% CI: 5.9–8.7) of Indiana youths in this age group engaged in binge drinking in the past month; the state's prevalence among 12- to 17-year-olds was similar to the nation's (7.3%; 95% CI: 7.0–7.6) (Substance Abuse and Mental Health Services Administration, 2013).

NSDUH also provides underage drinking prevalence estimates among 12- to 20-year-olds. Indiana's rates for current use (24.2%; 95% CI: 21.8–26.8) and binge drinking (16.4%; 95% CI: 14.5–18.6) were similar to U.S. rates of 24.7% (95% CI: 24.0–25.4) and 15.6% (95% CI: 15.0–16.2) respectively (Substance Abuse and Mental Health Services Administration, 2013).

In 2013, almost 62% of Indiana 12th grade students reported using alcohol at least once during their lifetime (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, et al., 2013). Overall alcohol consumption patterns seemed to progress with age; i.e., 8th grade students showed lower prevalence rates than 10th and 12th grade students. Students initiated alcohol use, on average, at the age of 13.4 years (Gassman, et al., 2013).

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 2013) on lifetime and monthly alcohol use among high school seniors, see Figure 3.6. For lifetime, monthly, and binge use by Indiana region and grade for 2013, see Appendix 3A, page 42.

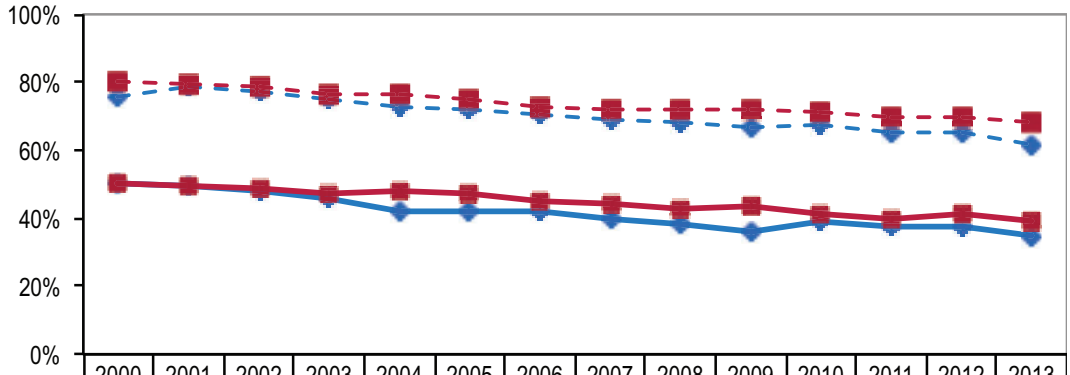
Figure 3.5 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Lifetime and Monthly Alcohol Use (Alcohol, Tobacco, and other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2013)



	8th Grade Lifetime	8th Grade Monthly	10th Grade Lifetime	10th Grade Monthly	12th Grade Lifetime	12th Grade Monthly
Indiana	32.6%	14.0%	49.4%	24.7%	61.7%	34.9%
U.S.	27.8%	10.2%	52.1%	25.7%	68.2%	39.2%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

Figure 3.6 Percentage of Indiana and U.S. High School Seniors (12th Grade) Reporting Monthly and Lifetime Alcohol Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2000–2013)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
IN Monthly Use	50.1%	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%
U.S. Monthly Use	50.0%	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%
IN Lifetime Use	75.9%	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%
U.S. Lifetime Use	80.3%	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%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

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 (King & Jun, 2013). According to 2013 results, 81.4% of students who responded to the survey reported past-year alcohol use and 63.4% reported past-month use; consumption rates were significantly lower for underage students (past-year use: 76.4%; past-month use: 57.0%) than those ages 21 and older (past-year use: 87.2%; past-month use: 70.6%). Similarly, past-month binge drinking prevalence, 49.8%, was significantly lower for underage students (47.5%) than those ages 21 and older (52.4%) (King & Jun, 2013).[2]

The Indiana Department of Education collects information on suspensions and expulsions of students from kindergarten through grade 12. During the 2007–2008 school year, a total of 6,023 students were suspended or expelled due to alcohol, drug, or weapon involvement. This represents a suspension/expulsion rate of 5.21 per 1,000 enrolled students (Indiana Department of Education, 2007-2008). (For county-level rates, see Map 3.1, page 49.)

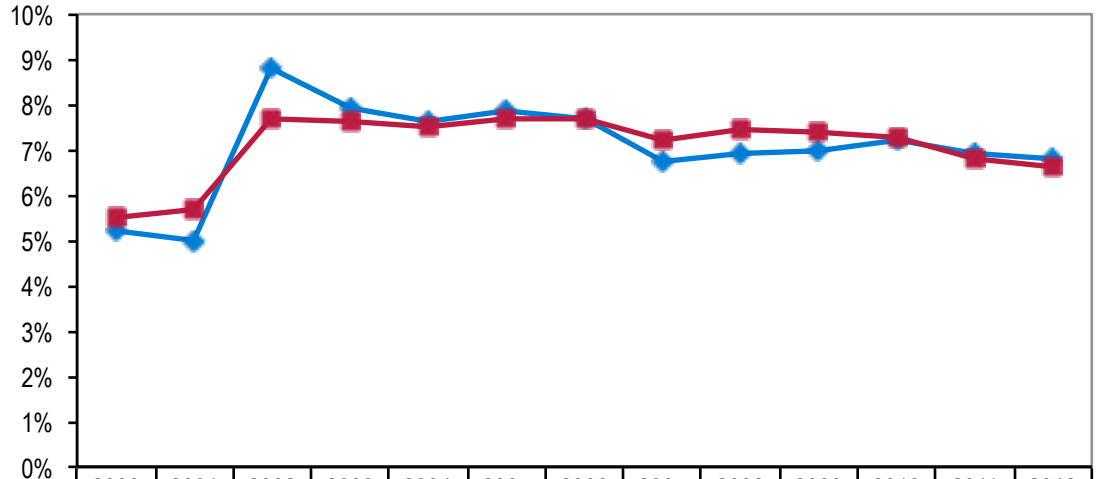
CONSEQUENCES

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 unsafe 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 2011–2012 NSDUH averages, the estimated prevalence for alcohol abuse and/or dependence[3] in the past year among those ages 12 and older was 6.8% (95% CI: 5.7–8.2) in Indiana, which was similar to the national estimate (6.6%; 95% CI: 6.4–6.9). Since at least 2000, Indiana's alcohol abuse/dependence prevalence estimates 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 6.6% (95% CI: 5.4–8.1) of those ages 12 and older were in need of but did not receive treatment for alcohol use in Indiana (U.S.: 6.3%; 95% CI: 6.1–6.5) (Substance Abuse and Mental Health Services Administration, 2013).

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, 2000–2012)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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%
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%

Source: Substance Abuse and Mental Health Services Administration, 2013

[2]Eleven Indiana colleges participated in the 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 (57.5%) of Indiana treatment episodes in 2011, alcohol use was reported (U.S.: 57.3%), and in more than one-third (38.5%), alcohol dependence[4] was indicated (U.S.: 39.3%) (see Figure 3.8) (Substance Abuse and Mental Health Data Archive, 2011).

Factors significantly associated with alcohol abuse and dependence in Indiana included gender, race/ethnicity, and age (findings from the 2011 TEDS dataset):

Gender—Over 42 percent of males (42.5%) in substance abuse treatment listed alcohol as their primary substance, compared to 31.6% of females ($P < 0.001$).

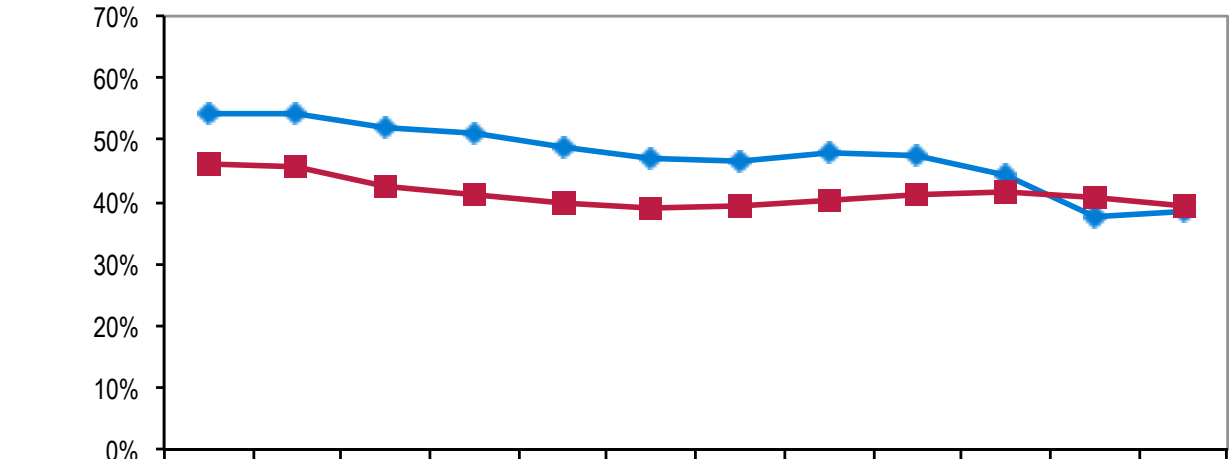
Race/ethnicity—Over one-third of whites (38.3%) reported alcohol as their primary substance; this percentage was below that for blacks (41.8%) and other races (42.1%) ($P < 0.001$). With regard to ethnicity, a significantly higher percentage of Hispanics (45.5%) reported alcohol dependence than non-Hispanics (38.8%) ($P < 0.001$).

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 (15.7%) and those ages 55 and older had the highest percentage (66.3%) ($P < 0.001$).

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.

Figure 3.8 Percentage of Treatment Episodes in Indiana and the United States with Alcohol Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

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

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, 2011)

		Alcohol Dependence
Gender	Male	42.5%
	Female	31.6%
Race	White	38.3%
	Black	41.8%
	Other	42.1%
Ethnicity	Hispanic	45.5%
	Non-Hispanic	38.8%
Age Group	Under 18	15.7%
	18-24	28.1%
	25-34	32.1%
	35-44	45.7%
	45-54	58.5%
	55+	66.3%
Total		**38.5%**

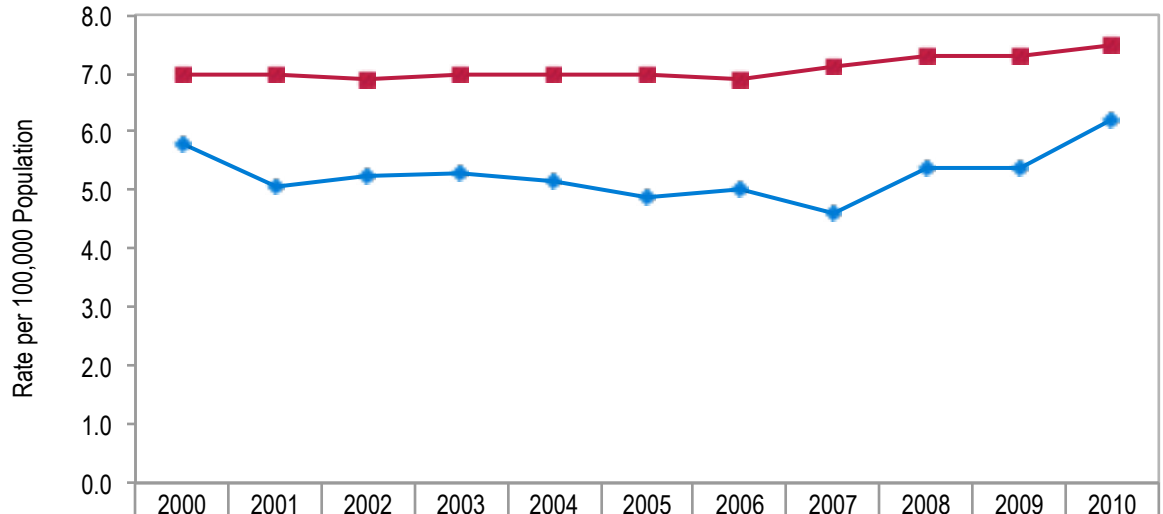
Source: Substance Abuse and Mental Health Data Archive, 2011

Alcohol-Related Morbidity and Mortality

Hospital discharge records show that in 2011, a total of 1,740 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, 1999-2011).[5]

From 2000 through 2011, a total of 4,262 Hoosiers died from alcohol-induced causes (Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2013).[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 6.2 per 100,000 (95% CI: 5.6–6.8) in 2010, which was significantly lower than the U.S. rate of 7.5 per 100,000 population (95% CI: 7.4–7.6) (see Figure 3.9) (Centers for Disease Control and Prevention, 2013). (For alcohol-attributable deaths by county, see Map 3.2, page 50.)

Figure 3.9 Age-Adjusted Alcohol-attributable Mortality Rates per 100,000 Population in Indiana and the United States (CDC WONDER, 2000–2010)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Indiana	5.8	5.1	5.3	5.3	5.2	4.9	5.0	4.6	5.4	5.4	6.2
U.S.	7.0	7.0	6.9	7.0	7.0	7.0	6.9	7.1	7.3	7.3	7.5

Source: Centers for Disease Control and Prevention, 2013

[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-9 codes 291, 303.0, 303.9, 305.0, 357.5, 425.5, 535.3, 571.0–571.3, 655.4, 760.71, 790.3, 980.0, 980.1, E860.0, E860.1, E860.2, E860.9 (Centers for Disease Control and Prevention, 2001-2005).
[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.

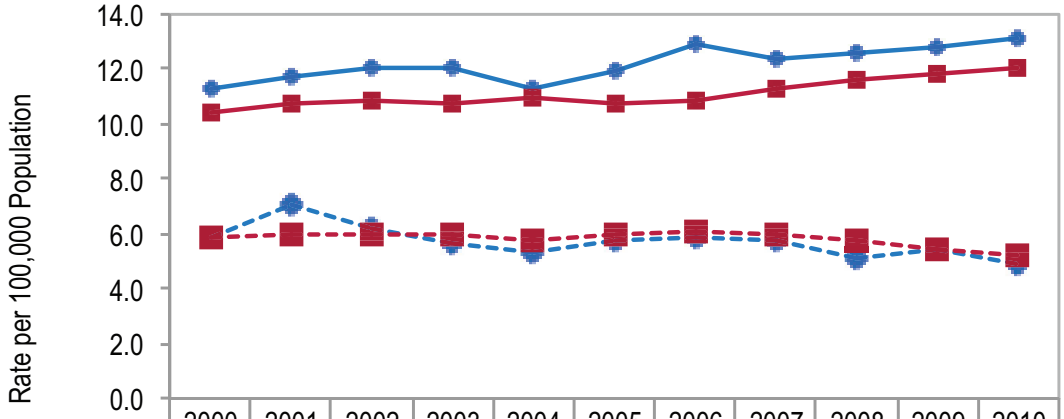
Though alcohol use is not associated with every suicide and homicide, these violent acts often involve individuals who have been drinking. According to the Alcohol-Related Disease Impact (ARDI) database, the direct alcohol-attributable fraction for suicides and homicides, both in Indiana and in the nation, is 23% and 47%, respectively. In other words, 23% of suicides and 47% of homicides can be attributed to alcohol consumption (Centers for Disease Control and Prevention, 2001-2005). (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 2010, a total of 8,435 Hoosiers committed suicide. Applying ARDI's alcohol-attributable fraction of 23%, this means that during these ten years 1,940 suicide deaths were attributable to alcohol. Indiana's age-adjusted mortality rate for suicide was 13.1 per 100,000 population (95% CI: 12.2–14.0) in 2010, a rate statistically similar to the U.S. rate of 12.1 per 100,000 population (95% CI: 12.0–12.2) (see Figure 3.10). Rates were significantly higher for males (21.0 per 100,000 population; 95% CI: 19.4–22.6) than for females (5.7 per 100,000 population; 95% CI: 4.9–6.5), and for whites (14.0 per 100,000 population; 95% CI: 13.0–15.0) than for blacks (5.5 per 100,000 population; 95% CI: 3.8–7.9) in Indiana (Centers for Disease Control and Prevention, 2013).

From 2000 through 2010, a total of 3,943 homicides were committed in Indiana. Applying ARDI's alcohol-attributable fraction of 47%, this means that 1,853 homicide deaths were attributable to alcohol during that time period. Indiana's age-adjusted homicide death rate was 4.9 per 100,000 population (95% CI: 4.4–5.5) in 2010, which was statistically similar to the U.S. rate of 5.2 per 100,000 population (95% CI: 5.2–5.3) (see Figure 3.10). In 2010, rates were significantly higher for Indiana males (7.6 per 100,000 population; 95% CI: 6.7–8.6) than for females (2.2 per 100,000 population; 95% CI: 1.7–2.8), and for blacks (24.4 per 100,000 population; 95% CI: 20.6–28.2) than for whites (2.7 per 100,000 population; 95% CI: 2.3–3.1) (Centers for Disease Control and Prevention, 2013).

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

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, 2000–2010)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Suicide Indiana	11.3	11.7	12.1	12.0	11.3	11.9	12.9	12.4	12.6	12.8	13.1
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
Homicide Indiana	5.9	7.1	6.2	5.6	5.3	5.8	5.9	5.8	5.1	5.4	4.9
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

Source: Centers for Disease Control and Prevention, 2013

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 (Substance Abuse and Mental Health Services Administration, 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 the Indiana State Department of Health when a child is born with a birth defect. From 2005 through 2009, 181 children were born with fetal alcohol syndrome,[9] the most severe form of FASD, in Indiana (Indiana State Department of Health, 2005-2009).

[9]The ICD-9 code for fetal alcohol syndrome is 760.71.

Alcohol-Related Motor Vehicle Accidents

According to the Fatality Analysis Reporting System (FARS), a total of 675 fatal crashes occurred in Indiana in 2011, of which 195 (or 29%) were alcohol-related (U.S.: 9,001 alcohol-related crashes; 30%) (National Highway Traffic Safety Administration, 2011). 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 8,761 in 2012. This represents a 37% drop. The number of fatal crashes with alcohol involvement also decreased from 242 to 205. (For a detailed listing of alcohol-related collisions and fatalities in Indiana by county for 2012, see Appendix 3D, pages 44-46). The overall rate for alcohol-related collisions in Indiana in 2012 was 1.3 per 1,000 population (Indiana State Police, 2013).

Table 3.4 Number of Fatal Crashes and Percent Alcohol-Related in Indiana, by Time of Day and Crash Type (Fatality Analysis Reporting System, 2011)

	Single Vehicle			Multiple Vehicle			All Crashes		
Time of Crash	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.	48	28	59%	13	10	74%	61	38	62%
3 a.m. to 5:59 a.m.	37	26	71%	26	11	43%	63	38	60%
6 a.m. to 8:59 a.m.	37	9	24%	32	3	9%	69	12	17%
9 a.m. to 11:59 a.m.	18	2	9%	49	2	4%	67	4	6%
Noon to 2:59 p.m.	42	8	18%	57	4	7%	99	12	12%
3 p.m. to 5:59 p.m.	53	11	21%	70	7	9%	123	18	14%
6 p.m. to 8:59 p.m.	64	18	28%	41	12	29%	105	30	29%
9 p.m. to 11:59 p.m.	64	35	55%	24	9	37%	88	44	50%
Total	**363**	**137**	**38%**	**312**	**57**	**18%**	**675**	**195**	**29%**

Note: National Highway Traffic Safety Administration estimates alcohol involvement when alcohol test results are unknown.
Source: National Highway Traffic Safety Administration, 2011

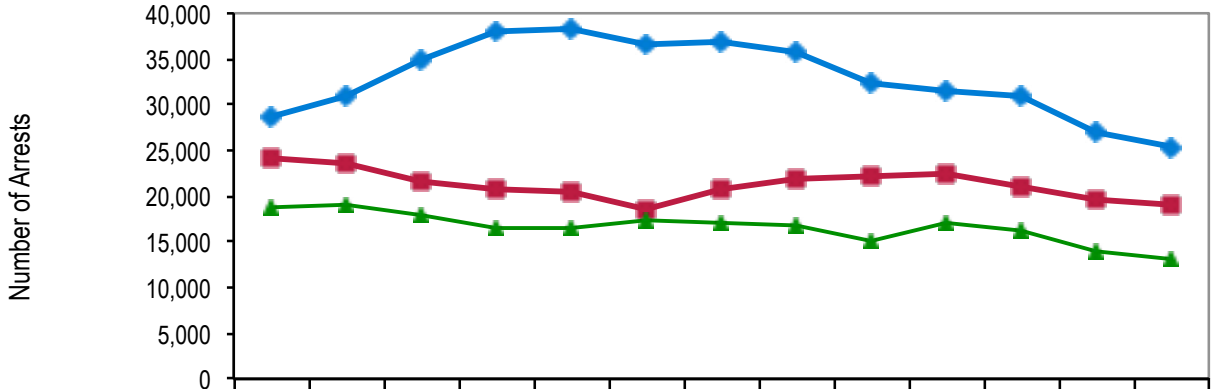
[10]Alcohol-impaired driving means that at least one driver or motorcycle rider had a blood alcohol content (BAC) of .08 or higher.

Alcohol-Related Crimes

Using the Uniform Crime Reporting Program (UCR) dataset, we compared alcohol-related offenses, including arrests for driving under the influence (DUI), public intoxication, and liquor law violations, between Indiana and the United States (National Archive of Criminal Justice Data, Interuniversity Consortium for Political and Social Research, University of Michigan, 2011). In 2011, a total of 25,410 DUI arrests were made in Indiana. The arrest rate was statistically similar between Hoosiers, at 3.9 per 1,000 population (95% CI: 3.9–4.0), and U.S. residents, at 4.0 per 1,000 population (95% CI: 4.0–4.0). Close to 19,000 Hoosiers were arrested for public intoxication; the arrest rate was almost twice as high for Indiana, at 2.9 per 1,000 population (95% CI: 2.9–3.0), as for the nation, at 1.5 per 1,000 population (95% CI: 1.5–1.5). Additionally, more than 13,000 arrests occurred for liquor law violations in Indiana, representing an arrest rate of 2.0 per 1,000 population (95% CI: 2.0–2.0), which was significantly higher than the U.S. rate of 1.6 per 1,000 population (95% CI: 1.6–1.6) (see Figures 3.11–3.14).

Arrests for alcohol-related crimes varied among Indiana counties. These county differences are presented in Maps 3.3 through 3.5 (pages 51-53) and Appendix 3E (pages 47-48).

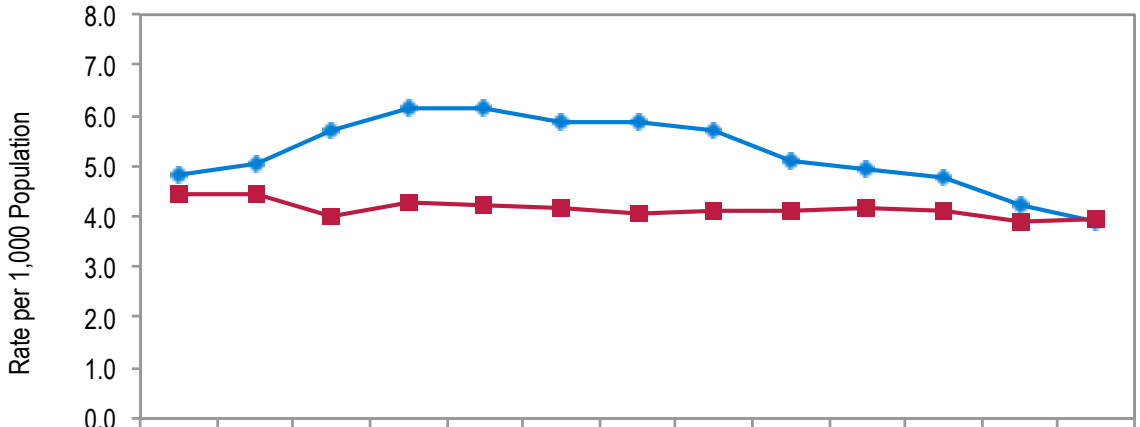
Figure 3.11 Number of Arrests for Driving Under the Influence (DUI), Public Intoxication, and Liquor Law Violations in Indiana (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
DUI	28,649	30,814	34,797	38,003	38,226	36,469	36,772	35,884	32,232	31,447	30,819	27,112	25,410
Public Intoxication	24,247	23,647	21,598	20,820	20,382	18,562	20,701	21,987	22,229	22,545	20,936	19,617	18,975
Liquor Law Violations	18,837	18,980	18,024	16,484	16,502	17,307	17,119	16,659	15,066	16,950	16,183	14,027	13,042

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

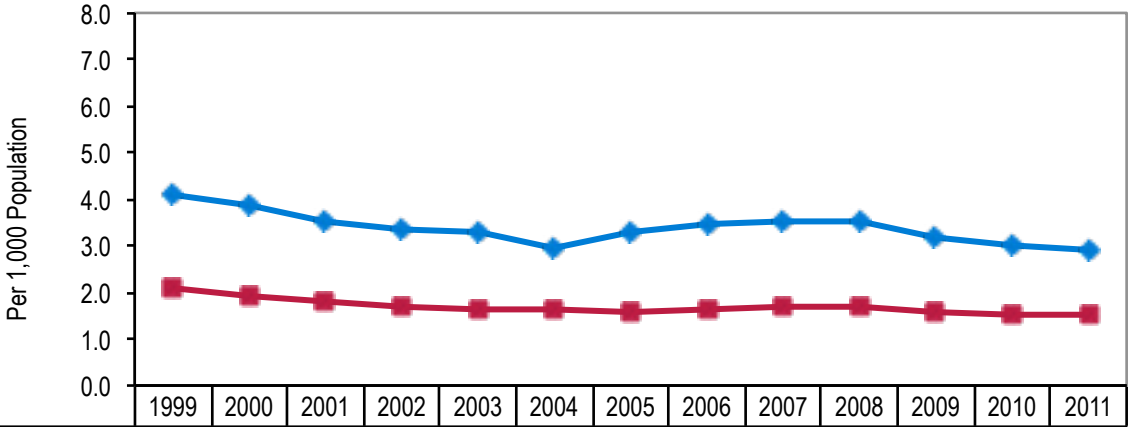
Figure 3.12 Arrest Rates, per 1,000 Population, for Driving Under the Influence (DUI) in Indiana and the United States (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	4.8	5.1	5.7	6.2	6.2	5.8	5.9	5.7	5.1	4.9	4.8	4.2	3.9
U.S.	4.5	4.4	4.0	4.3	4.2	4.2	4.1	4.1	4.1	4.2	4.1	3.9	4.0

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

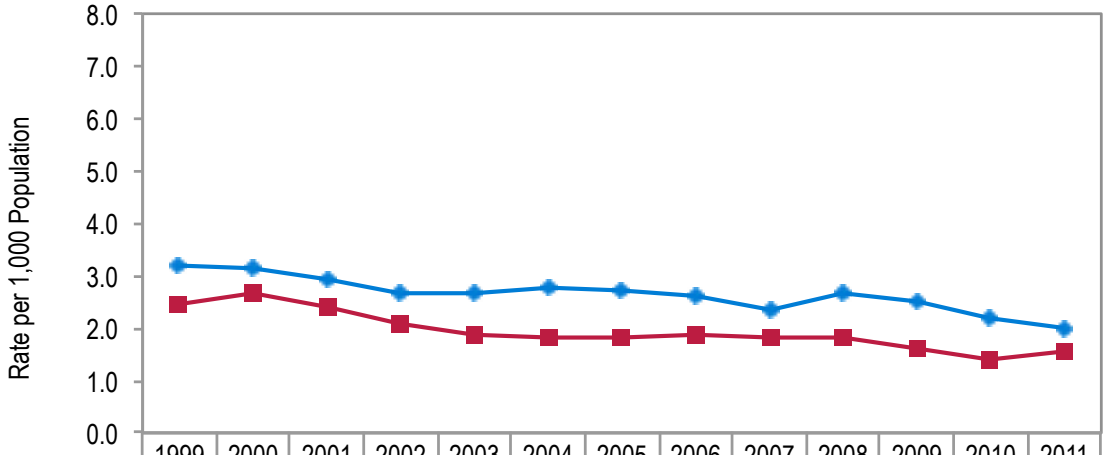
Figure 3.13 Arrest Rates, per 1,000 Population, for Public Intoxication in Indiana and the United States (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	4.1	3.9	3.5	3.4	3.3	3.0	3.3	3.5	3.5	3.5	3.2	3.0	2.9
U.S.	2.1	1.9	1.8	1.7	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.5	1.5

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Figure 3.14 Arrest Rates, per 1,000 Population, for Liquor Law Violation in Indiana and the United States (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	3.2	3.1	2.9	2.7	2.7	2.8	2.7	2.6	2.4	2.7	2.5	2.2	2.0
U.S.	2.5	2.6	2.4	2.1	1.9	1.8	1.8	1.9	1.8	1.8	1.6	1.4	1.6

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

APPENDIX 3A

Percentage of Indiana Students Reporting Lifetime, Monthly, and Binge Alcohol Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	13.6	14.7	*17.4	12.3	13.1	*11.0	*7.8	*10.6	*15.2
	Monthly	4.4	*5.3	4.4	4.4	3.7	3.9	2.1	*3.4	5.0
	Binge	5.5	*7.4	4.7	6.4	4.8	4.9	3.6	*3.8	6.0
7th Grade	Lifetime	19.4	20.7	20.5	*12.2	19.0	19.3	22.3	18.4	20.6
	Monthly	7.1	*8.2	7.8	*4.5	6.7	6.5	*9.6	6.7	7.1
	Binge	6.0	*7.0	6.7	4.6	*4.9	6.0	7.6	5.7	5.8
8th Grade	Lifetime	32.6	32.9	32.2	*28.0	*30.7	33.0	*36.8	*30.3	*36.6
	Monthly	14.0	14.3	13.3	12.2	*11.6	13.4	16.7	14.0	*16.5
	Binge	9.6	*10.9	9.7	9.2	*7.9	8.5	*11.2	*8.2	*11.4
9th Grade	Lifetime	39.5	39.2	*35.8	*34.2	40.7	38.8	43.2	39.9	*44.3
	Monthly	18.7	*16.8	17.1	*15.1	18.3	18.3	22.2	20.0	*22.2
	Binge	12.4	11.2	11.5	*9.1	12.0	11.8	15.0	*13.8	*15.2
10th Grade	Lifetime	49.4	50.1	*46.0	*42.3	47.8	50.5	52.4	48.5	*55.2
	Monthly	24.7	24.7	*21.3	*22.0	*21.4	24.2	28.3	25.7	*29.7
	Binge	16.0	16.9	14.8	*13.4	*13.5	*14.0	*20.3	16.0	*20.0
11th Grade	Lifetime	55.3	*58.4	52.7	*48.8	54.7	54.8	52.3	54.7	*60.8
	Monthly	28.5	30.0	*24.7	*23.5	27.2	28.5	26.7	*31.0	*32.3
	Binge	18.9	18.8	*16.2	*16.0	17.0	18.1	18.6	*22.5	*21.7
12th Grade	Lifetime	61.7	*65.2	*55.5	*51.5	59.8	62.9	59.0	62.8	*66.6
	Monthly	34.9	36.6	*27.2	*27.4	*31.4	34.4	30.5	*38.9	*40.7
	Binge	23.5	24.3	*17.5	*18.6	*20.2	21.3	22.5	*27.6	*28.6

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman, et al., 2013

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, 2013)

	Treatment Episodes	Alcohol Use		Alcohol Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Adams	136	109	80.1%	89	65.4%
Allen	1,856	1,368	73.7%	837	45.1%
Bartholomew	653	343	52.5%	223	34.2%
Benton	45	29	64.4%	15	33.3%
Blackford	43	17	39.5%	14	32.6%
Boone	181	109	60.2%	87	48.1%
Brown	98	63	64.3%	51	52.0%
Carroll	99	65	65.7%	52	52.5%
Cass	248	207	83.5%	142	57.3%
Clark	392	150	38.3%	126	32.1%
Clay	196	134	68.4%	89	45.4%
Clinton	122	71	58.2%	45	36.9%
Crawford	71	37	52.1%	25	35.2%
Daviess	177	110	62.1%	75	42.4%
Dearborn	508	299	58.9%	185	36.4%
Decatur	192	127	66.1%	102	53.1%
DeKalb	202	135	66.8%	106	52.5%
Delaware	990	495	50.0%	369	37.3%
Dubois	298	220	73.8%	154	51.7%
Elkhart	810	535	66.0%	363	44.8%
Fayette	207	110	53.1%	73	35.3%
Floyd	186	65	34.9%	56	30.1%
Fountain	59	30	50.8%	20	33.9%
Franklin	168	112	66.7%	69	41.1%
Fulton	215	156	72.6%	85	39.5%
Gibson	216	139	64.4%	103	47.7%
Grant	495	325	65.7%	194	39.2%
Greene	207	114	55.1%	81	39.1%
Hamilton	813	571	70.2%	365	44.9%
Hancock	164	113	68.9%	75	45.7%
Harrison	54	21	38.9%	19	35.2%
Hendricks	358	161	45.0%	123	34.4%
Henry	259	105	40.5%	72	27.8%
Howard	649	342	52.7%	217	33.4%
Huntington	86	40	46.5%	30	34.9%
Jackson	292	136	46.6%	90	30.8%
Jasper	109	51	46.8%	32	29.4%
Jay	84	42	50.0%	30	35.7%
Jefferson	340	168	49.4%	137	40.3%
Jennings	247	114	46.2%	81	32.8%
Johnson	234	137	58.5%	94	40.2%
Knox	374	245	65.5%	147	39.3%
Kosciusko	343	189	55.1%	115	33.5%
LaGrange	95	70	73.7%	44	46.3%
Lake	2,886	1,792	62.1%	1,404	48.6%
LaPorte	623	325	52.2%	249	40.0%
Lawrence	481	188	39.1%	161	33.5%
Madison	708	436	61.6%	256	36.2%
Marion	4,177	2,035	48.7%	1,357	32.5%
Marshall	249	129	51.8%	85	34.1%
Martin	51	25	49.0%	17	33.3%
Miami	265	182	68.7%	128	48.3%
Monroe	1,412	886	62.7%	711	50.4%
Montgomery	330	156	47.3%	101	30.6%
Morgan	479	203	42.4%	145	30.3%
Newton	29	13	44.8%	11	37.9%
Noble	331	175	52.9%	112	33.8%
Ohio	44	26	59.1%	19	43.2%
Orange	113	56	49.6%	38	33.6%
Owen	245	132	53.9%	105	42.9%
Parke	103	74	71.8%	55	53.4%
Perry	126	102	81.0%	66	52.4%
Pike	56	35	62.5%	22	39.3%
Porter	664	332	50.0%	189	28.5%
Posey	108	85	78.7%	48	44.4%
Pulaski	111	82	73.9%	58	52.3%
Putnam	207	96	46.4%	67	32.4%
Randolph	193	109	56.5%	82	42.5%
Ripley	236	158	66.9%	119	50.4%
Rush	168	121	72.0%	86	51.2%
Saint Joseph	1,462	939	64.2%	594	40.6%
Scott	154	52	33.8%	40	26.0%
Shelby	139	73	52.5%	55	39.6%
Spencer	194	143	73.7%	97	50.0%
Starke	218	106	48.6%	61	28.0%
Steuben	191	135	70.7%	96	50.3%
Sullivan	72	44	61.1%	26	36.1%
Switzerland	64	36	56.3%	23	35.9%
Tippecanoe	406	249	61.3%	161	39.7%
Tipton	68	43	63.2%	27	39.7%
Union	43	27	62.8%	16	37.2%
Vanderburgh	1,191	791	66.4%	521	43.7%
Vermillion	114	79	69.3%	57	50.0%
Vigo	755	448	59.3%	285	37.7%
Wabash	222	122	55.0%	81	36.5%
Warren	16	7	43.8%	6	37.5%
Warrick	320	204	63.8%	130	40.6%
Washington	58	26	44.8%	20	34.5%
Wayne	475	275	57.9%	163	34.3%
Wells	111	82	73.9%	46	41.4%
White	151	99	65.6%	62	41.1%
Whitley	131	82	62.6%	46	35.1%
County Info Missing	149	80	53.7%	50	33.6%
Indiana	**34,670**	**20,274**	**58.5%**	**13,855**	**40.0%**

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.
Source: Indiana Family and Social Services Administration, 2014

APPENDIX 3C

Conditions that are Directly Attributable to Alcohol in Indiana (Alcohol-Related Disease Impact, Based on Averages from 2001–2005)

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%

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, 2001-2005

APPENDIX 3D

Number and Rate (per 1,000) of All and Fatal Alcohol-Related Collisions in Indiana, by County (Automated Reporting Information Exchange System, 2012)

	All Collisions			Fatal Collisions		
County	Total Collisions	Alcohol-related Collisions	Alcohol-related Collision Rate	Total Fatal Collision	Alcohol-related Fatal Collisions	Alcohol-related Fatal Collision Rate
Adams	680	33	0.96	3	0	*0.00
Allen	11,309	580	1.61	30	10	*0.03
Bartholomew	2,224	85	1.07	8	0	*0.00
Benton	139	6	*0.68	2	0	*0.00
Blackford	254	9	*0.72	2	0	*0.00
Boone	1,954	60	1.02	8	0	*0.00
Brown	523	19	*1.26	1	0	*0.00
Carroll	553	27	1.34	2	1	*0.05
Cass	1,173	45	1.17	4	3	*0.08
Clark	4,398	187	1.67	14	2	*0.02
Clay	744	33	1.23	6	1	*0.04
Clinton	1,002	59	1.79	6	2	*0.06
Crawford	280	16	*1.50	3	0	*0.00
Daviess	357	30	0.94	3	1	*0.03
Dearborn	1,831	108	2.17	11	4	*0.08
Decatur	855	42	1.61	5	2	*0.08
DeKalb	1,259	65	1.54	3	1	*0.02
Delaware	4,034	178	1.52	11	4	*0.03
Dubois	1,166	54	1.28	7	1	*0.02
Elkhart	6,146	220	1.10	25	5	*0.03
Fayette	427	25	1.04	1	0	*0.00
Floyd	2,556	128	1.70	4	2	*0.03
Fountain	328	29	1.69	4	1	*0.06

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APPENDIX 3D *(Continued from previous page)*

	All Collisions			Fatal Collisions		
County	**Total Collisions**	**Alcohol-related Collisions**	**Alcohol-related Collision Rate**	**Total Fatal Collision**	**Alcohol-related Fatal Collisions**	**Alcohol-related Fatal Collision Rate**
Franklin	532	36	1.57	6	3	*0.13
Fulton	564	24	1.16	5	0	*0.00
Gibson	1,115	48	1.43	9	2	*0.06
Grant	2,274	69	1.00	5	1	*0.01
Greene	826	41	1.24	8	3	*0.09
Hamilton	6,861	247	0.85	8	3	*0.01
Hancock	1,416	65	0.92	7	2	*0.03
Harrison	1,194	61	1.56	8	1	*0.03
Hendricks	3,653	143	0.95	10	2	*0.01
Henry	949	36	0.73	3	0	*0.00
Howard	2,265	74	0.89	5	2	*0.02
Huntington	1,178	43	1.16	7	0	*0.00
Jackson	1,539	77	1.79	11	1	*0.02
Jasper	1,243	69	2.06	8	5	*0.15
Jay	680	21	0.98	5	2	*0.09
Jefferson	859	49	1.51	9	2	*0.06
Jennings	712	35	1.24	6	3	*0.11
Johnson	2,921	136	0.95	5	1	*0.01
Knox	953	70	1.84	5	1	*0.03
Kosciusko	2,293	96	1.24	10	5	*0.06
LaGrange	822	36	0.96	8	4	*0.11
Lake	15,531	934	1.89	42	24	0.05
LaPorte	3,163	208	1.87	15	5	*0.04
Lawrence	1,424	72	1.56	11	6	*0.13
Madison	3,772	157	1.20	14	1	*0.01
Marion	28,997	1,127	1.23	76	16	*0.02
Marshall	1,307	56	1.19	8	2	*0.04
Martin	180	9	*0.88	0	0	*0.00
Miami	837	41	1.12	2	0	*0.00
Monroe	4,223	188	1.33	9	3	*0.02
Montgomery	928	47	1.23	8	1	*0.03
Morgan	1,530	82	1.18	11	3	*0.04
Newton	326	18	*1.28	4	0	*0.00
Noble	1,202	63	1.32	2	0	*0.00
Ohio	162	12	*1.97	1	1	*0.16
Orange	652	26	1.32	0	0	*0.00
Owen	560	24	1.12	5	0	*0.00
Parke	559	38	2.23	3	2	*0.12
Perry	454	30	1.54	5	0	*0.00
Pike	155	11	*0.86	5	1	*0.08
Porter	4,368	270	1.63	10	4	*0.02
Posey	512	32	1.25	3	0	*0.00
Pulaski	420	13	*0.99	2	1	*0.08
Putnam	719	29	0.77	7	3	*0.08
Randolph	483	21	0.81	5	2	*0.08
Ripley	746	38	1.33	4	0	*0.00
Rush	304	23	1.35	1	0	*0.00
Saint Joseph	6,636	323	1.21	18	12	*0.05
Scott	580	30	1.26	4	1	*0.04
Shelby	971	46	1.03	6	3	*0.07

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APPENDIX 3D *(Continued from previous page)*

	All Collisions			Fatal Collisions		
County	**Total Collisions**	**Alcohol-related Collisions**	**Alcohol-related Collision Rate**	**Total Fatal Collision**	**Alcohol-related Fatal Collisions**	**Alcohol-related Fatal Collision Rate**
Spencer	531	34	1.63	3	0	*0.00
Starke	661	32	1.38	6	1	*0.04
Steuben	1,422	71	2.08	4	3	*0.09
Sullivan	410	38	1.79	7	4	*0.19
Switzerland	181	14	*1.34	4	1	*0.10
Tippecanoe	6,939	273	1.54	16	6	*0.03
Tipton	315	15	*0.96	5	0	*0.00
Union	107	3	*0.41	1	0	*0.00
Vanderburgh	6,446	261	1.44	15	5	*0.03
Vermillion	343	17	*1.06	5	0	*0.00
Vigo	3,085	171	1.58	10	2	*0.02
Wabash	931	27	0.83	5	0	*0.00
Warren	263	13	*1.56	4	0	*0.00
Warrick	1,372	68	1.12	5	1	*0.02
Washington	696	47	1.68	9	3	*0.11
Wayne	2,169	101	1.48	10	2	*0.03
Wells	589	16	*0.58	1	0	*0.00
White	834	31	1.27	9	2	*0.08
Whitley	796	44	1.32	7	1	*0.03
Indiana	**188,841**	**8,761**	**1.34**	**718**	**205**	**0.03**

* Rates that are based on numbers lower than 20 are unreliable.
Source: Indiana State Police, 2013

APPENDIX 3E

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, 2011)

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	133	3.8	39	1.1	47	1.4
Allen	1,491	4.2	868	2.4	217	0.6
Bartholomew	346	4.5	207	2.7	236	3.1
Benton	20	2.2	7	*0.8	10	*1.1
Blackford	70	5.5	34	2.7	16	*1.3
Boone	161	2.8	91	1.6	125	2.2
Brown	35	2.3	3	*0.2	12	*0.8
Carroll	109	5.4	13	*0.6	36	1.8
Cass	170	4.3	170	4.3	124	3.2
Clark	791	7.1	389	3.5	189	1.7
Clay	87	3.2	90	3.3	58	2.1
Clinton	140	4.2	48	1.4	64	1.9
Crawford	52	4.8	24	2.2	13	*1.2
Daviess	115	3.6	74	2.3	53	1.7
Dearborn	106	2.1	136	2.7	51	1.0
Decatur	76	2.9	117	4.5	24	0.9
DeKalb	144	3.4	98	2.3	73	1.7
Delaware	514	4.3	220	1.9	113	1.0
Dubois	123	2.9	58	1.4	97	2.3
Elkhart	852	4.3	253	1.3	381	1.9
Fayette	100	4.1	66	2.7	73	3.0
Floyd	728	9.7	302	4.0	114	1.5
Fountain	63	3.6	36	2.1	41	2.4
Franklin	2	*0.1	0	*0.0	77	3.6
Fulton	63	3.0	35	1.7	32	1.5
Gibson	160	4.8	0	*0.0	137	4.1
Grant	207	2.9	179	2.5	74	1.1
Greene	143	4.3	74	2.2	55	1.6
Hamilton	972	3.5	201	0.7	688	2.5
Hancock	253	3.7	119	1.8	153	2.3
Harrison	47	1.2	15	*0.4	19	*0.5
Hendricks	528	3.6	195	1.3	258	1.8
Henry	149	3.0	97	2.0	117	2.4
Howard	210	2.5	207	2.5	109	1.3
Huntington	135	3.6	21	0.6	64	1.7
Jackson	140	3.3	130	3.1	107	2.5
Jasper	108	3.2	30	0.9	46	1.4
Jay	58	2.7	79	3.7	42	2.0
Jefferson	120	3.7	71	2.2	80	2.5
Jennings	46	1.6	54	1.9	60	2.1
Johnson	497	3.5	126	0.9	414	2.9
Knox	116	3.0	76	2.0	315	8.2
Kosciusko	879	11.4	156	2.0	151	2.0
LaGrange	107	2.9	29	0.8	115	3.1
Lake	2,761	5.5	2,136	4.3	1,167	2.3
LaPorte	652	5.8	466	4.2	364	3.2
Lawrence	131	2.8	72	1.6	65	1.4
Madison	418	3.2	370	2.8	198	1.5

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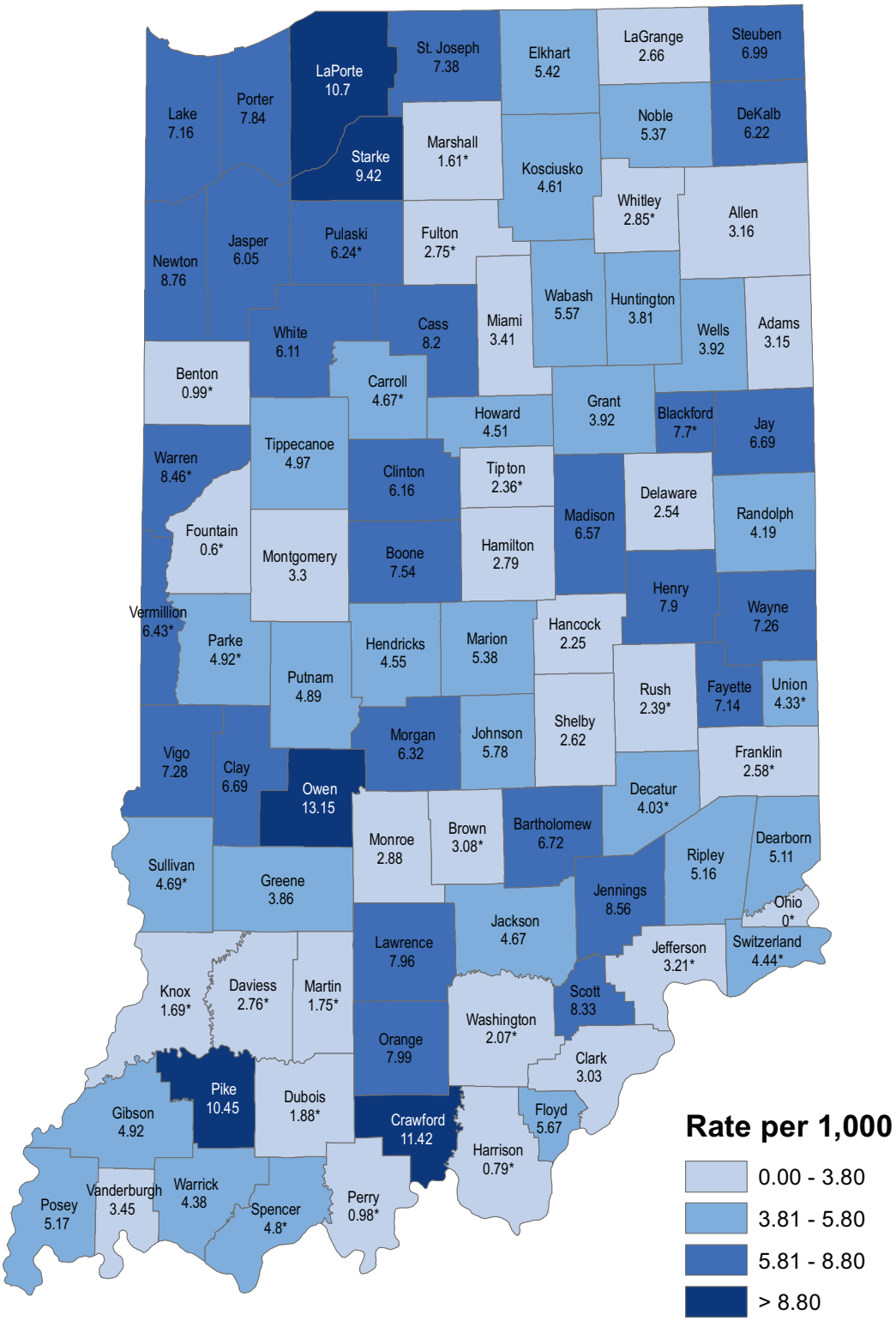
APPENDIX 3E *(Continued from previous page)*

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	2,894	3.2	5,762	6.3	1,012	1.1
Marshall	299	6.3	120	2.5	99	2.1
Martin	28	2.7	20	1.9	15	*1.4
Miami	110	3.0	84	2.3	40	1.1
Monroe	517	3.7	1,033	7.4	1,066	7.7
Montgomery	154	4.0	125	3.3	72	1.9
Morgan	212	3.1	103	1.5	212	3.1
Newton	74	5.2	41	2.9	5	*0.3
Noble	181	3.8	89	1.9	132	2.8
Ohio	19	*3.1	5	*0.8	8	*1.3
Orange	56	2.8	22	1.1	27	1.4
Owen	67	3.1	16	*0.7	30	1.4
Parke	96	5.5	42	2.4	13	*0.7
Perry	81	4.2	71	3.7	43	2.2
Pike	42	3.3	21	1.6	25	1.9
Porter	828	5.0	346	2.1	539	3.3
Posey	70	2.7	39	1.5	34	1.3
Pulaski	32	2.4	10	*0.7	6	*0.4
Putnam	162	4.2	82	2.1	55	1.4
Randolph	32	1.2	49	1.9	62	2.4
Ripley	82	2.7	30	1.0	40	1.3
Rush	24	1.4	2	*0.1	108	6.2
Saint Joseph	692	2.6	126	0.5	339	1.3
Scott	62	2.6	112	4.6	26	1.1
Shelby	83	1.9	26	0.6	47	1.1
Spencer	11	*0.5	0	*0.0	35	1.7
Starke	52	2.2	46	2.0	24	1.0
Steuben	142	4.1	46	1.3	104	3.0
Sullivan	42	1.9	31	1.4	43	2.0
Switzerland	30	2.8	12	*1.1	15	*1.4
Tippecanoe	638	3.7	730	4.2	404	2.3
Tipton	30	1.9	34	2.1	10	*0.6
Union	21	2.8	8	*1.1	10	*1.3
Vanderburgh	905	5.0	629	3.5	210	1.2
Vermillion	71	4.4	59	3.6	31	1.9
Vigo	398	3.7	156	1.4	602	5.6
Wabash	133	4.0	85	2.6	94	2.8
Warren	24	2.8	9	*1.1	12	*1.4
Warrick	115	1.9	69	1.2	89	1.5
Washington	101	3.6	42	1.5	57	2.0
Wayne	190	2.7	266	3.8	55	0.8
Wells	50	1.8	21	0.8	34	1.2
White	117	4.7	40	1.6	35	1.4
Whitley	115	3.4	35	1.0	49	1.5
Indiana	**25,410**	**3.9**	**18,975**	**2.9**	**13,042**	**2.0**

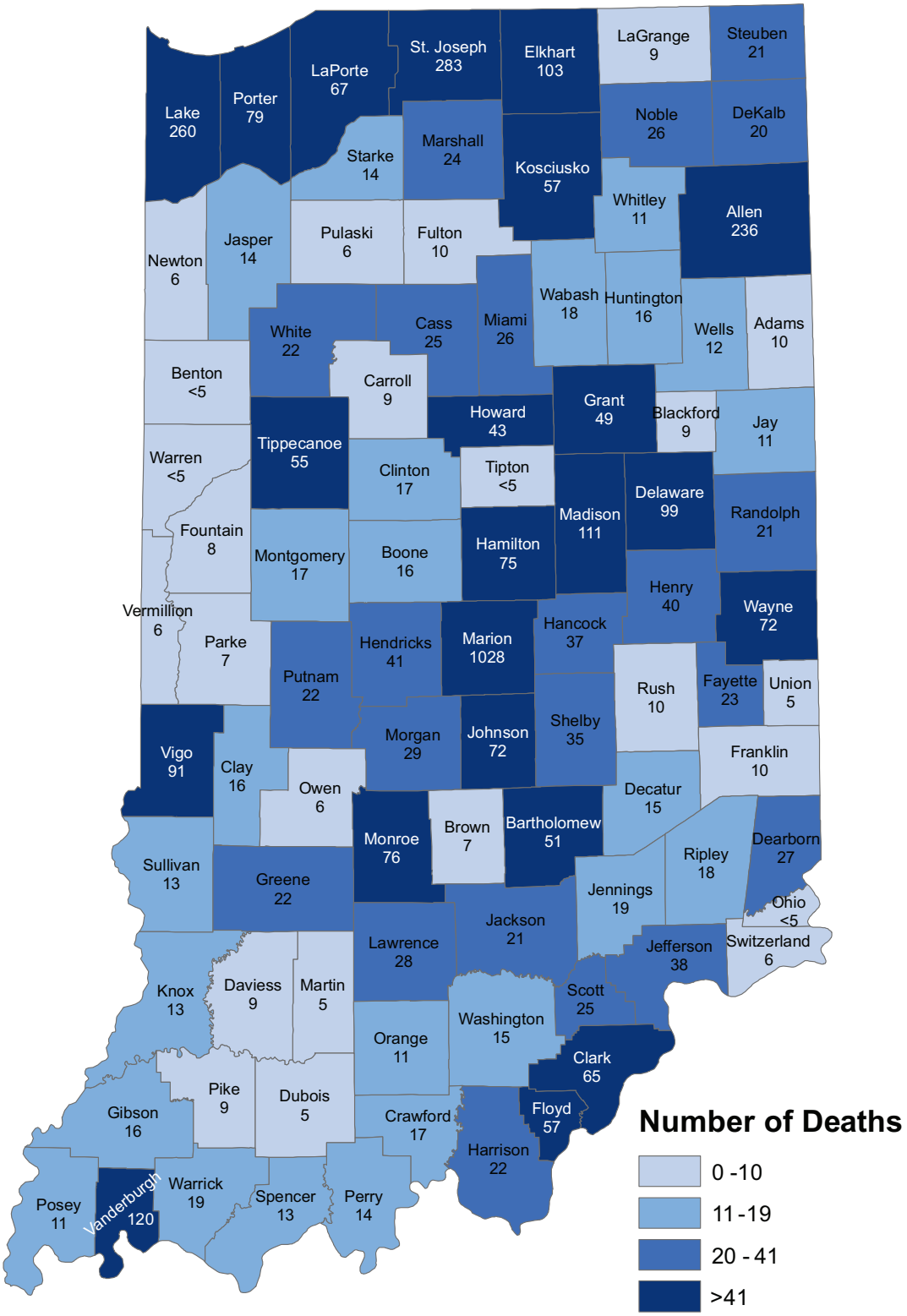
* Rates based on arrest numbers lower than 20 are unreliable.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 3.1 Suspension and Expulsion Rates per 1,000 Enrolled Students, with Alcohol, Drug, or Weapon Involvement in Indiana, by County (School Data, 2007–2008)



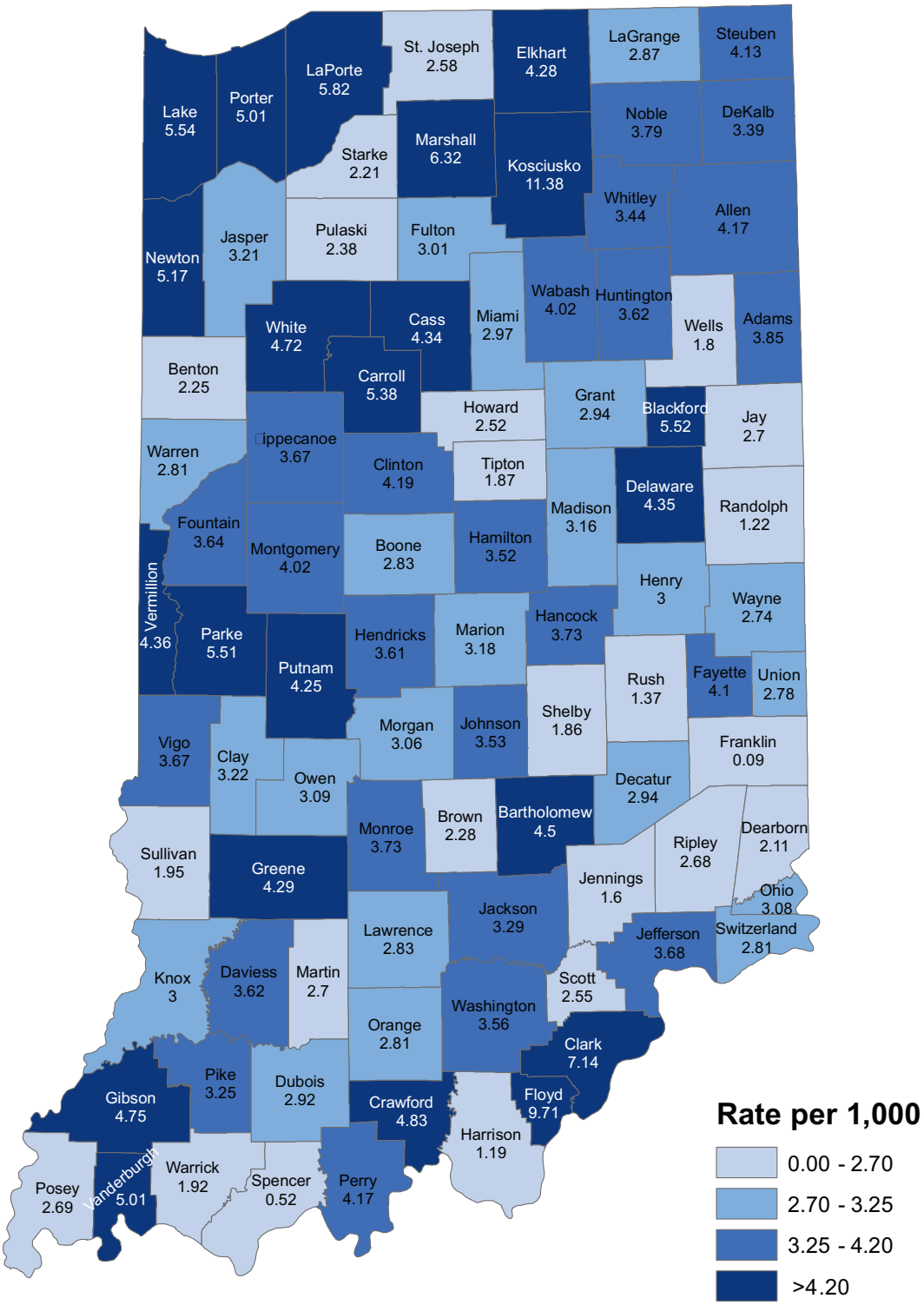
* Rates based on suspension and expulsion numbers lower than 20 are unreliable.
Source: Indiana Department of Education, 2007-2008

Map 3.2 Number of Alcohol-Induced Deaths in Indiana, by County (Indiana Mortality Data, 2000–2011)



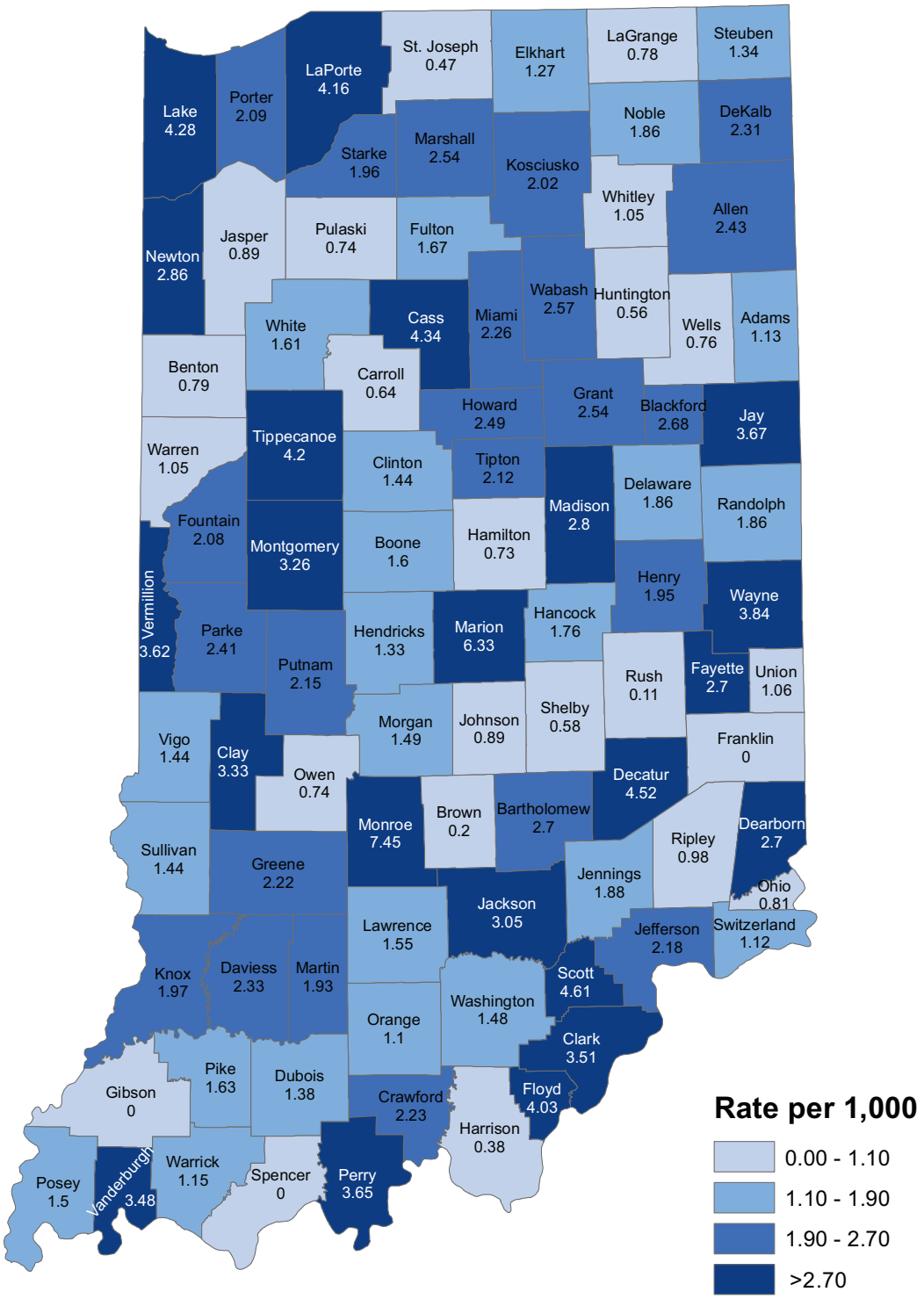
Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2013

Map 3.3 DUI Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2011)



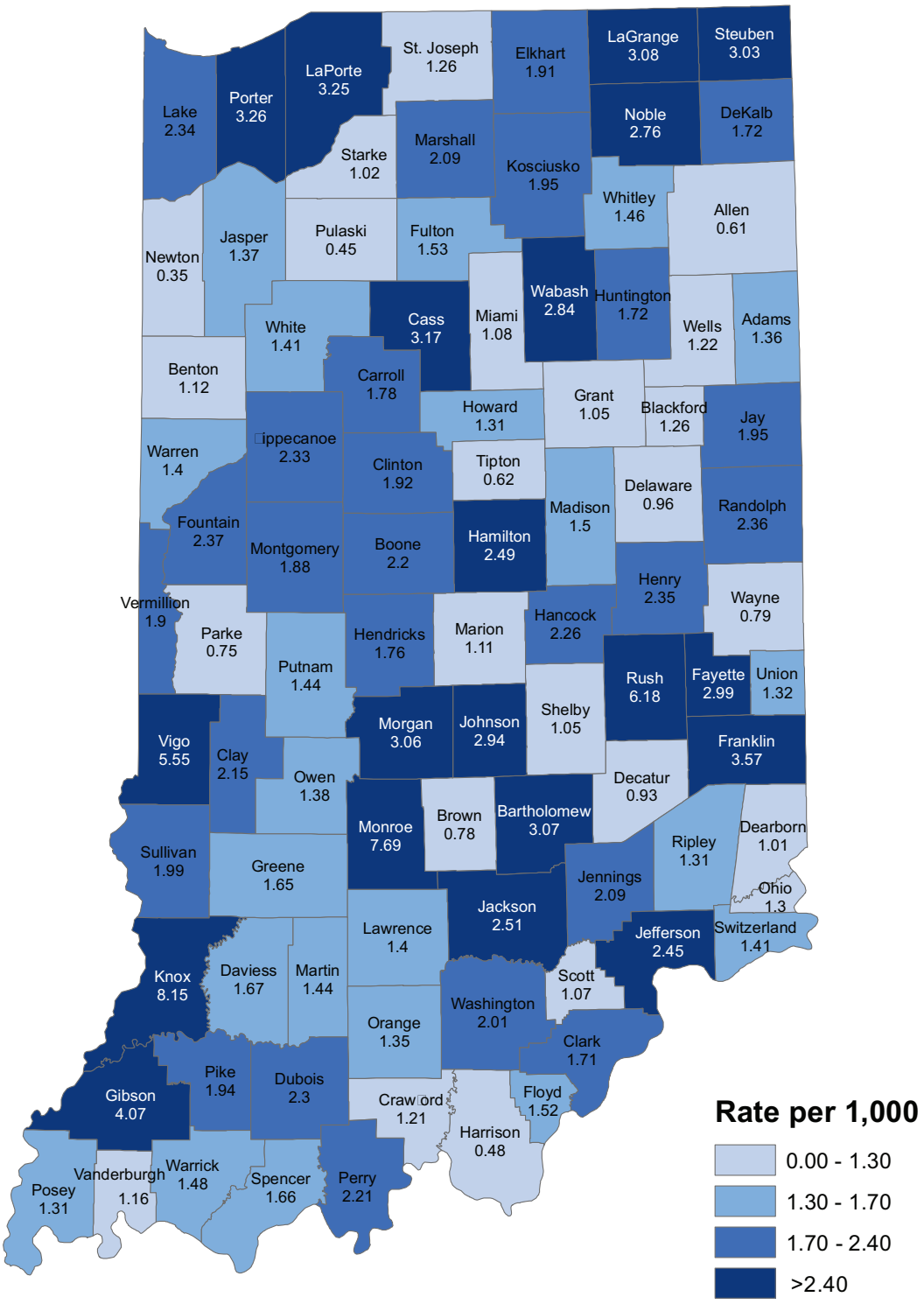
Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 3.4 Public Intoxication Arrest Rates Per 1,000 in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 3.5 Liquor Law Violation Arrest Rates Per 1,000 in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 3E (pages 47-48) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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4 Tobacco Use in Indiana: Consumption Patterns and Consequences

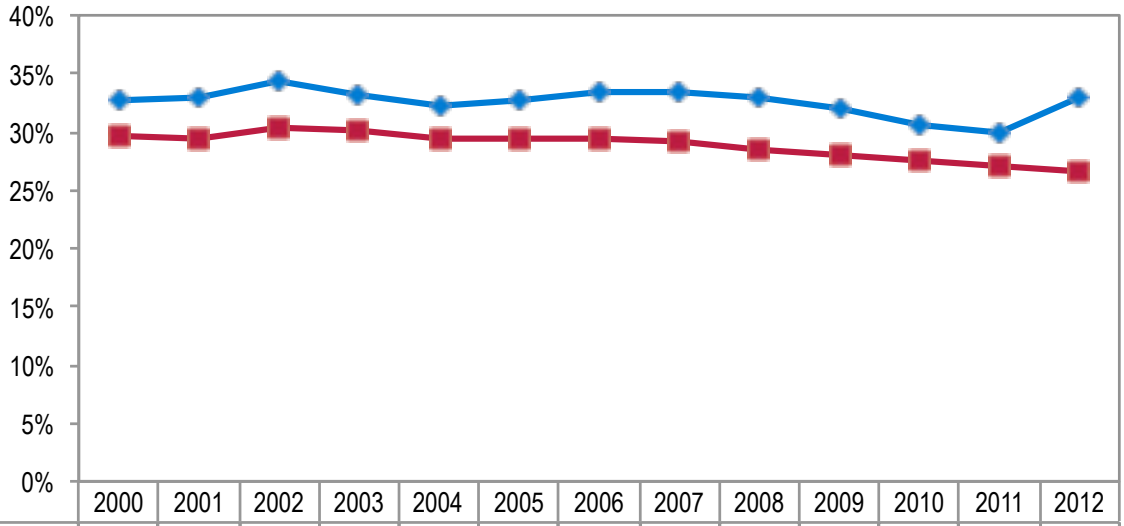
TOBACCO CONSUMPTION

The harmful effects of tobacco on population health have been widely studied and the results published. Cigarette smoking remains the leading cause of preventable death in the United States, accounting for approximately one of every five deaths (Centers for Disease Control and Prevention, 2013).

General Consumption Patterns

The 2012 National Survey on Drug Use and Health (NSDUH) estimates that 32.9% (95% Confidence Interval [CI]: 30.1–35.7) of Indiana residents 12 years and older used a tobacco product in the past month, which was significantly higher than the U.S. rate (26.6%; 26.1–27.1). Tobacco products include cigarettes, smokeless tobacco, cigars, and pipe tobacco. Indiana's rate has remained stable for at least the past 12 years, from 2000 through 2012 (see Figure 4.1) (Substance Abuse and Mental Health Services Administration, 2013).

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, 2000–2012)

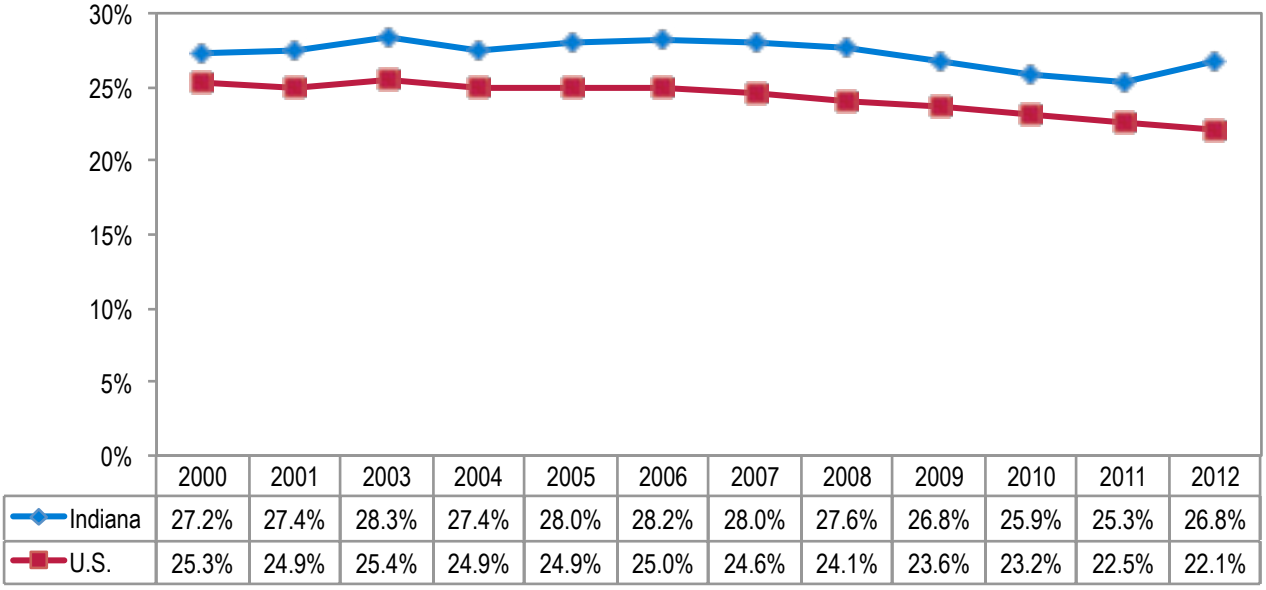


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	32.8%	32.9%	34.3%	33.1%	32.3%	32.7%	33.4%	33.5%	32.9%	31.9%	30.6%	29.9%	32.9%
U.S.	29.8%	29.4%	30.4%	30.1%	29.5%	29.3%	29.5%	29.1%	28.5%	28.0%	27.6%	27.0%	26.6%

Source: Substance Abuse and Mental Health Services Administration, 2013

The majority of tobacco consumers smoke cigarettes. In 2012, 26.8% (95% CI: 24.2–29.5) 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 (22.1%; 95% CI: 21.6–22.6). The smoking prevalence for Indiana remained stable from 2000 (27.2%; 95% CI: 24.7–29.9) to 2012 (see Figure 4.2).

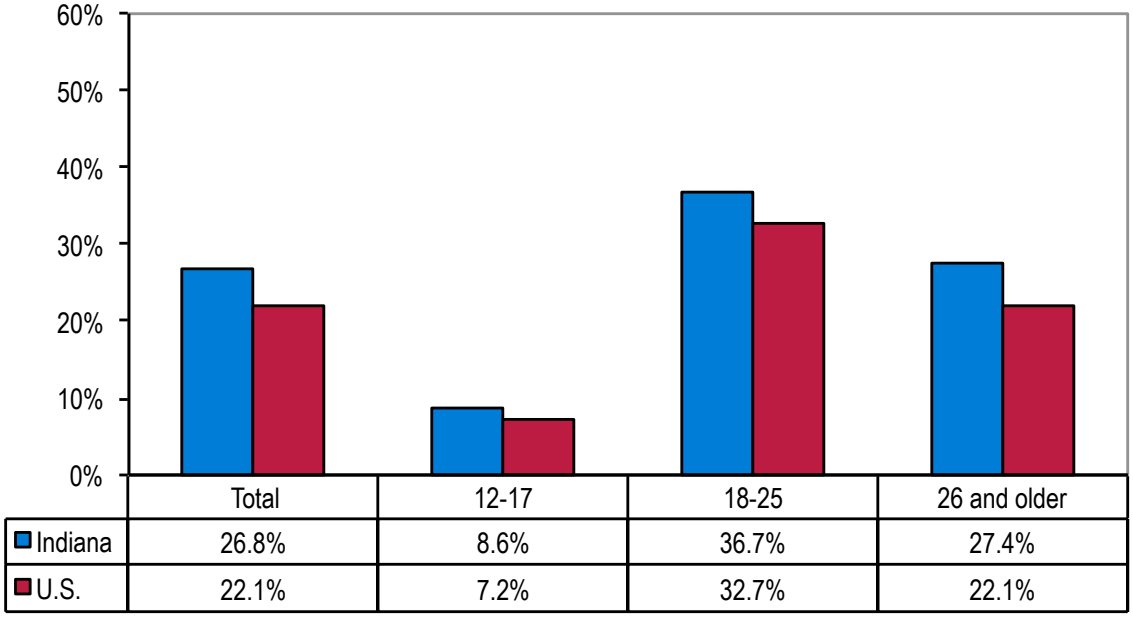
Figure 4.2 Percentage of Indiana and U.S. Population (12 Years and Older) Reporting Cigarette Use in the Past Month (National Survey on Drug Use and Health, 2000–2012)



	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	27.2%	27.4%	28.3%	27.4%	28.0%	28.2%	28.0%	27.6%	26.8%	25.9%	25.3%	26.8%
U.S.	25.3%	24.9%	25.4%	24.9%	24.9%	25.0%	24.6%	24.1%	23.6%	23.2%	22.5%	22.1%

Source: Substance Abuse and Mental Health Services Administration, 2013

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, 2012)



	Total	12-17	18-25	26 and older
Indiana	26.8%	8.6%	36.7%	27.4%
U.S.	22.1%	7.2%	32.7%	22.1%

Source: Substance Abuse and Mental Health Services Administration, 2013

In Indiana, 67.2% (95% CI: 64.5–69.8) of the population 12 years and older perceived smoking one or more packs of cigarettes per day to be a great risk; the percentage within the nation was significantly higher (71.4%; 95% CI: 71.0–71.9) (Substance Abuse and Mental Health Services Administration, 2013).

In addition to smoking rates, cigarette consumption is also an indicator of smoking behavior. Cigarette consumption decreased from 121.0 packs sold per capita in 2001 to 67.4 packs sold per capita in 2013 (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, n.d.a).

Adult Consumption Patterns

The highest rate of tobacco use was among 18- to 25-year-olds. An estimated 44.7% of Hoosiers in this age group (95% CI: 41.0–48.4) reported currently, i.e., within the past 30 days, using a tobacco product, which was significantly higher than the national rate (38.8%; 95% CI: 38.1–39.4). The 30-day prevalence rate for cigarette smoking among 18- to 25-year-olds was 36.7% (95% CI: 33.1–40.4) in Indiana (U.S.: 32.7%; 95% CI: 32.0–33.3) (see Figure 4.3).

Among Hoosiers ages 26 and older, 33.6% (95% CI: 30.3–37.1) used a tobacco product, and 27.4% (95% CI: 24.3–30.8) smoked cigarettes in the past month. U.S. rates were significantly lower for both tobacco use (26.7%; 95% CI: 26.1–27.3) and cigarette smoking (22.1%; 95% CI: 21.6–22.7) (Substance Abuse and Mental Health Services Administration, 2013).

The Behavioral Risk Factor Surveillance System (BRFSS) focuses on behaviors and conditions that are linked with leading causes of death. According to the 2012 BRFSS, the past-month prevalence rate for adult (18 years and older) smoking in Indiana was 24.0% (95% CI: 22.8–25.2). Moreover, 18.0% (95% CI: 16.9–19.1) of Hoosiers used cigarettes every day. Indiana's smoking prevalence rates were significantly higher than national rates: 19.6% of U.S. residents smoked in the past month and 13.5% reported smoking every day (Centers for Disease Control and Prevention, 2012).

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

- Males displayed higher smoking rates than females.
- 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, 2012)

		Indiana	U.S.
Gender	Male	26.5% (24.5–28.4)	21.6%
	Female	21.6% (20.1–23.2)	17.4%
Race/ Ethnicity	White	23.5% (22.2-24.9)	19.2%
	Black	29.2% (24.2-34.2)	22.7%
	Hispanic	18.9% (12.7-25.2)	18.9%
Age Group	18-24	26.1% (21.7-30.5)	21.3%
	25-34	30.9% (27.3-34.6)	26.5%
	35-44	26.8% (23.7-30.0)	21.5%
	45-54	28.2% (25.4-31.0)	22.1%
	55-64	23.4% (20.8-25.9)	18.4%
	65+	9.9% (8.5-11.3)	8.8%
Education	Less than High School	40.1% (35.7-44.5)	33.0%
	High School or GED	26.7% (24.7-28.7)	24.0%
	Some Post-High School	24.0% (21.6-26.3)	19.6%
	College Graduate	8.2% (6.9-9.5)	8.2%
Income	Less than $15,000	39.6% (35.3-43.9)	32.7%
	$15,000 – $24,999	36.0% (32.6-39.4)	27.3%
	$25,000 – $34,999	26.5% (22.5-39.4)	23.1%
	$35,000 – $49,999	20.5% (17.5-23.5)	20.1%
	$50,000 and above	17.1% (15.2-19.0)	12.9%
Total		**24.0% (22.8-25.2)**	**19.6%**

Note: U.S. rates are based on median percentages and do not have an associated confidence interval (CI).
Source: Centers for Disease Control and Prevention, 2012

Adult smoking prevalence in Indiana has been above the U.S. level for at least the past ten years (see Figure 4.4) and ranked 6th among the 50 U.S. states in 2012 (Centers for Disease Control and Prevention, 2012). Adult smoking prevalence, as shown in Figure 4.4, has been trending downward from 2002 through 2010. However, 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".)

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 2013 survey, 27.5% of Indiana college students reported use of cigarettes in the past year (U.S.: 23.4; $P > 0.05$), while 15.1% reported current (past-month) use (U.S. 12.5%; $P > 0.05$). Results for the different types of tobacco by demographic characteristics can be found in Table 4.2 (King & Jun, 2013).[1]

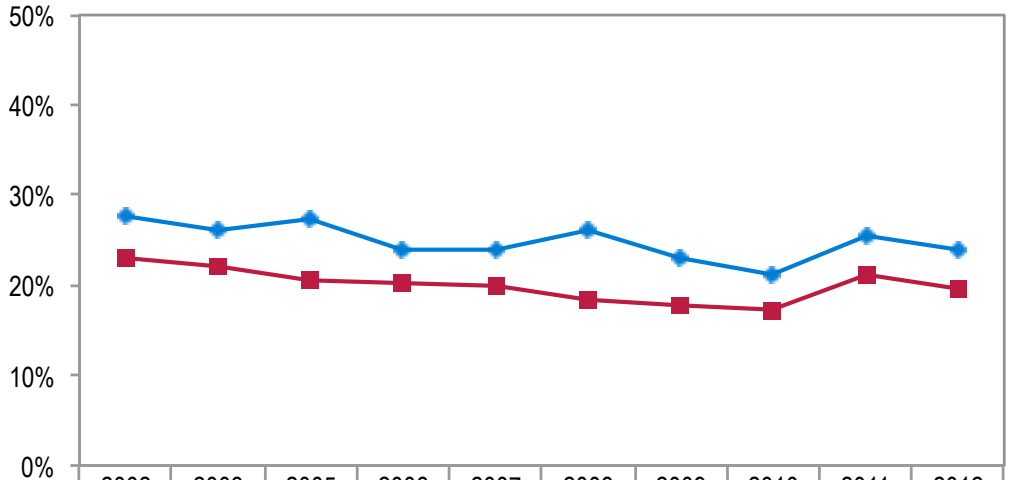
Youth Consumption Patterns

Based on results from the 2012 NSDUH, 10.9% (95% CI: 9.0–13.2) of Hoosiers ages 12 to 17 used a tobacco product in the past month (U.S.: 9.3%; 95% CI: 9.0–9.7). Of these, 8.6% (95% CI: 6.9–10.6) of young Hoosiers smoked cigarettes (U.S.: 7.2%; 95% CI: 6.8–7.5) (Substance Abuse and Mental Health Services Administration, 2013).

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, 1991-2011). 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 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) (Centers for Disease Control and Prevention, 1991-2011).

Figure 4.4 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Current Cigarette Use (Behavioral Risk Factor Surveillance System, 2002–2012)



	2002	2003	2005	2006	2007	2008	2009	2010	2011	2012
Indiana	27.6%	26.1%	27.3%	24.1%	24.1%	26.0%	23.1%	21.2%	25.6%	24.0%
U.S.	23.1%	22.0%	20.5%	20.1%	19.8%	18.4%	17.9%	17.3%	21.2%	19.6%

Note: Prevalence rates, starting with 2011, should not be compared to previous years due to changes in methodology.
Source: Centers for Disease Control and Prevention, 2012

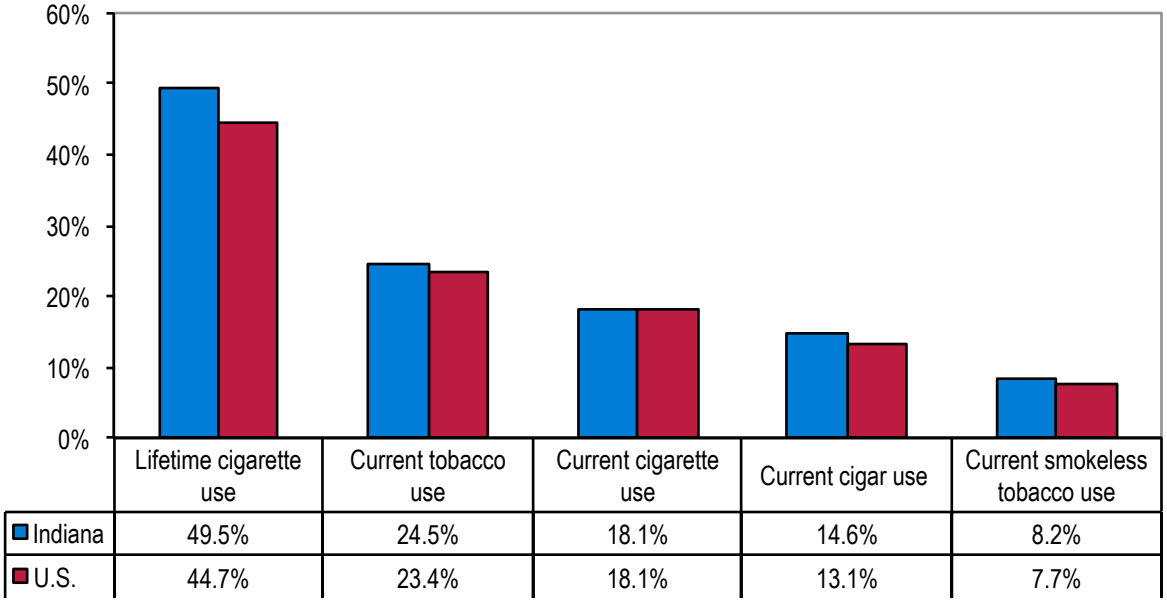
[1]Eleven Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

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, 2013)

	All Students		Gender		Age		Type of Institution	
	Indiana	U.S.	Male	Female	Under 21	21 or Over	Private	Public
Cigarettes (Past-Year)	27.5	23.4	34.5	23.5‡	25.2	30.1‡	19.4	30.2‡
Cigarettes (Past-Month)	15.1	12.5	19.8	12.4‡	13.7	16.6†	9.7	16.9‡
Cigars (Past-Year)	24.1	N/A	41.8	14.2‡	25.6	22.5†	21.5	25.0†
Cigars (Past-Month)	6.8	N/A	13.7	2.9‡	7.9	5.5‡	6.3	6.9
Chewing/ smokeless tobacco (Past-Year)	6.9	N/A	16.3	1.6‡	6.7	7.1	7.1	6.9
Chewing/ smokeless tobacco (Past-Month)	3.1	N/A	7.8	0.4‡	2.6	3.6*	3.4	3.0
Smoking tobacco with hookah/water pipe (Past-Year)	27.9	25.7	33.2	25‡	30.8	24.7‡	22.2	29.9‡
Smoking tobacco with hookah/water pipe (Past-Month)	8.9	N/A	11.8	7.2‡	9.7	8.0*	7.5	9.4*

Note: *$P < 0.05$; †$P < 0.01$; ‡$P < 0.001$; Indiana data are from 2013, while U.S. data are from 2012.
Source: King & Jun, 2013

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



Source: Centers for Disease Control and Prevention, 1991-2011

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).

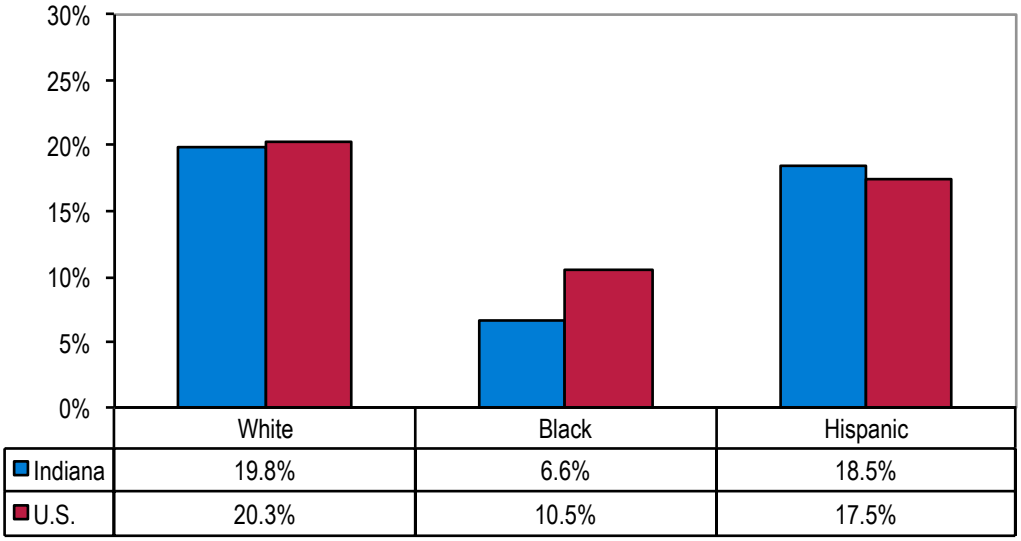
Prevalence of current cigarette use increased as students progressed through high school. In 2011, 12.6% (95% CI: 11.1–14.3) of 9th grade students reported current use; this represents a rate significantly lower than the rates for 11th and 12th grade students (11th grade: 19.0%; 95% CI: 14.4–24.7; 12th grade: 22.6%; 95% CI: 17.0–29.4) in Indiana (see Figure 4.7) (Centers for Disease Control and Prevention, 1991-2011).

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)

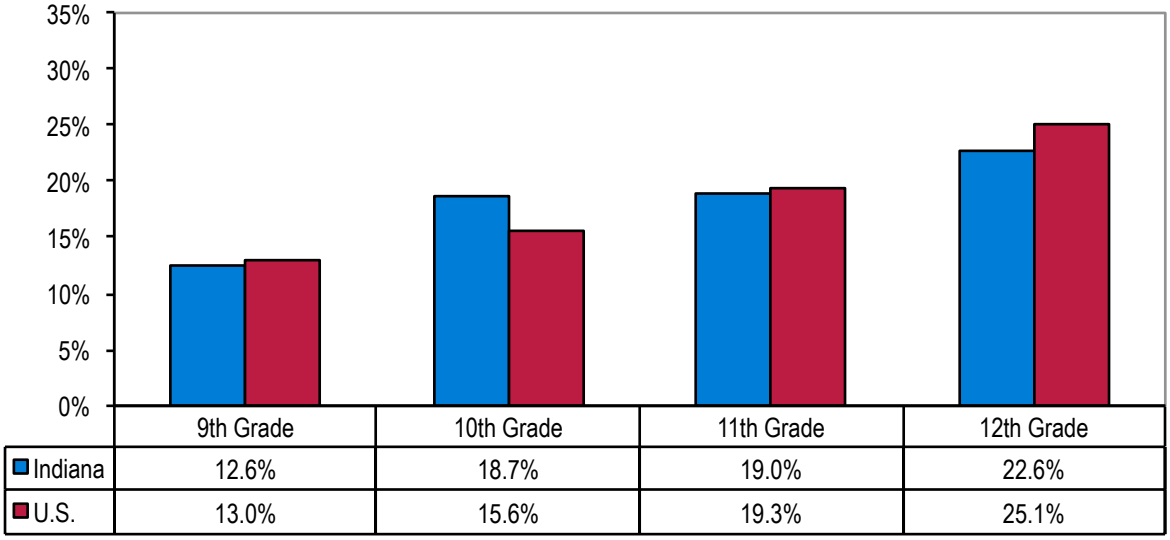
Source: Centers for Disease Control and Prevention, 1991-2011

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)



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: Centers for Disease Control and Prevention, 1991-2011

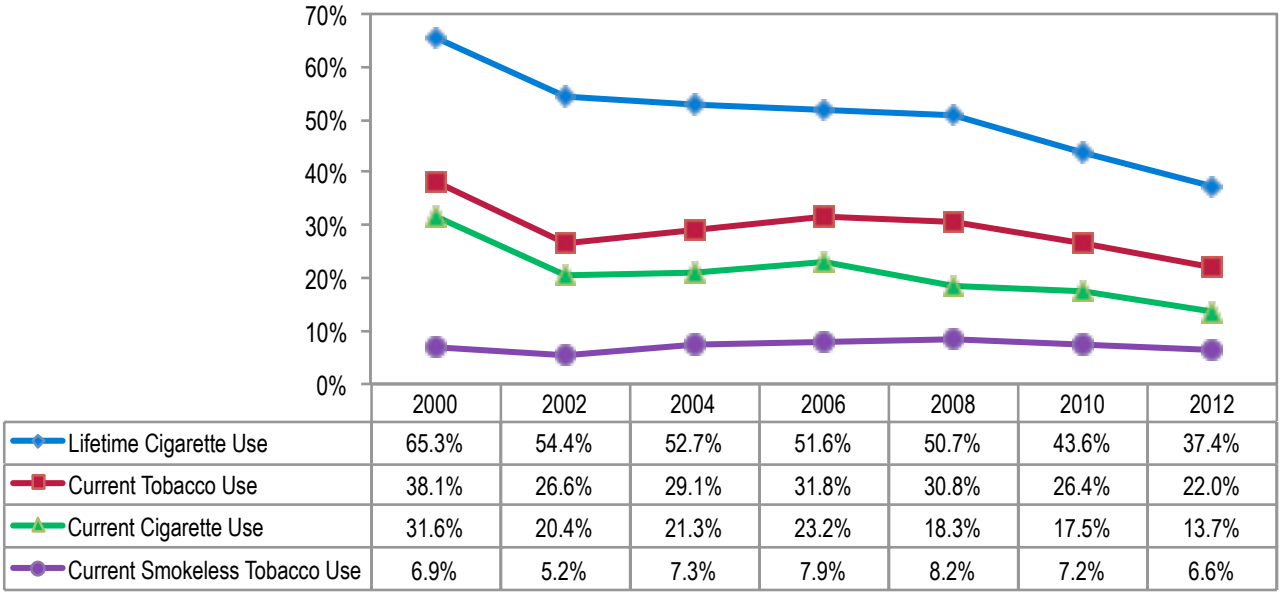
Figure 4.7 Current Smoking Prevalence for Indiana and U.S. High School Students (9th–12th Grade), by Grade (Youth Risk Behavior Surveillance System, 2011)



Source: Centers for Disease Control and Prevention, 1991-2011

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, lifetime use of cigarettes and current use of various tobacco products declined significantly in Indiana from 2000 to 2012 (see Figure 4.8) (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b).

Figure 4.8 Tobacco Use Among Indiana High School Students (9th–12th Grade) (Indiana Youth Tobacco Survey, 2000–2012)



Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b

Based on 2012 IYTS results, a total of 5.9% of middle school students (95% CI: 4.5–7.3) and 22.0% of high school students (95% CI: 19.3–24.7) used a tobacco product (any type) in the past month, while 3.7% of middle school students (95% CI: 2.7–4.7) and 13.7% of high school students (95% CI: 11.3–16.1) smoked cigarettes in the past month (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b). A review of IYTS data from 2000 through 2012 reveals that the prevalence of cigarette smoking has declined significantly among Indiana middle school students over the past few years. The drop in current cigarette use among high school students from 2000 through 2012 was also significant. For trend information, see Figure 4.9.

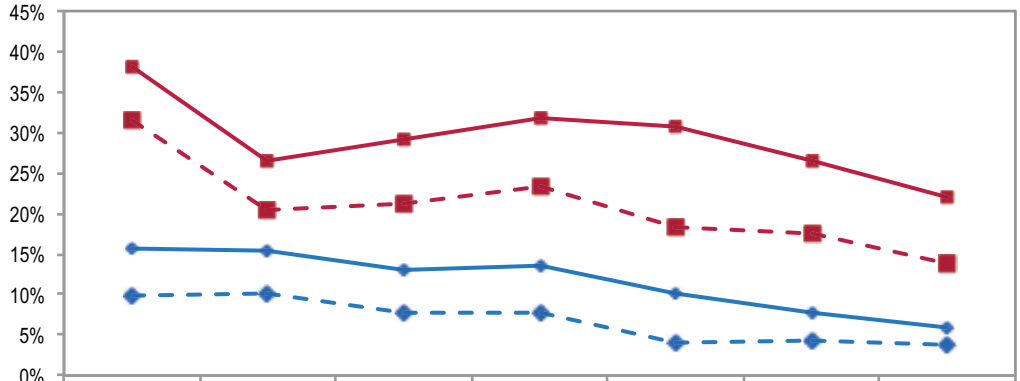
Appendix 4A (pages 69-71) shows the percentages, including 95% confidence intervals, of Indiana middle and high school students who reported current use of various tobacco products, grouped by gender, race/ethnicity, and grade, from 2000 through 2012.

According to the 2013 Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey, the mean age of first-time cigarette use among Hoosier 6th through 12th graders was 13.2 years. Initiation of smokeless tobacco use occurred on average at the age of 13.7 years, cigar use at 14.3 years, and pipe use at 14.5 years (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, Oi, et al., 2013). A comparison of 2013 Indiana data (ATOD survey) and national data (Monitoring the Future, or MTF, survey; Inter-university Consortium for Political and Social Research, University of Michigan, 2013) suggests that Indiana's smoking prevalence among 8th, 10th, and 12th grade students exceeded the national level. However, due the nature of the data, the statistical significance of the differences could not be determined.

Generally, tobacco use seemed to increase as students progressed in school; i.e., higher smoking rates were found in 12th grade students than 8th grade students (see Figure 4.10) (Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013). See Appendix 4B (page 72) for Indiana students' 2013 lifetime and monthly cigarette use by region and grade.

Comparisons between Indiana (ATOD survey) and the United States (MTF survey) 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.

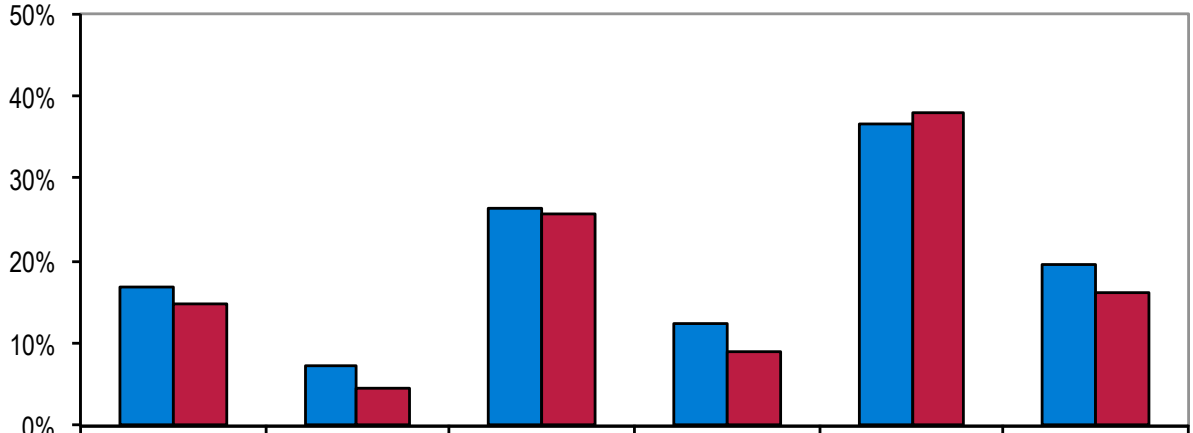
Figure 4.9 Percentage of Indiana Middle School and High School Students Reporting Current Tobacco and Cigarette Use (Indiana Youth Tobacco Survey, 2000–2012)



	2000	2002	2004	2006	2008	2010	2012
Current MS Tobacco Use	15.7%	15.3%	12.9%	13.5%	10.0%	7.8%	5.9%
Current HS Tobacco Use	38.1%	26.6%	29.1%	31.8%	30.8%	26.4%	22.0%
Current MS Cigarettes Use	9.8%	10.0%	7.8%	7.7%	4.1%	4.4%	3.7%
Current HS Cigarettes Use	31.6%	20.4%	21.3%	23.2%	18.3%	17.5%	13.7%

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b

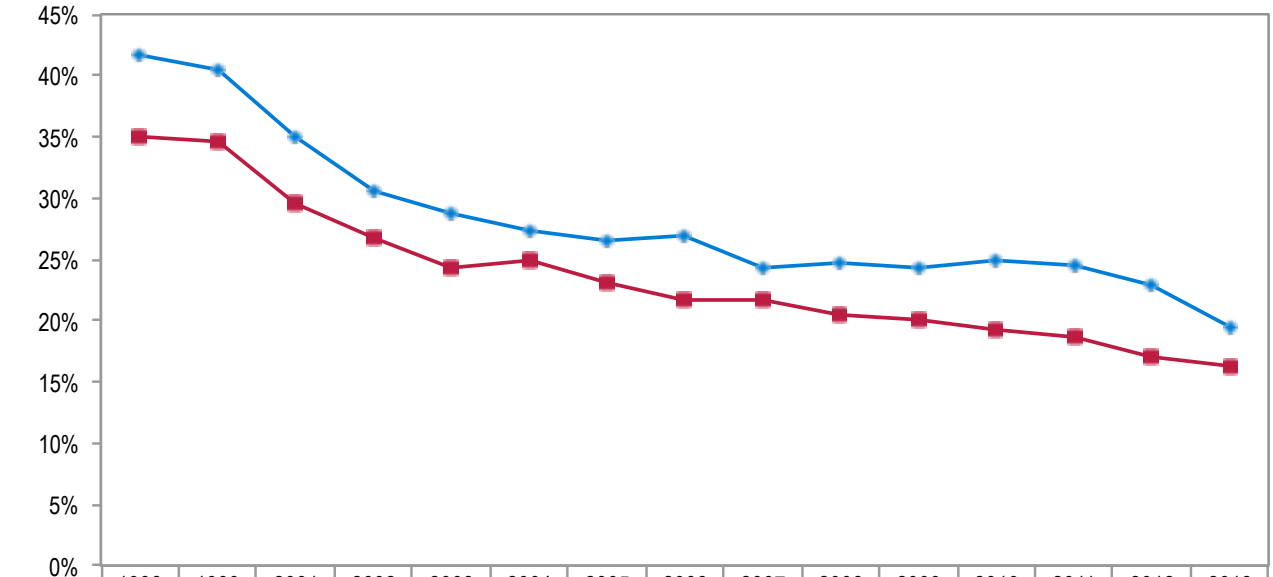
Figure 4.10 Cigarette Use Among 8th, 10th, and 12th Grade Students, Indiana and the United States (Alcohol, Tobacco, and Other Drug Use by Indiana Children Survey and Adolescents and Monitoring the Future Survey, 2013)



	8th Grade Life	8th Grade Month	10th Grade Life	10th Grade Month	12th Grade Life	12th Grade Month
Indiana	16.8%	7.4%	26.3%	12.6%	36.6%	19.5%
U.S.	14.8%	4.5%	25.7%	9.1%	38.1%	16.3%

Source: Gassman et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

Figure 4.11 Past-Month Smoking Prevalence for 12th Grade Students in Indiana and the United States (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 1998–2013)



	1998	1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	41.6%	40.5%	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%
U.S.	35.1%	34.6%	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%

Source: Gassman et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

CONSEQUENCES

Health Consequences

Tobacco is the second major cause of death in the world. It is responsible for approximately 1 in 10 deaths among adults worldwide, or about 5 million deaths annually (World Health Organization, 2012). 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.

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 (Centers for Disease Control and Prevention, 2013).

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 (U.S. Department of Health and Human Services, 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 (Centers for Disease Control and Prevention, 2013). Other specific health-related outcomes include age-related macular degeneration, dental disease, diabetes, autoimmune disease, rheumatoid arthritis, systemic lupus erythematosus, and inflammatory bowel disease (U.S. Department of Health and Human Services, 2014).

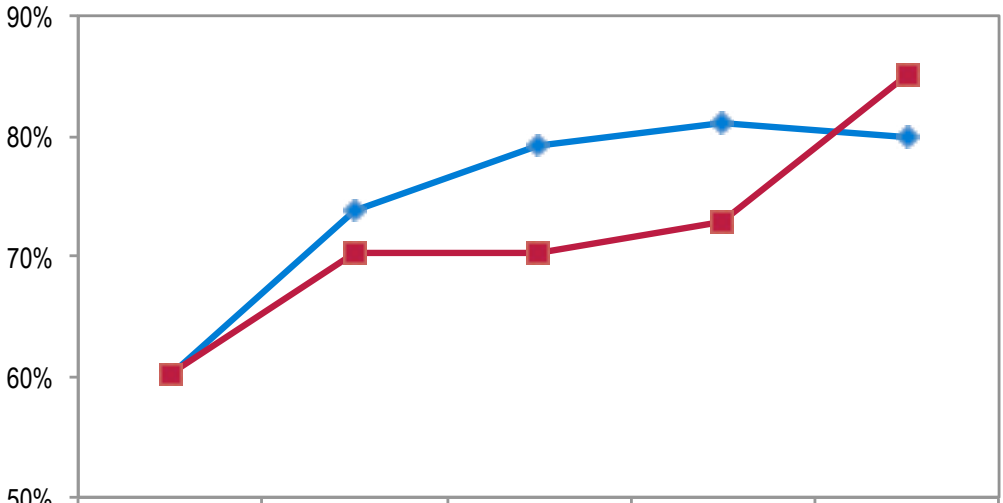
The effects of smoking can also be observed in unborn babies, infants, and children, and may influence women's reproductive health. Women who smoke have an increased risk for infertility and ectopic pregnancies. Smoking during pregnancy causes health problems for both mothers and babies, such as an increased 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 (Centers for Disease Control and Prevention, 2013). The percentage of births to mothers who smoked during pregnancy declined in Indiana from 21.3% in 1997 to 16.6% in 2011; a higher percentage of white mothers (17.9%) smoked during pregnancy than black mothers (13.3%) (Indiana State Department of Health, Epidemiology Resource Center, 2013a). For a list of health outcomes/diseases for which maternal smoking is a significant risk factor in Indiana, see Appendix 4C, page 72.

The use of tobacco products has wide-ranging consequences for adolescents and young adults. The younger people are when they start smoking cigarettes, the more likely they are to become strongly addicted to nicotine. 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. Tobacco use in adolescence is associated with many other health risk behaviors, including higher risk sexual behavior and use of alcohol or other drugs (Centers for Disease Control and Prevention, 2013).

It is estimated that over 9,700 Hoosiers die annually from smoking-attributable causes. This represents an age-adjusted mortality rate of 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 (Centers for Disease Control and Prevention, n.d.). For a detailed list of smoking-attributable mortality rates by disease category, see Appendix 4D, page 73.

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 4E, pages 74-77.

Figure 4.12 Percentage of Smoke-free Homes and Workplaces in Indiana (Adult Tobacco Survey, 2002–2013)



	2002	2006	2007	2008	2013
Homes	60.1%	73.8%	79.3%	81.1%	80.0%
Workplaces	60.3%	70.4%	70.3%	72.8%	85.0%

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013a

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 46,000 deaths due to heart disease and 3,400 lung cancer deaths each year among nonsmoking adults (Centers for Disease Control and Prevention, 2013). Nearly 1,200 Hoosiers are estimated to die each year from secondhand smoke (Indiana State Department of Health, Tobacco Prevention & Cessation, n.d.b).

In Indiana, the percentage of smoke-free homes has increased from 60.1% in 2002 to 80.0% in 2013. However, among smokers, only 40.4% do not allow smoking in their homes. The percentage of smoke-free workplaces[2] rose from 60.3% to 85.0% during that time period (see Figure 4.12) (Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013a).

[2]This measure refers to the prevalence of workers reporting a 100% smoke-free workplace (Adult Tobacco Survey).

Economic Consequences

Annual U.S. tobacco industry marketing expenditures were estimated at $8.8 billion in 2011, including Indiana's share of $271.7 million. Total tobacco marketing expenditures in Indiana declined after peaking at $475.4 million in 2003 (Campaign for Tobacco-Free Kids, 2013a).

The federal excise tax, as of April 1, 2009, is $1.01 per pack of cigarettes. The average state cigarette excise tax rate is $1.53 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, 2013b).

During 2000–2004, cigarette smoking was estimated to be responsible for $193 billion in annual health-related economic losses in the United States ($96 billion in direct medical costs and approximately $97 billion in lost productivity) (Centers for Disease Control and Prevention, 2013). In Indiana, $2.08 billion dollars of health-related costs in 2004 were smoking-attributable expenditures (SAE). Most of these costs accrued through hospital care ($1.14 billion) and prescription drugs ($372 million); the SAE estimate also included ambulatory care ($318 million), nursing home care ($215 million), and other health-related costs ($138 million) (Centers for Disease Control and Prevention, 2004). 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, 2000–2012)

	2000		2002		2004		2006		2008		2010		2012	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
MIDDLE SCHOOL														
Gender														
Male	16.8	(12.9–20.8)	15.9	(12.5–19.3)	11.3	(8.9–13.7)	13.8	(10.4–17.2)	11.5	(8.3–14.7)	10.0	(7.5–12.5)	6.2	(4.6-7.8)
Female	14.6	(10.1–19.0)	14.6	(10.8–18.4)	14.6	(11.3–18.0)	13.2	(10.5–15.8)	8.3	(6.2–10.5)	5.3	(3.4–7.2)	5.5	(3.8-7.2)
Race/Ethnicity														
White	14.3	(10.5–18.1)	12.2	(9.0–15.5)	12.5	(9.6–15.3)	12.2	(9.3–15.0)	13.5	(9.4–17.6)	6.5	(5.0–8.0)	5.4	(3.8-7.0)
Black	22.1	(13.2–30.9)	21.7	(17.0–26.5)	15.9	(10.6–21.3)	19.8	(15.0–24.5)	10.0	(6.6–13.5)	11.7	(7.2–16.3)	5.3	(3.5-7.1)
Hispanic	26.0	(14.9–37.2)	20.3	(12.0–28.7)	14.4	(8.0–20.7)	14.2	(10.1–18.2)	9.3	(6.4–12.3)	14.8	(11.0–18.6)	8.2	(4.8-11.6)
Grade														
6	10.7	(5.3–16.1)	11.1	(6.2–16.0)	8.9	(4.5–13.4)	6.4	(4.5–8.2)	3.2	(1.5–5.0)	2.1	(0.5–3.7)	1.9	(1.0-2.8)
7	12.0	(7.9–16.1)	14.5	(10.8–18.3)	11.5	(8.8–14.3)	11.4	(8.9–13.8)	9.5	(6.9–12.0)	5.7	(3.9–7.5)	5.2	(3.5-6.9)
8	24.9	(19.6–30.1)	19.0	(13.0–25.0)	17.7	(13.4–22.0)	22.3	(17.0–27.5)	17.0	(12.4–21.6)	13.2	(8.8–17.5)	10.6	(7.7-13.5)
Total	15.7	(12.3–19.2)	15.3	(12.5–18.1)	12.9	(10.6–15.3)	13.5	(10.9–16.2)	10.0	(7.5–12.4)	7.8	(6.2–9.4)	5.9	(4.5-7.3)
HIGH SCHOOL														
Gender														
Male	42.5	(36.9–48.0)	30.0	(25.7–34.3)	33.9	(30.9–37.0)	36.0	(31.3–40.7)	34.5	(30.7–38.4)	30.4	(26.5–34.2)	27.4	(23.9-30.9)
Female	33.2	(29.5–37.0)	23.0	(18.4–27.7)	24.0	(21.2–26.7)	27.4	(22.4–32.3)	26.9	(23.6–30.3)	21.9	(19.1–24.8)	16.2	(12.7-19.7)
Race/Ethnicity														
White	39.1	(35.1–43.2)	27.0	(23.1–30.9)	28.9	(25.8–32.0)	32.6	(27.6–37.7)	34.7	(30.4–39.1)	25.7	(22.9–28.4)	22.5	(19.5-25.5)
Black	24.7	(18.8–30.7)	26.4	(20.5–32.3)	24.1	(18.8–29.5)	24.8	(18.8–30.9)	29.7	(24.7–34.7)	24.0	(19.5–28.4)	17.4	(11.0-23.8)
Hispanic	36.7	(25.7–47.7)	22.8	(14.9–30.7)	34.4	(27.5–41.4)	32.0	(27.4–36.6)	25.5	(20.9–30.0)	32.7	(26.7–38.7)	23.1	(17.6-28.6)
Grade														
9	29.5	(22.4–36.5)	23.4	(17.5–29.2)	25.3	(22.4–28.3)	24.3	(20.1–28.5)	22.1	(18.0–26.3)	19.8	(16.7–23.0)	14.5	(10.4-18.6)
10	39.0	(34.0–44.0)	24.9	(18.7–31.0)	25.5	(22.3–28.6)	31.1	(25.4–36.8)	28.7	(23.7–33.6)	23.0	(19.2–26.7)	18.0	(15.9-20.1)
11	36.5	(28.3–44.7)	27.4	(18.6–36.1)	31.7	(26.9–36.5)	36.4	(30.2–42.5)	36.9	(31.3–42.6)	30.9	(27.0–34.9)	26.4	(20.6-32.2)
12	48.2	(37.9–58.5)	32.4	(25.0–39.7)	35.2	(29.3–41.1)	37.6	(30.4–44.8)	37.5	(31.6–43.4)	31.8	(26.1–37.4)	30.0	(24.5-35.5)
Total	**38.1**	**(34.3–41.9)**	**26.6**	**(23.1–30.2)**	**29.1**	**(26.5–31.7)**	**31.8**	**(27.6–36.0)**	**30.8**	**(27.8–33.9)**	**26.4**	**(23.9–28.8)**	**22.0**	**(19.3-24.7)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2011

APPENDIX 4A - Part 2

Percentage of Indiana Middle School and High School Respondents Who Currently Use Cigarettes, by Gender, Race/Ethnicity, and School Grade (Indiana Youth Tobacco Survey, 2000–2012)

	2000		2002		2004		2006		2008		2010		2012	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Gender														
Male	9.3	(6.8–11.9)	8.4	(5.6–11.1)	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)
Female	10.4	(6.7–14.2)	11.1	(7.4–14.8)	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)
Race/Ethnicity														
White	9.0	(5.9–12.1)	9.1	(6.1–12.1)	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)
Black	12.3	(6.0–18.6)	10.2	(7.2–13.1)	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)
Hispanic	20.2	(10.3–30.1)	12.1	(5.6–18.6)	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)
Grade														
6	5.9	(2.1–9.7)	5.0	(1.6–8.4)	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)
7	7.2	(4.1–10.4)	10.2	(6.9–13.5)	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)
8	17.1	(11.8–22.3)	13.2	(8.3–18.1)	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)
Total	9.8	(7.1–12.6)	10.0	(7.6–12.4)	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)
HIGH SCHOOL														
Gender														
Male	32.8	(27.9–37.7)	21.2	(17.9–24.5)	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)
Female	30.1	(26.0–34.2)	19.7	(15.3–24.2)	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)
Race/Ethnicity														
White	32.8	(29.4–36.3)	20.9	(17.1–24.7)	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)
Black	16.5	(11.5–21.6)	16.4	(11.4–21.5)	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)
Hispanic	28.2	(16.3–40.1)	17.6	(7.8–27.4)	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)
Grade														
9	23.8	(17.1–30.5)	17.0	(11.6–22.5)	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)
10	31.4	(26.9–35.9)	19.5	(14.1–25.0)	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)
11	30.5	(24.5–36.5)	19.7	(13.1–26.3)	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)
12	41.8	(31.7–52.0)	27.3	(20.5–34.1)	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)
Total	**31.6**	**(28.3–34.9)**	**20.4**	**(17.0–23.8)**	**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)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b

APPENDIX 4A - Part 3

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, 2000–2012)

	2000		2002		2004		2006		2008		2010		2012	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Gender														
Male	6.3	(3.8–8.8)	3.3	(1.7–4.9)	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)
Female	1.8	(0.7–3.0)	1.7	(0.7–2.7)	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)
Race/Ethnicity														
White	3.8	(2.3–5.2)	2.5	(1.4–3.6)	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)
Black	3.8	(0.0–8.1)	2.0	(0.8–3.2)	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)
Hispanic	7.4	(0.6–14.1)	1.3	(0.0–3.0)	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)
Grade														
6	4.2	(1.0–7.4)	1.6	(0.3–3.0)	1.9	(0.2–3.5)	1.5	(0.6–2.3)	0.9	(0.1–1.8)	0.5	(0.2–1.3)	0.7	(0.0-1.4)
7	2.8	(0.9–4.7)	2.2	(0.6–3.8)	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)
8	5.4	(2.1–8.6)	3.1	(1.5–4.7)	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)
Total	4.1	(2.7–5.6)	2.4	(1.6–3.2)	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)
HIGH SCHOOL														
Gender														
Male	12.2	(8.5–16.0)	8.1	(4.4–11.8)	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)
Female	1.4	(0.6–2.1)	2.1	(0.8–3.5)	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)
Race/Ethnicity														
White	7.7	(5.3–10.1)	5.9	(3.6–8.2)	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)
Black	1.2	(0.0–2.8)	3.7	(0.0–8.5)	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)
Hispanic	N/A	N/A	0.5	(0.0–1.2)	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)
Grade														
9	5.4	(2.0–8.8)	3.9	(2.1–5.7)	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)
10	6.7	(4.4–9.0)	5.6	(3.2–7.9)	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)
11	6.8	(2.4–11.3)	6.5	(0.3–12.6)	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)
12	8.9	(2.3–15.6)	5.2	(1.8–8.6)	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)
Total	**6.9**	**(4.7–9.2)**	**5.2**	**(3.1–7.4)**	**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)**

Source: Indiana State Department of Health, Tobacco Prevention and Cessation Commission, 2013b

APPENDIX 4B

Percentage of Indiana Students Reporting Lifetime and Monthly Cigarette Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	5.8	*4.8	*8.6	5.5	6.4	5.7	6.2	*3.2	*7.3
	Monthly	2.0	1.9	1.4	2.3	1.7	*2.9	*4.1	*1.2	*2.9
7th Grade	Lifetime	9.6	*8.2	9.7	*6.0	9.7	*11.1	*15.8	8.8	10.6
	Monthly	3.6	3.0	3.6	*1.8	3.5	4.3	*7.9	3.1	4.0
8th Grade	Lifetime	16.8	*14.2	16.1	*13.5	15.9	*19.9	*23.2	*14.4	*20.7
	Monthly	7.4	*6.2	*6.1	*5.4	6.8	*8.7	10.0	6.9	*9.6
9th Grade	Lifetime	21.9	*18.4	20.5	*18.2	22.0	*21.4	*28.6	21.6	*27.1
	Monthly	10.4	*6.1	9.9	*8.3	10.2	9.5	*14.6	*11.9	*14.2
10th Grade	Lifetime	26.3	25.5	24.8	*22.3	25.9	26.6	*32.5	24.7	*30.4
	Monthly	12.6	*11.2	11.6	*10.6	12.0	12.8	*16.6	12.2	*15.6
11th Grade	Lifetime	32.0	31.4	32.5	*26.8	29.8	30.4	30.2	33.1	*37.7
	Monthly	16.5	16.1	16.7	*13.3	14.9	*13.8	16.9	17.8	*21.0
12th Grade	Lifetime	36.6	36.1	35.7	*28.9	*33.9	38.4	37.5	36.5	*42.0
	Monthly	19.5	18.1	20.5	*14.9	*16.6	19.2	22.5	20.1	*24.3

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman, et al., 2013

APPENDIX 4C

Smoking-Attributable Health Outcomes or Diseases for which Maternal Smoking is a Significant Risk Factor in Indiana (Smoking-Attributable Mortality, Morbidity, and Economic Costs, 2004)

Relative Risk (Risk for infants having the condition, given that their mother smoked during pregnancy; e.g., the risk of SID is 2.29 as high in infants whose mothers smoked during pregnancy as it is in those whose mothers did not smoke)	Sudden Infant Death (SID) Syndrome	2.29
	Short Gestation / Low Birth Weight	1.83
	Respiratory Distress (Syndrome)—newborn	1.30
	Other Respiratory Conditions—perinatal	1.41
Mortality Number of infant deaths caused by maternal smoking)	Short Gestation / Low Birth Weight	Males: 74 Females: 57
	Sudden Infant Death Syndrome	Males: 20 Females: 22
	Respiratory Distress (Syndrome)—newborn	Males: 10 Females: 8
	Other Respiratory Conditions—perinatal	Males: 15 Females: 10
Maternal Smoking Prevalence (Among women who gave birth, percentage who had smoking during pregnancy, as indicated on the birth certificate)		18.0

Source: Centers for Disease Control and Prevention, 2004

APPENDIX 4D

Average Annual Age-Adjusted Smoking-Attributable Mortality Rate per 100,000 Population Among Adults 35 Years and Older in Indiana (Smoking-Attributable Mortality, Morbidity, and Economic Costs, 2000–2004)

Disease Category	Male	Female	Total
Malignant Neoplasms			
Lip, Oral Cavity, Pharynx	4.9	1.3	2.9
Esophagus	12.1	2.0	6.4
Stomach	2.3	0.6	1.3
Pancreas	5.6	4.4	5.0
Larynx	3.6	0.7	1.9
Trachea, Lung, Bronchus	152.3	66.7	102.2
Cervix Uteri	0.0	0.6	0.3
Kidney and Renal Pelvis	5.5	0.4	2.6
Urinary Bladder	7.0	1.2	3.5
Acute Myeloid Leukemia	1.6	0.4	0.9
Subtotal	**194.9**	**78.3**	**127.0**
Cardiovascular Diseases			
Ischemic Heart Disease	88.6	34.5	57.8
Other Heart Disease	29.5	11.4	18.4
Cerebrovascular Disease	14.9	11.1	12.5
Atherosclerosis	3.4	1.0	1.8
Aortic Aneurysm	11.4	3.8	6.8
Other Circulatory Diseases	1.1	0.9	1.0
Subtotal	**148.9**	**62.7**	**98.3**
Respiratory Diseases			
Pneumonia, Influenza	10.9	4.8	6.9
Bronchitis, Emphysema	17.5	9.2	12.4
Chronic Airway Obstruction	85.0	52.7	64.3
Subtotal	**113.4**	**66.7**	**83.6**
Average Annual Total	**457.2**	**207.7**	**308.9**

Source: Centers for Disease Control and Prevention, 2004

APPENDIX 4E

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

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Percent of Pregnant Women who Smoke	Asthma-related ER Visits per 10,000	Lung Cancer Deaths per 100,000	COPD Deaths per 100,000	Number of Deaths due to SHS	Number of Tobacco-related Illnesses	Number of Deaths due to Tobacco
Adams	4,853	20.5%	8.4	38.30	43.2	28.7	7	1076	54
Allen	56,802	21.9%	12.2	54.42	49.5	49.0	65	10618	531
Bartholomew	12,463	21.7%	15.8	7.03	59.5	56.3	14	2286	114
Benton	N/A	N/A	18.9	30.40	80.1	72.4	2	301	15
Blackford	3,123	31.7%	35.2	63.17	62.9	46.6	3	450	22
Boone	7,697	18.9%	11.6	27.61	57.6	39.9	9	1475	74
Brown	2,281	18.9%	16.5	*	53.5	44.4	3	479	24
Carroll	3,982	26.2%	22.6	23.19	59.8	59.5	4	645	32
Cass	7,045	24.4%	20.8	30.93	67.5	54.8	8	1310	65
Clark	23,639	28.1%	14.9	42.91	73.3	61.8	19	3087	154
Clay	5,623	27.5%	20.8	40.62	56.6	62.1	5	850	42
Clinton	4,680	19.2%	20.7	47.99	62.3	54.3	7	1084	54
Crawford	1,981	24.1%	30.9	26.81	64.2	57.7	2	344	17
Daviess	5,564	24.7%	12	24.12	51.5	44.4	6	954	48
Dearborn	10,734	28.6%	22.8	23.52	63.9	52.0	9	1475	74
Decatur	4,258	22.2%	22.6	43.91	72.1	46.9	5	786	39
DeKalb	6,746	21.7%	22.7	24.21	51.7	59.1	8	1289	64
Delaware	24,654	26.2%	22.4	47.26	71.7	58.4	23	3800	190
Dubois	5,401	17.3%	13.6	22.44	38.7	29.2	8	1269	63
Elkhart	29,973	21.2%	13.1	36.70	52.1	43.5	36	5849	292
Fayette	5,132	27.8%	27	40.11	73.7	70.9	5	819	41
Floyd	16,768	29.6%	11.8	35.24	69.2	59.7	14	2266	113
Fountain	3,672	28.1%	22.1	114.42	74.3	57.6	4	574	29
Franklin	5,082	29.8%	21.6	16.49	53.4	41.4	4	709	35
Fulton	3,056	19.5%	26.8	42.18	65.0	61.1	4	656	33

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APPENDIX 4E *(Continued from previous page)*

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Percent of Pregnant Women who Smoke	Asthma-related ER Visits per 10,000	Lung Cancer Deaths per 100,000	COPD Deaths per 100,000	Number of Deaths due to SHS	Number of Tobacco-related Illnesses	Number of Deaths due to Tobacco
Gibson	6,517	25.7%	26.8	41.82	52.4	45.3	6	1040	52
Grant	15,040	27.4%	27.1	98.88	66.7	79.4	14	2349	117
Greene	6,548	25.9%	23.9	24.81	69.1	58.4	6	1061	53
Hamilton	25,487	13.3%	3.4	21.33	39.0	35.9	36	5847	292
Hancock	9,868	19.1%	13.4	27.04	61.2	51.1	11	1772	89
Harrison	4,779	15.9%	21.4	26.55	59.4	65.4	7	1098	55
Hendricks	21,636	20.5%	9.5	18.59	50.6	54.9	20	3331	167
Henry	10,411	27.1%	30.5	65.07	69.3	61.3	10	1552	78
Howard	15,665	24.8%	23.9	50.57	61.5	51.2	17	2719	136
Huntington	7,819	27.6%	26.9	51.16	47.6	58.0	7	1218	61
Jackson	7,958	24.9%	21.2	41.20	67.3	61.3	8	1323	66
Jasper	N/A	N/A	23.1	19.97	79.0	38.4	6	961	48
Jay	3,169	20.3%	20.6	60.25	74.9	60.1	4	698	35
Jefferson	7,127	28.4%	29.7	24.10	69.9	66.2	6	1014	51
Jennings	7,747	36.9%	26.6	28.61	77.7	95.6	5	882	44
Johnson	26,819	26.1%	17.9	37.65	56.8	71.2	23	3686	184
Knox	9,347	30.9%	29.5	48.55	54.3	60.8	8	1256	63
Kosciusko	13,350	23.2%	16.6	34.41	55.9	41.4	15	2370	118
LaGrange	5,424	22.3%	6.9	29.24	40.2	40.0	7	1117	56
Lake	95,502	25.9%	12.5	63.54	57.8	39.4	95	15505	775
LaPorte	21,349	24.8%	26.8	49.16	54.8	50.4	22	3523	176
Lawrence	7,334	20.8%	26	48.08	66.4	47.5	9	1469	73
Madison	29,969	29.6%	22.1	86.68	62.6	50.0	26	4267	213
Marion	173,960	25.7%	14.3	75.52	66.9	61.8	169	27532	1377

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APPENDIX 4E *(Continued from previous page)*

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Percent of Pregnant Women who Smoke	Asthma-related ER Visits per 10,000	Lung Cancer Deaths per 100,000	COPD Deaths per 100,000	Number of Deaths due to SHS	Number of Tobacco-related Illnesses	Number of Deaths due to Tobacco
Marshall	7,912	23.0%	16.8	35.13	45.7	58.2	9	1444	72
Martin	1,445	18.4%	24.4	28.27	58.4	46.5	2	332	17
Miami	8,496	29.8%	25.4	53.64	67.1	39.4	7	1155	58
Monroe	22,870	19.8%	17.6	21.39	49.2	34.4	24	3858	193
Montgomery	7,159	24.7%	25.5	45.80	64.9	44.0	7	1204	60
Morgan	11,757	22.8%	28.1	60.67	68.1	80.9	13	2134	107
Newton	N/A	N/A	26.4	†	64.6	54.9	3	466	23
Noble	9,573	27.6%	23.5	35.59	61.8	56.7	9	1481	74
Ohio	N/A	N/A	22.7	†	75.1	†	1	180	9
Orange	4,187	28.0%	26.9	35.99	81.0	57.9	4	618	31
Owen	5,416	32.7%	33.2	39.37	82.3	68.0	4	697	35
Parke	N/A	N/A	19.8	37.08	73.6	53.9	3	552	28
Perry	3,905	25.7%	28.9	95.16	68.2	45.7	4	605	30
Pike	1,684	16.9%	20.8	27.90	57.1	54.0	3	411	21
Porter	27,871	22.4%	14	30.62	54.3	41.8	29	4697	235
Posey	4,172	21.1%	20.1	16.94	47.6	60.1	5	866	43
Pulaski	2,316	22.7%	26.8	41.72	58.2	50.4	3	440	22
Putnam	6,862	22.9%	23.3	33.06	76.0	46.9	7	1153	58
Randolph	4,492	22.7%	26.2	66.16	64.2	42.7	5	877	44
Ripley	5,583	26.3%	27.6	31.77	63.0	55.6	5	849	42
Rush	2,761	21.1%	28.8	61.85	65.8	71.7	4	584	29
Saint Joseph	44,037	21.9%	11.9	41.09	55.5	43.6	52	8497	425
Scott	3,913	21.3%	36.2	32.53	80.6	83.0	5	735	37
Shelby	9,775	29.1%	24.3	46.24	62.8	51.1	9	1390	70
Spencer	3,337	21.0%	20.3	31.67	53.0	35.8	4	652	33

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APPENDIX 4E *(Continued from previous page)*

County	Estimated Number of Adult Smokers	Estimated Adult Smoking Rate	Percent of Pregnant Women who Smoke	Asthma-related ER Visits per 10,000	Lung Cancer Deaths per 100,000	COPD Deaths per 100,000	Number of Deaths due to SHS	Number of Tobacco-related Illnesses	Number of Deaths due to Tobacco
Starke	5,706	32.3%	24.6	57.19	77.1	65.4	5	754	38
Steuben	7,141	27.1%	22	31.62	38.3	53.3	7	1063	53
Sullivan	4,289	25.4%	25.4	29.60	58.3	59.8	4	696	35
Switzerland	2,509	31.8%	22.5	†	75.4	†	2	290	15
Tippecanoe	22,890	16.7%	13.9	43.50	56.6	52.6	29	4766	238
Tipton	1,982	16.2%	15.7	61.77	46.5	45.4	3	530	27
Union	N/A	N/A	23.2	†	57.1	†	1	235	12
Vanderburgh	36,350	26.0%	20	55.45	65.5	56.3	34	5501	275
Vermillion	N/A	N/A	26.3	57.82	67.3	58.5	3	537	27
Vigo	20,097	23.7%	21.1	42.24	70.0	64.2	21	3387	169
Wabash	5,035	19.8%	28.5	37.89	49.3	51.6	7	1119	56
Warren	1,335	20.5%	22.7	80.67	52.2	59.7	2	269	13
Warrick	7,657	17.3%	16.8	43.53	56.5	50.9	10	1676	84
Washington	N/A	N/A	17.9	†	73.9	68.3	5	871	44
Wayne	14,743	27.8%	21.7	39.29	74.8	52.9	14	2275	114
Wells	4,790	23.1%	17.5	28.41	46.2	61.6	5	883	44
White	3,942	21.1%	24.8	48.85	76.8	47.5	5	808	40
Whitley	5,624	22.4%	16.7	26.76	53.9	58.0	6	983	49
Indiana	**1,170,121**	**24.0%**	**16.6**	**46.8**	**60.0**	**52.4**	**1,192**	**194560**	**9728**

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

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5 Marijuana Use in Indiana: Consumption Patterns and Consequences

MARIJUANA CONSUMPTION

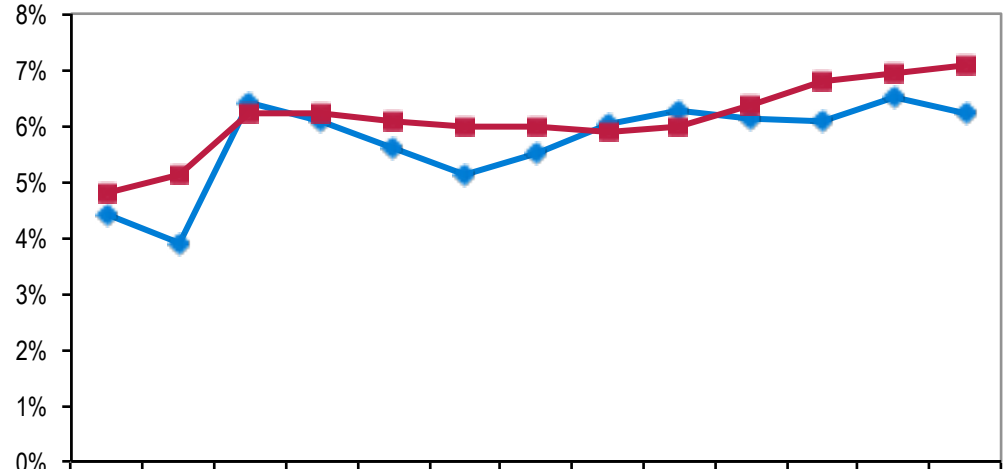
Marijuana is a green, brown, or gray mixture of dried, shredded leaves, stems, seeds, and flowers of the hemp plant (Cannabis sativa). All forms of cannabis are mind-altering (psychoactive) drugs. The main active chemical in marijuana is THC (delta-9-tetrahydrocannabinol). Marijuana is usually smoked as a cigarette (called a joint) or in a pipe or bong. It can also be consumed in blunts, which are cigars that have been emptied of tobacco and refilled with marijuana, sometimes in combination with another drug, such as crack. Marijuana can be mixed into foods or brewed as tea (National Institute on Drug Abuse, 2014).

General Consumption Patterns

Marijuana is the most commonly used illicit drug, both in the United States and Indiana. According to results from the 2011–2012 National Survey on Drug Use and Health (NSDUH), an estimated 6.2% (95% Confidence Interval [CI]: 5.1–7.6) of Indiana residents ages 12 and older reported current (past 30 days) marijuana use (U.S.: 7.1%; 95% CI: 6.9–7.4). A slightly larger number, 10.8% (95% CI: 9.3–12.5), of Indiana residents reported past-year use of the drug (U.S.: 11.8%; 95% CI: 11.5–12.1) (Substance Abuse and Mental Health Services Administration, 2013).

Looking at trend data from 2000 through 2012, it seems that the prevalence of current marijuana use has risen from 4.4% to 6.2% in Indiana; however, this increase was statistically not significant (see Figure 5.1). During this period, marijuana use patterns were similar in Indiana and the nation (Substance Abuse and Mental Health Services Administration, 2013).

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, 2000–2012)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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%
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%

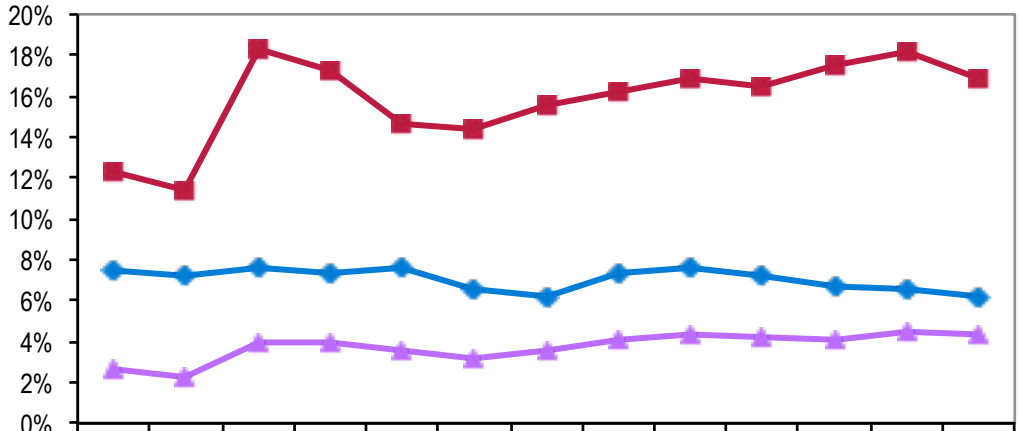
Source: Substance Abuse and Mental Health Services Administration, 2013

Adult Consumption Patterns

Patterns of marijuana use among adults were similar in Indiana and the United States. According to 2011–2012 NSDUH data, marijuana use was highest among individuals ages 18 to 25, with 16.8% (95% CI: 14.1–19.9) of Hoosiers in this age group reporting current use (U.S.: 18.9%; 95% CI: 18.3–19.5) and 29.3% (95% CI: 26.2–32.6) reporting past-year use (U.S.: 31.1; 95% CI: 30.4–31.8) (Substance Abuse and Mental Health Services Administration, 2013).

Among Indiana residents ages 26 and older, 4.3% (95% CI: 3.2–5.8) reported current use (U.S.: 5.1%; 95% CI: 4.8–5.3), and 7.4% (95% CI: 5.8–9.3) reported past-year use (U.S.: 8.2%; 95% CI: 7.9–8.6) (Substance Abuse and Mental Health Services Administration, 2013). See Figure 5.2 for Indiana 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, 2000–2012)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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%
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%
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%

Source: Substance Abuse and Mental Health Services Administration, 2013

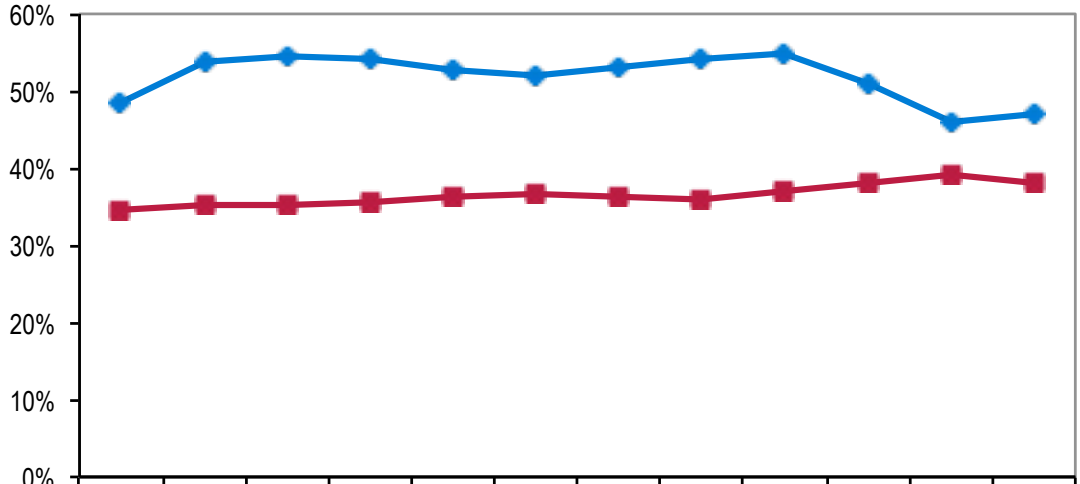
Regarding initiation of use in Indiana, 7.6% (95% CI: 6.2–9.3) of 18- to 25-year-olds and 0.2% (95% CI: 0.1–0.3) of individuals 26 years and older reported first use of marijuana during the past year. These rates were statistically similar to the nation's prevalence, 7.6% (95% CI: 7.2–8.0) and 0.2% (95% CI: 0.1–0.2) respectively (Substance Abuse and Mental Health Services Administration, 2013).

Marijuana use is also prevalent among Indiana college students. Based on results from the 2013 Indiana College Substance Use Survey, 18.3% of college students reported current marijuana use (U.S.: 20.5%) and 33.5% reported past-year use (U.S.: 34.9%). Users were more likely to be male, under the age of 21, and attend a public institution of higher education (King & Jun, 2013).[1]

The Treatment Episode Data Set (TEDS) series represents information gathered from clients at admission for each episode of substance abuse treatment (Substance Abuse and Mental Health Data Archive, 2011). TEDS data from 2000 through 2011 show 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 2011, 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]Eleven Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

Figure 5.3 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Use Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

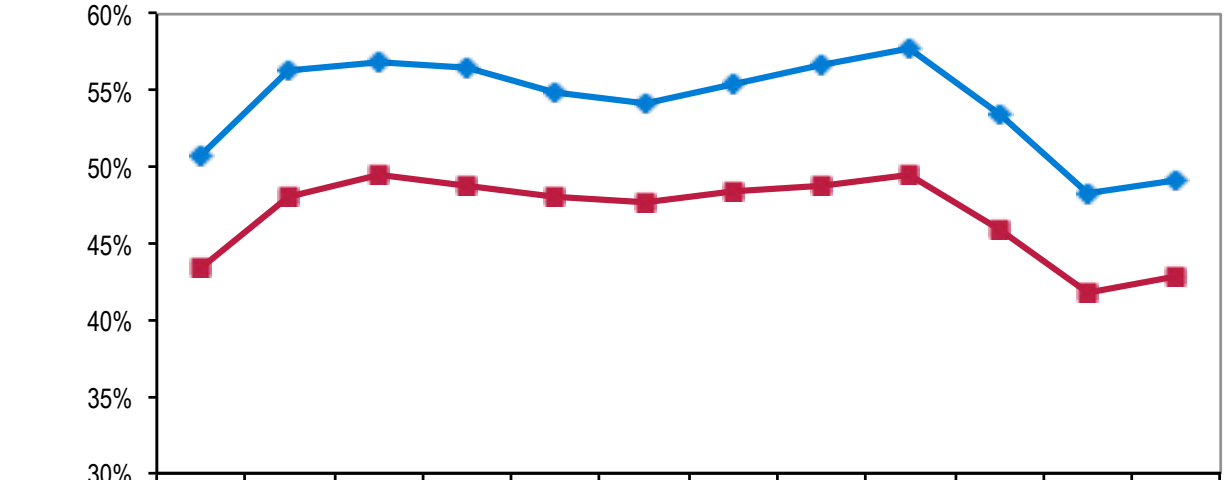
Source: Substance Abuse and Mental Health Data Archive, 2011

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).
- Blacks had the highest percentage of reported marijuana use, compared to whites and other races in 2011 (see Figure 5.5).
- Throughout the years, marijuana use in the treatment population was highest among adolescents and decreased with age. Most Hoosiers in treatment who were under the age of 18 reported marijuana use (71.9%), while one-fifth (20.1%) of Indiana residents ages 55 and older indicated use of the substance (see Figure 5.6).

For county-level information on marijuana use, see Appendix 5A, page 92 (Indiana Family and Social Services Administration, 2014).

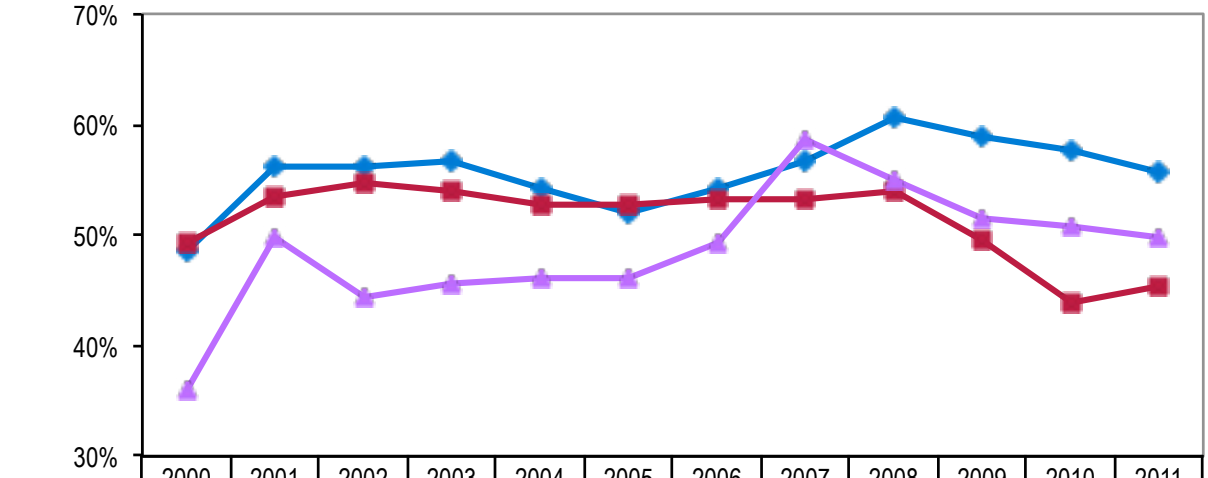
Figure 5.4 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

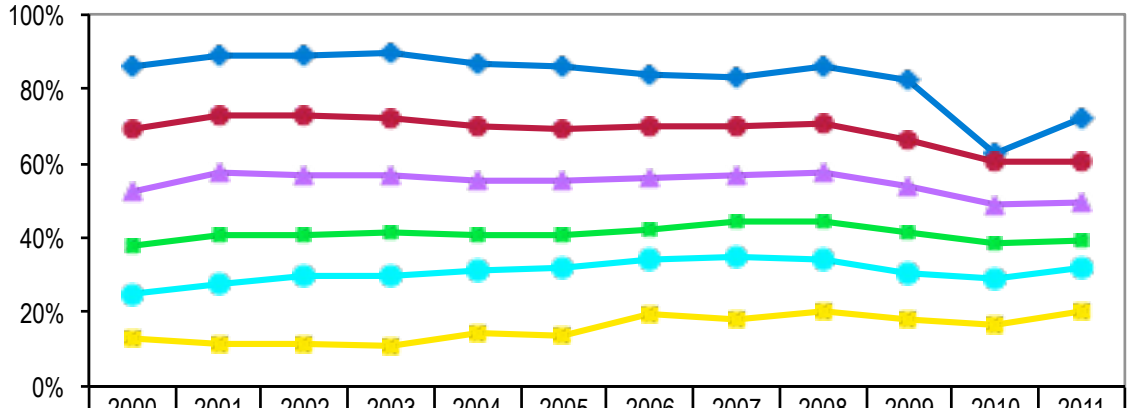
Figure 5.5 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 5.6 Percentage of Indiana Treatment Episodes with Marijuana Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

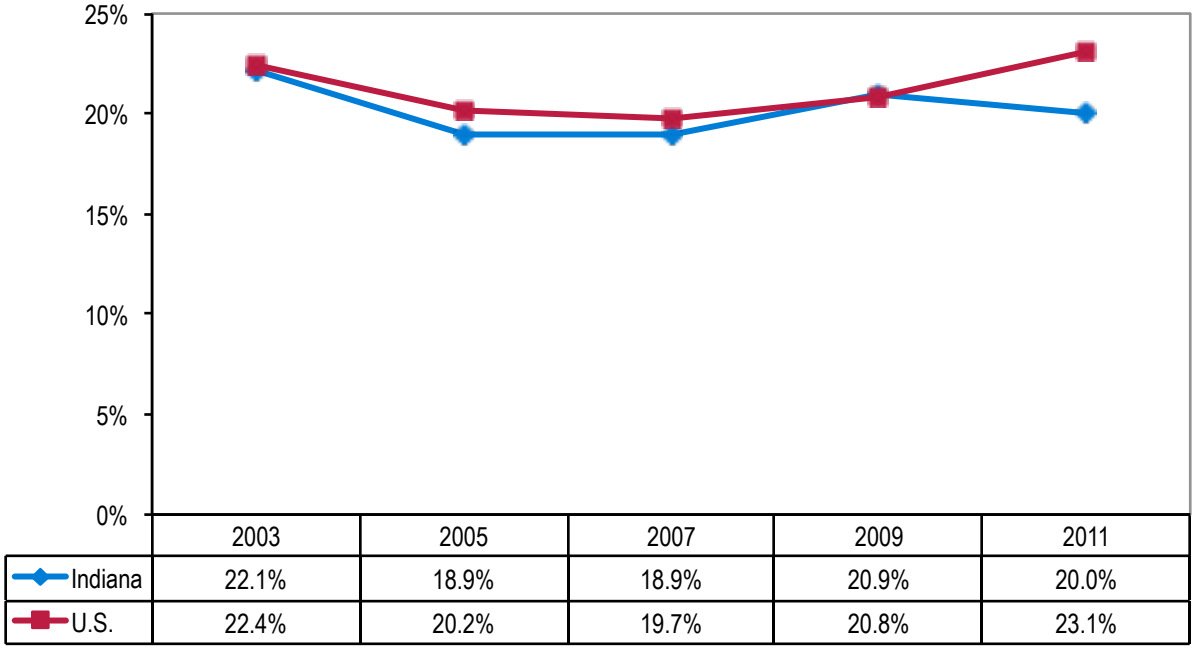
Youth Consumption Patterns

According to 2012 NSDUH findings, an estimated 5.5% (95% CI: 4.6–6.6) of 12- to 17-year-olds had used marijuana for the first time during the past year in Indiana; the rate was statistically similar to the U.S. rate of 6.0% (95% CI: 5.7–6.2). Nearly 12% (11.9%; 95% CI: 10.0–14.2) in that age group reported past-year marijuana use (U.S.: 13.9%; 95% CI: 13.4–14.3). Patterns of current marijuana use among Indiana youth mirrored national rates, and remained constant from 2000 to 2012 (see Figure 5.2) (Substance Abuse and Mental Health Services Administration, 2013).

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, 1991-2011). 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) (Centers for Disease Control and Prevention, 1991-2011).

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



Source: Centers for Disease Control and Prevention, 1991-2011

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: Centers for Disease Control and Prevention, 1991-2011

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: Centers for Disease Control and Prevention, 1991-2011

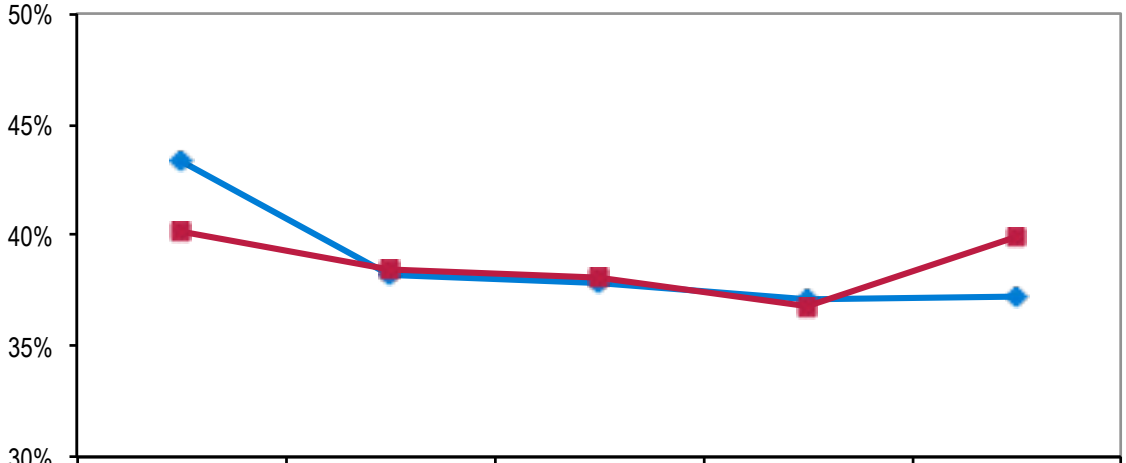
Age at drug initiation is an important risk factor in the subsequent progression to substance abuse and dependence. Researchers found that adolescents who used marijuana by the age of 17 were at greater risk to use other drugs and develop alcohol dependence and drug abuse/dependence (Lynskey, Heath, 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) (Centers for Disease Control and Prevention, 1991-2011).

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 (Centers for Disease Control and Prevention, 1991-2011).

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: Centers for Disease Control and Prevention, 1991-2011

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)

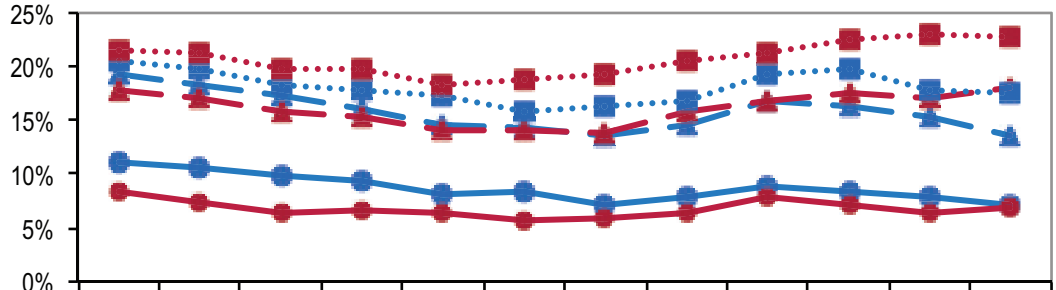
		Indiana Prevalence Rate (95% CI)	U.S. Prevalence Rate (95% CI)
Grade	9th	23.8% (19.7–28.5)	30.8% (28.0–33.7)
	10th	35.1% (30.1–40.4)	36.4% (33.4–39.5)
	11th	44.3% (36.2–52.8)	45.5% (42.1–48.9)
	12th	47.7% (41.1–54.4)	48.9% (45.7–52.1)
Gender	Male	41.0% (35.9–46.3)	42.5% (39.8–45.2)
	Female	33.3% (29.4–37.4)	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: Centers for Disease Control and Prevention, 1991-2011

Results from the Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, Oi, et al., 2013) and the Monitoring the Future (MTF) survey (Inter-university Consortium for Political and Social Research, University of Michigan, 2013) show that marijuana use among 8th, 10th, and 12th grade students increased with age. Prevalence rates for current marijuana use seemed comparable between Indiana and the nation; however, due to the 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 2013, see Figure 5.9).

From 2002 until 2013, lifetime use among students in grades 8, 10, and 12 seemed to have declined both nationally and in Indiana (see Figure 5.10). Again, due to the data format, statistical significance of the differences could not be determined (Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013). For lifetime and monthly marijuana use by Indiana region and grade level for 2013, see Appendix 5B, page 93.

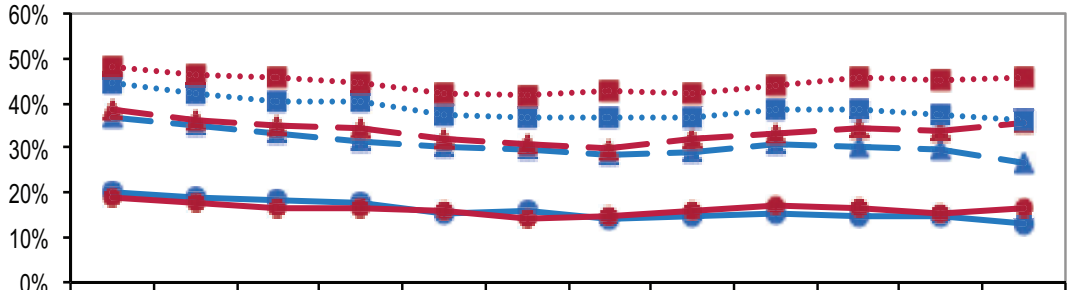
Figure 5.9 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Current Marijuana Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2002–2013)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
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%
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%
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%
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%
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%
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%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

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 (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2002–2013)



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
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%
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%
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%
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%
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%
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%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

CONSEQUENCES OF MARIJUANA USE

Health-Related Consequences

Marijuana use can produce adverse physical, mental, emotional, and behavioral changes, and long-term use can lead to addiction. Short-term effects include memory impairment and learning problems, distorted perception, difficulty thinking and solving problems, loss of coordination, and increased heart rate. Harmful effects also include respiratory illnesses, and increased risk of heart attack and cancer. Associations have been found between marijuana use and mental health problems, including depression, anxiety, suicidal thoughts, and personality disturbances.

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 (National Institute on Drug Abuse, 2014).

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 the treatment population in the rest of the nation. In 2011, marijuana dependence was indicated in 20.9% of Indiana's treatment episodes, which was significantly higher than the nation (18.0%) ($P < 0.001$) (see Figure 5.11) (Substance Abuse and Mental Health Data Archive, 2011).

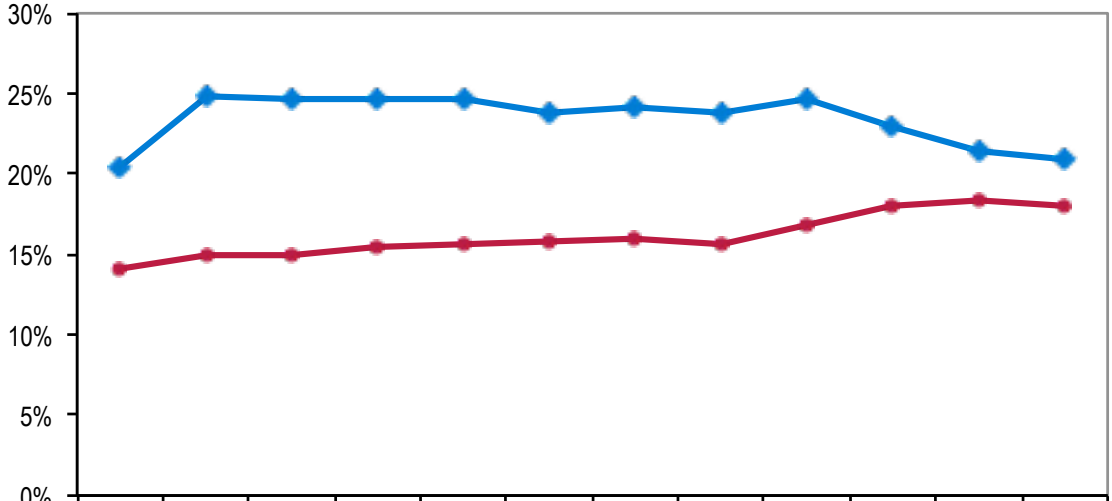
Significant differences for marijuana dependence in Indiana were observed by gender, age, and race, as follows (findings from the 2011 TEDS dataset):

- More males (22.7%) than females (17.6%) reported marijuana dependency ($P < 0.001$) (see Figure 5.12).
- More blacks (32.9%) reported marijuana dependency than whites (18.7%) or persons from other races (24.7%) ($P < 0.001$) (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) (Substance Abuse and Mental Health Data Archive, 2011).

For county-level information on marijuana dependence, see Appendix 5A, page 92.

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

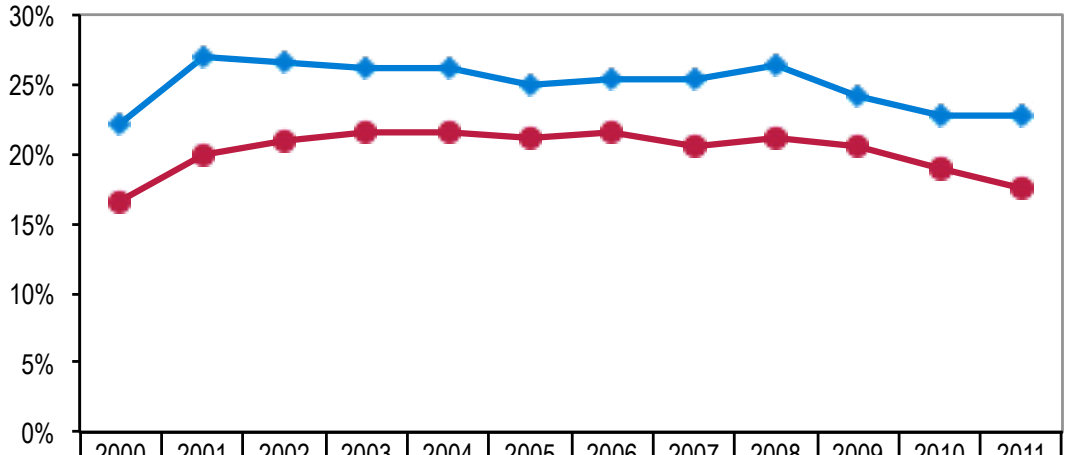
Figure 5.11 Percentage of Indiana and U.S. Treatment Episodes with Marijuana Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

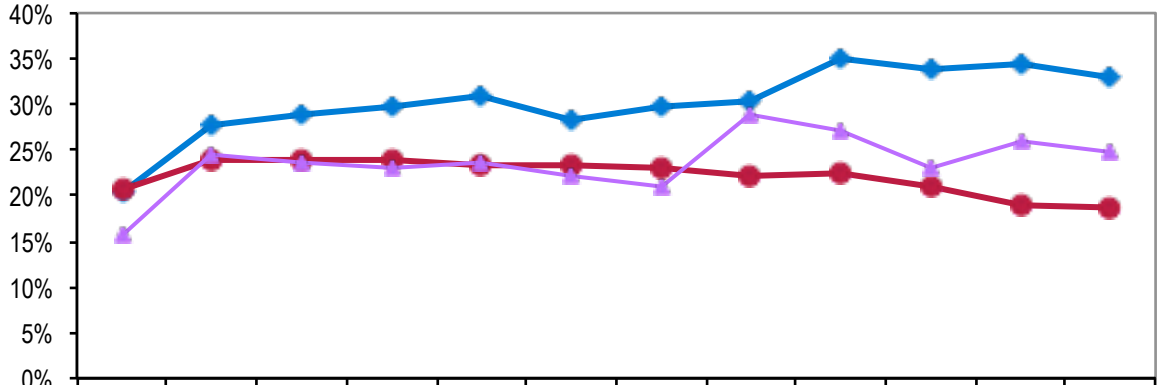
Figure 5.12 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

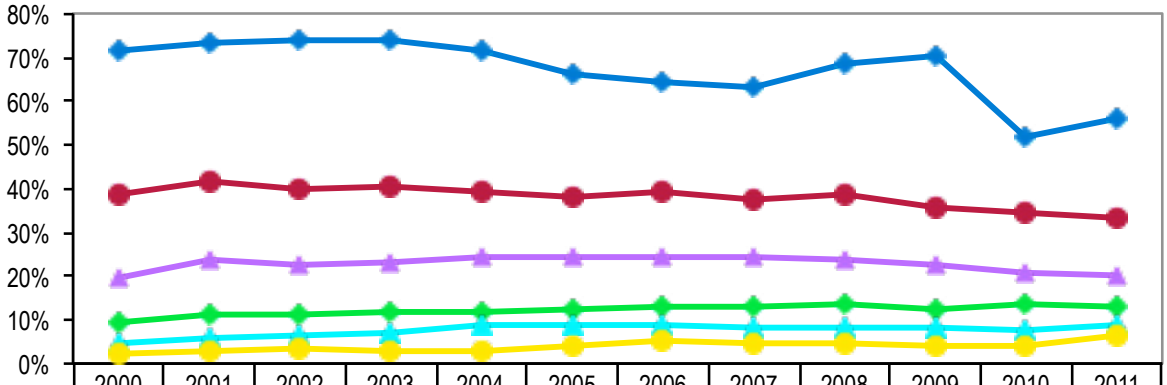
Figure 5.13 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 5.14 Percentage of Indiana Treatment Episodes with Marijuana Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%
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%
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%
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%

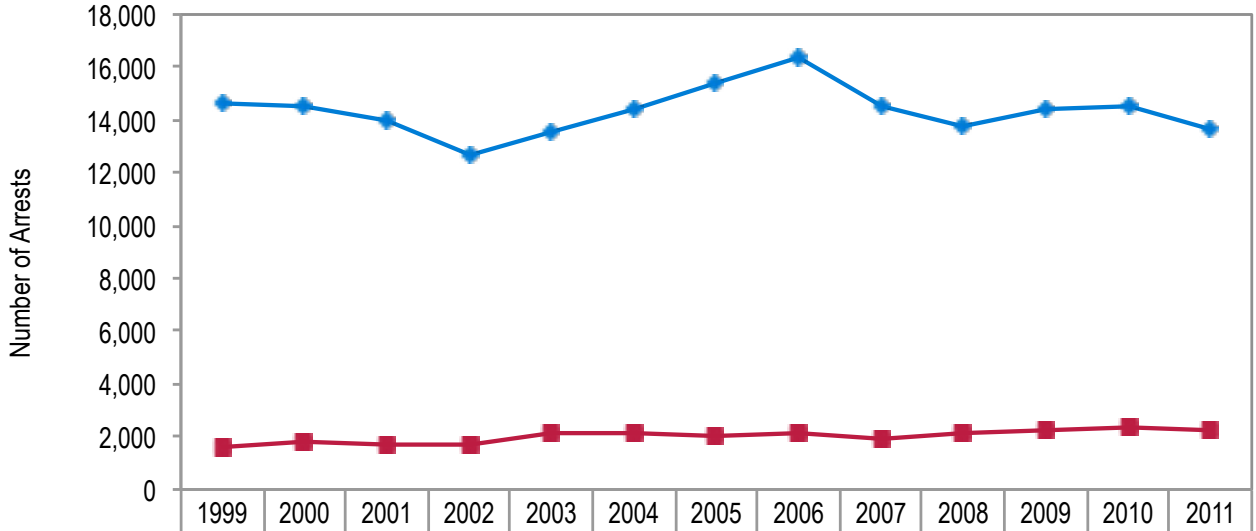
Source: Substance Abuse and Mental Health Data Archive, 2011

Criminal Consequences

The Uniform Crime Reporting (UCR) program collects drug violation arrest data nationwide (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). According to 2011 results, almost 14,000 arrests were made in Indiana for the possession of marijuana. This represents an arrest rate of 2.1 (95% CI: 2.1–2.1) per 1,000 population (U.S.: 2.2 per 1,000; 95% CI: 2.2–2.2). Additionally, over 2,200 Hoosiers were arrested for selling marijuana. Indiana's arrest rate for sale of the substance was 0.3 per 1,000 population (95% CI: 0.3–0.4), comparable to the national rate of 0.3 per 1,000 population (95% CI: 0.3–0.3) (see Figures 5.15 and 5.16).

Maps 5.1 and 5.2 (pages 96 and 97) and Appendix 5C (pages 94-95), portray the distribution by county of 2011 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.)

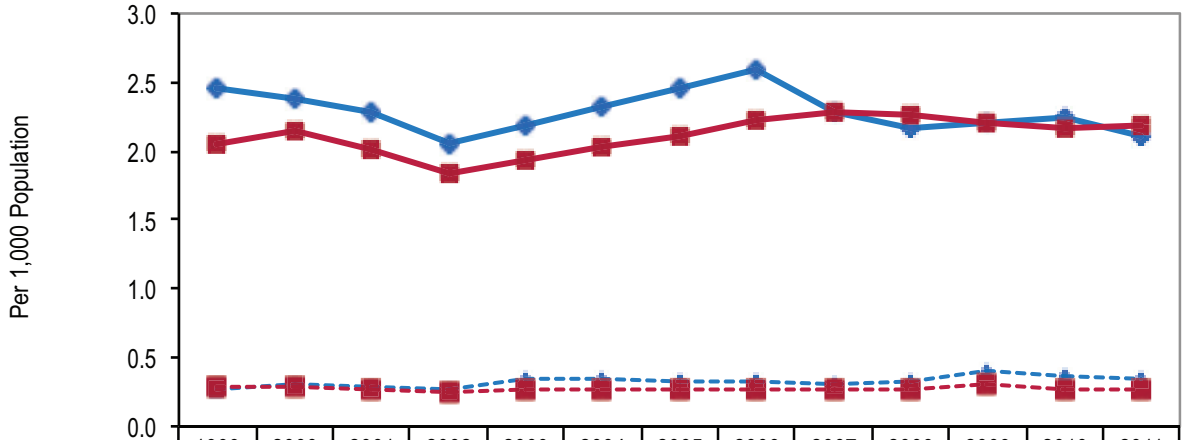
Figure 5.15 Number of Indiana Arrests for Marijuana Possession and Sale/Manufacture (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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
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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Figure 5.16 Indiana and U.S. Arrest Rates for Marijuana Possession and Sale/Manufacture per 1,000 Population (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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
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
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
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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

APPENDIX 5A

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, 2013)

	Treatment Episodes	Marijuana Use		Marijuana Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Adams	136	78	57.4%	29	21.3%
Allen	1,856	1,161	62.6%	530	28.6%
Bartholomew	653	319	48.9%	85	13.0%
Benton	45	26	57.8%	10	22.2%
Blackford	43	18	41.9%	5	11.6%
Boone	181	66	36.5%	33	18.2%
Brown	98	45	45.9%	11	11.2%
Carroll	99	48	48.5%	19	19.2%
Cass	248	161	64.9%	53	21.4%
Clark	392	82	20.9%	32	8.2%
Clay	196	89	45.4%	39	19.9%
Clinton	122	50	41.0%	22	18.0%
Crawford	71	26	36.6%	12	16.9%
Daviess	177	72	40.7%	38	21.5%
Dearborn	508	230	45.3%	69	13.6%
Decatur	192	85	44.3%	24	12.5%
DeKalb	202	107	53.0%	47	23.3%
Delaware	990	376	38.0%	171	17.3%
Dubois	298	159	53.4%	68	22.8%
Elkhart	810	419	51.7%	250	30.9%
Fayette	207	84	40.6%	25	12.1%
Floyd	186	36	19.4%	11	5.9%
Fountain	59	36	61.0%	17	28.8%
Franklin	168	90	53.6%	33	19.6%
Fulton	215	132	61.4%	58	27.0%
Gibson	216	110	50.9%	57	26.4%
Grant	495	325	65.7%	148	29.9%
Greene	207	87	42.0%	37	17.9%
Hamilton	813	442	54.4%	220	27.1%
Hancock	164	93	56.7%	30	18.3%
Harrison	54	7	13.0%	<5	N/A
Hendricks	358	137	38.3%	86	24.0%
Henry	259	100	38.6%	41	15.8%
Howard	649	328	50.5%	124	19.1%
Huntington	86	40	46.5%	15	17.4%
Jackson	292	153	52.4%	46	15.8%
Jasper	109	37	33.9%	14	12.8%
Jay	84	35	41.7%	18	21.4%
Jefferson	340	139	40.9%	43	12.6%
Jennings	247	109	44.1%	32	13.0%
Johnson	234	115	49.1%	37	15.8%
Knox	374	182	48.7%	83	22.2%
Kosciusko	343	129	37.6%	47	13.7%
LaGrange	95	66	69.5%	20	21.1%
Lake	2,886	1,130	39.2%	579	20.1%
LaPorte	623	237	38.0%	102	16.4%
Lawrence	481	170	35.3%	94	19.5%
Madison	708	438	61.9%	187	26.4%
Marion	4,177	1,862	44.6%	921	22.0%
Marshall	249	91	36.5%	51	20.5%
Martin	51	24	47.1%	9	17.6%
Miami	265	144	54.3%	51	19.2%
Monroe	1,412	686	48.6%	234	16.6%
Montgomery	330	179	54.2%	86	26.1%
Morgan	479	214	44.7%	99	20.7%
Newton	29	14	48.3%	<5	N/A
Noble	331	160	48.3%	66	19.9%
Ohio	44	25	56.8%	<5	N/A
Orange	113	57	50.4%	16	14.2%
Owen	245	89	36.3%	48	19.6%
Parke	103	48	46.6%	18	17.5%
Perry	126	70	55.6%	28	22.2%
Pike	56	23	41.1%	9	16.1%
Porter	664	271	40.8%	120	18.1%
Posey	108	57	52.8%	16	14.8%
Pulaski	111	45	40.5%	15	13.5%
Putnam	207	81	39.1%	49	23.7%
Randolph	193	109	56.5%	38	19.7%
Ripley	236	95	40.3%	32	13.6%
Rush	168	91	54.2%	20	11.9%
Saint Joseph	1,462	692	47.3%	307	21.0%
Scott	154	20	13.0%	12	7.8%
Shelby	139	67	48.2%	31	22.3%
Spencer	194	109	56.2%	32	16.5%
Starke	218	86	39.4%	29	13.3%
Steuben	191	112	58.6%	42	22.0%
Sullivan	72	38	52.8%	14	19.4%
Switzerland	64	26	40.6%	10	15.6%
Tippecanoe	406	217	53.4%	74	18.2%
Tipton	68	38	55.9%	14	20.6%
Union	43	22	51.2%	<5	N/A
Vanderburgh	1,191	651	54.7%	258	21.7%
Vermillion	114	44	38.6%	15	13.2%
Vigo	755	432	57.2%	189	25.0%
Wabash	222	98	44.1%	38	17.1%
Warren	16	8	50.0%	<5	N/A
Warrick	320	185	57.8%	65	20.3%
Washington	58	6	10.3%	<5	N/A
Wayne	475	198	41.7%	57	12.0%
Wells	111	70	63.1%	36	32.4%
White	151	84	55.6%	26	17.2%
Whitley	131	74	56.5%	22	16.8%
County Info Missing	149	57	38.3%	29	19.5%
Indiana	**34,670**	**16,373**	**47.2%**	**6,993**	**20.2%**

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, 2014

APPENDIX 5B

Percentage of Indiana Students Reporting Lifetime and Monthly Marijuana Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	2.1	2.5	2.2	1.9	2.0	2.6	4.1	*0.9	2.5
	Monthly	1.1	1.3	1.2	1.5	0.9	1.3	2.1	*0.4	1.2
7th Grade	Lifetime	5.4	*6.6	4.8	*3.7	4.7	*6.8	*10.5	*3.9	5.3
	Monthly	2.7	*3.5	2.5	1.8	2.2	*3.5	*5.3	*2.0	2.5
8th Grade	Lifetime	13.1	*14.3	12.6	*10.7	12.3	14.5	*20.7	*8.8	*15.0
	Monthly	7.1	*8.0	7.0	*5.0	*6.1	7.8	12.4	*5.1	7.9
9th Grade	Lifetime	18.9	*21.0	18.0	*14.9	19.4	20.6	*25.4	*15.6	20.3
	Monthly	9.7	10.4	9.8	*8.1	9.6	10.5	*14.2	*7.6	10.7
10th Grade	Lifetime	26.5	*29.9	24.8	*21.8	25.5	29.4	*31.9	*21.4	*29.0
	Monthly	13.7	*15.3	12.3	*10.9	12.9	15.0	*18.0	*11.2	*15.8
11th Grade	Lifetime	31.9	*35.7	31.3	*28.0	31.6	33.0	35.2	*29.5	32.8
	Monthly	15.3	*17.9	14.4	*13.3	15.5	15.7	*21.5	13.8	15.1
12th Grade	Lifetime	36.0	*40.1	34.0	*27.0	35.4	*39.7	40.5	*32.1	*39.2
	Monthly	17.6	*20.7	17.0	*12.7	16.0	19.5	*23.5	*14.8	*19.6

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman, et al., 2013

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, 2011)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	42	1.2	3	*0.1
Allen	662	1.9	35	0.1
Bartholomew	187	2.4	7	*0.1
Benton	8	*0.9	1	*0.1
Blackford	29	2.3	1	*0.1
Boone	77	1.4	9	*0.2
Brown	9	*0.6	0	*0.0
Carroll	25	1.2	0	*0.0
Cass	98	2.5	29	0.7
Clark	196	1.8	14	*0.1
Clay	39	1.4	7	*0.3
Clinton	56	1.7	2	*0.1
Crawford	12	*1.1	0	*0.0
Daviess	53	1.7	10	*0.3
Dearborn	60	1.2	9	*0.2
Decatur	51	2.0	2	*0.1
DeKalb	55	1.3	8	*0.2
Delaware	115	1.0	0	*0.0
Dubois	58	1.4	3	*0.1
Elkhart	297	1.5	36	0.2
Fayette	50	2.0	8	*0.3
Floyd	309	4.1	36	0.5
Fountain	30	1.7	4	*0.2
Franklin	1	*0.0	23	1.1
Fulton	21	1.0	3	*0.1
Gibson	99	2.9	5	*0.1
Grant	166	2.4	6	*0.1
Greene	46	1.4	6	*0.2
Hamilton	563	2.0	13	*0.0
Hancock	109	1.6	17	*0.3
Harrison	35	0.9	4	*0.1
Hendricks	310	2.1	43	0.3
Henry	71	1.4	14	*0.3
Howard	194	2.3	9	*0.1
Huntington	36	1.0	0	*0.0
Jackson	126	3.0	10	*0.2
Jasper	32	1.0	14	*0.4
Jay	60	2.8	3	*0.1
Jefferson	58	1.8	8	*0.2
Jennings	2	*0.1	35	1.2
Johnson	390	2.8	17	*0.1
Knox	53	1.4	67	1.7
Kosciusko	180	2.3	8	*0.1
LaGrange	36	1.0	2	*0.1
Lake	1,085	2.2	421	0.8
LaPorte	218	1.9	68	0.6
Lawrence	71	1.5	12	*0.3
Madison	236	1.8	41	0.3
Marion	2,950	3.2	594	0.7

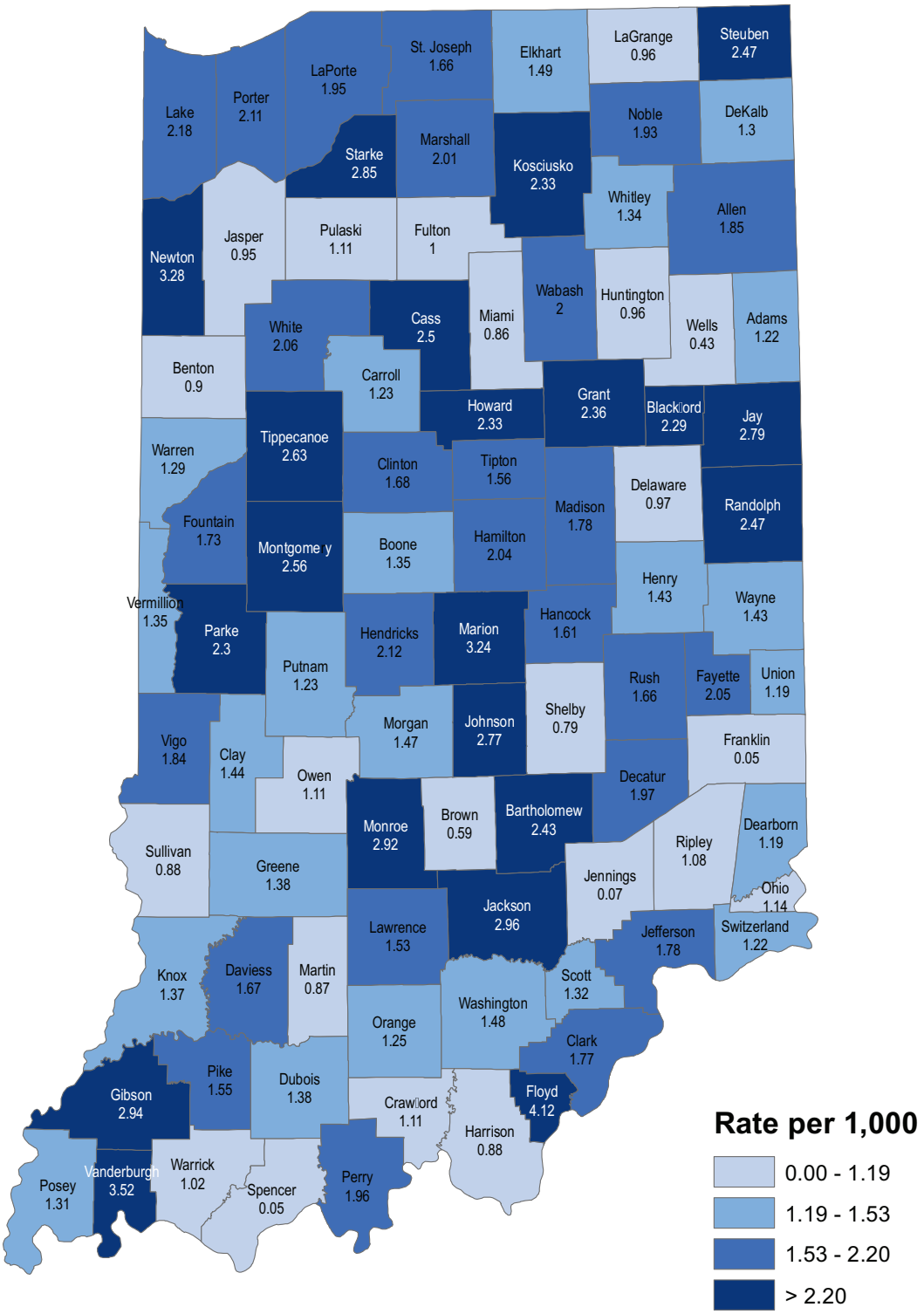
(continued on next page)

APPENDIX 5C *(Continued from previous page)*

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	95	2.0	3	*0.1
Martin	9	*0.9	3	*0.3
Miami	32	0.9	12	*0.3
Monroe	405	2.9	13	*0.1
Montgomery	98	2.6	8	*0.2
Morgan	102	1.5	77	1.1
Newton	47	3.3	2	*0.1
Noble	92	1.9	10	*0.2
Ohio	7	*1.1	1	*0.2
Orange	25	1.3	3	*0.2
Owen	24	1.1	4	*0.2
Parke	40	2.3	3	*0.2
Perry	38	2.0	4	*0.2
Pike	20	1.5	3	*0.2
Porter	348	2.1	16	*0.1
Posey	34	1.3	3	*0.1
Pulaski	15	*1.1	0	*0.0
Putnam	47	1.2	9	*0.2
Randolph	65	2.5	2	*0.1
Ripley	33	1.1	3	*0.1
Rush	29	1.7	49	2.8
Saint Joseph	445	1.7	56	0.2
Scott	32	1.3	2	*0.1
Shelby	35	0.8	4	*0.1
Spencer	1	*0.0	0	*0.0
Starke	67	2.9	5	*0.2
Steuben	85	2.5	5	*0.1
Sullivan	19	*0.9	3	*0.1
Switzerland	13	*1.2	2	*0.2
Tippecanoe	456	2.6	60	0.3
Tipton	25	1.6	7	*0.4
Union	9	*1.2	1	*0.1
Vanderburgh	636	3.5	82	0.5
Vermillion	22	1.4	12	*0.7
Vigo	199	1.8	13	*0.1
Wabash	66	2.0	10	*0.3
Warren	11	*1.3	1	*0.1
Warrick	61	1.0	32	0.5
Washington	42	1.5	7	*0.2
Wayne	99	1.4	19	*0.3
Wells	12	*0.4	13	*0.5
White	51	2.1	8	*0.3
Whitley	45	1.3	4	*0.1
Indiana	**13,702**	**2.1**	**2,241**	**0.3**

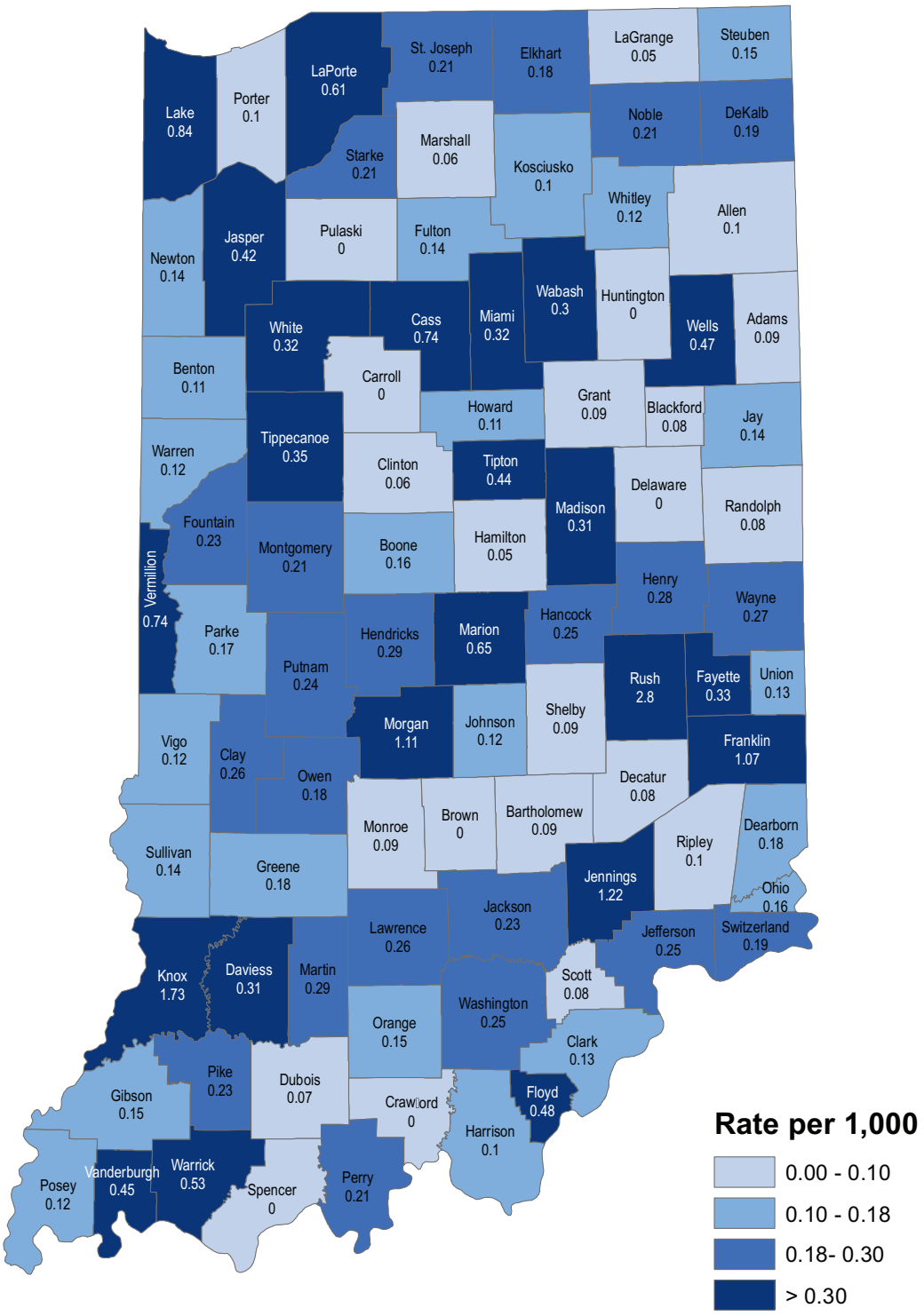
* Rates that are based on arrest numbers lower than 20 are unreliable.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 5.1 Marijuana Possession Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 5C (pages 94-95) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 5.2 Marijuana Sale/Manufacture Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 5C (pages 94-95) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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6 Cocaine Use in Indiana: Consumption Patterns and Consequences

COCAINE CONSUMPTION

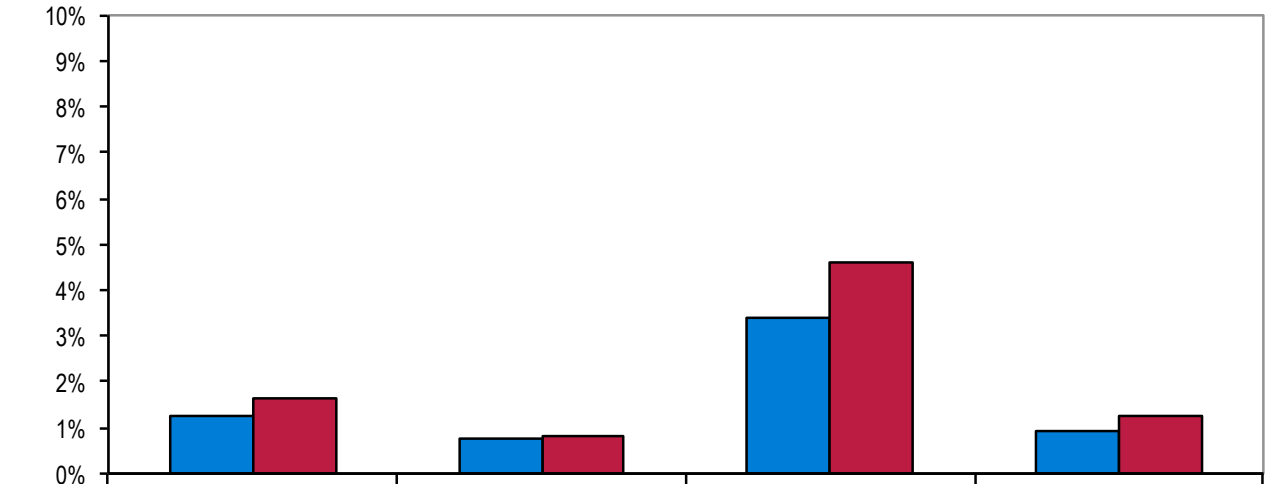
Cocaine is a highly addictive stimulant of natural origin. It can be snorted, smoked, or injected. When snorted, cocaine powder is inhaled through the nose where it is absorbed into the bloodstream through the nasal tissues. When injected, a needle is used to release the drug directly into the bloodstream. Smoking involves inhaling cocaine vapor or smoke into the lungs where absorption into the bloodstream is as rapid as by injection (National Institute on Drug Abuse, 2010).

Crack is cocaine base 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 (National Institute on Drug Abuse, 2010).

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, 2013). According to 2011–2012 data, the most recent estimates available, 1.2% (95% Confidence Interval [CI]: 0.9–1.7) 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, 2012)



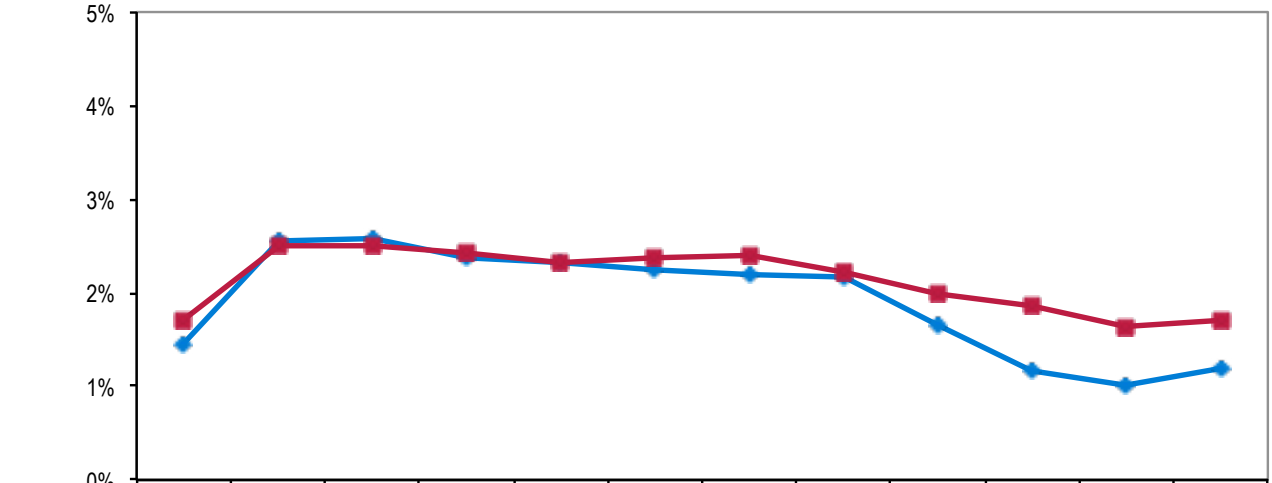
	Total	12-17	18-25	26 and older
Indiana	1.2%	0.8%	3.4%	0.9%
U.S.	1.7%	0.8%	4.6%	1.2%

Source: Substance Abuse and Mental Health Services Administration, 2013

NSDUH data from 2001 through 2012 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: 0.9–1.7) in 2012, mirroring national rates (see Figure 6.2).

Lifetime cocaine use was reported by 562,000 Hoosiers, or 11.1% (U.S.: 14.3%); current (past-month) use was reported by 33,000 Hoosiers, or 0.7% (U.S.: 1.0%).[1] Publicly available NSDUH data currently do not include gender or race comparisons at the state level (Substance Abuse and Mental Health Services Administration, 2013).

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, 2001–2012)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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%
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%

Source: Substance Abuse and Mental Health Services Administration, 2013

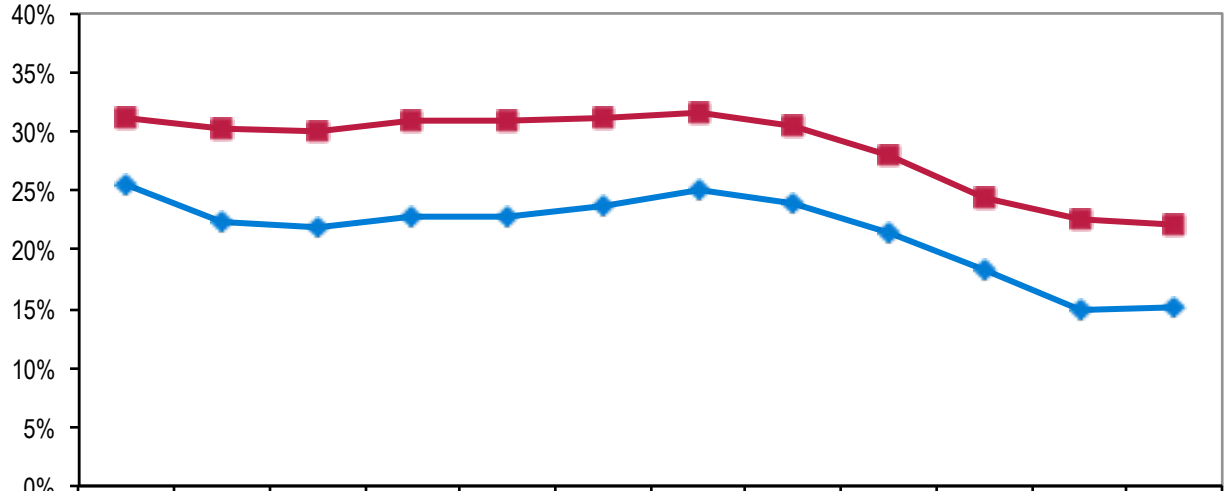
Adult Consumption Patterns

According to 2011–2012 NSDUH estimates, the prevalence rate for cocaine use was highest among 18- to 25-year-olds; 3.4% (95% CI: 2.4–4.7) of Hoosiers in that age group reported using cocaine in the past year (U.S.: 4.6%; 95% CI: 4.3–4.9). The rate of cocaine use was significantly lower among those ages 26 and older in Indiana (0.9%; 95% CI: 0.6–1.5) and the nation (1.2%; 95% CI: 1.1–1.4) (see Figure 6.1). Indiana and U.S. rates were statistically the same.

The Indiana College Substance Use Survey provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to findings from the 2013 survey, 2.8% of Indiana college students used cocaine in the past year (U.S.: 3.1%), and 0.9% currently use it (U.S.: 1.1%).[2] Rates were higher for males (past-year use: 4.9%; current use: 1.6%) than for females (past-year use: 1.6%; current use: 0.4%). Rates were also higher for those attending public institutions of higher education (past-year use: 3.6%; current use: 1.1%) than

[1]The most recent state-level estimates of lifetime and current (past-month) cocaine use from the National Survey on Drug Use and Health are based on annual averages from 2002 to 2004. The confidence intervals (CI) for these rates were not provided.
[2]National data are based on the Monitoring the Future study. College students were defined as "[T]hose follow-up respondents one to four years past high school who say they were registered as full-time students in a two- or four-year undergraduate college at the beginning of March in the year in question" (Johnston, O'Malley, Bachman, & Schulenberg, 2011, p. 255).

Figure 6.3 Percentage of Indiana and U.S. Treatment Episodes with Cocaine Use Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

for those who attended private institutions (past-year use: 0.3%; current use: 0.3%) (King & Jun, 2013).[3]

The 2011 Treatment Episode Data Set (TEDS) shows that cocaine use was reported in 15.2% of treatment episodes in Indiana; the U.S. percentage was significantly higher at 22.1% ($P < 0.001$) (see Figure 6.3) (Substance Abuse and Mental Health Data Archive, 2011).

Gender, age, and race differences in the Indiana treatment population were significant ($P < 0.001$). More women (17.6%) than men (13.9%) reported cocaine use; blacks displayed drastically higher rates (30.3%) than whites (12.3%) and other races (17.6%); and the percentages of 45- to 54-year-olds (22.4%) and 35- to 44-year-olds (22.1%) using cocaine were greater than that of any other age group among those in treatment (see Table 6.1). (For county-level information on cocaine use, see Appendix 6A, page 107.)

Table 6.1 Percentage of Indiana Treatment Episodes with Cocaine Use Reported at Treatment Admission (Treatment Episode Data Set, 2011)

		Cocaine Use
Gender	Male	13.9%
	Female	17.6%
Race	White	12.3%
	Black	30.3%
	Other	17.6%
Age Group	Under 18	6.5%
	18-24	7.9%
	25-34	14.0%
	35-44	22.1%
	45-54	22.4%
	55 and over	18.2%
Total		**15.2%**

Source: Substance Abuse and Mental Health Data Archive, 2011

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

Youth Consumption Patterns

Findings from the 2011–2012 NSDUH survey show that 0.8% (95% CI: 0.5–1.3) of 12- to 17-year-old Hoosiers used cocaine in the past year (see Figure 6.1). The national rate was similar, at 0.8% (95% CI: 0.7–0.9) (Substance Abuse and Mental Health Services Administration, 2013).

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, 1991-2011). 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 (Centers for Disease Control and Prevention, 1991-2011).

According to the annual Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey, rates of current cocaine and crack use among 12th grade students have remained fairly stable from 2000 through 2013. Comparisons with the national Monitoring the Future survey imply that Indiana rates were slightly above U.S. rates (see Figure 6.4); however, due

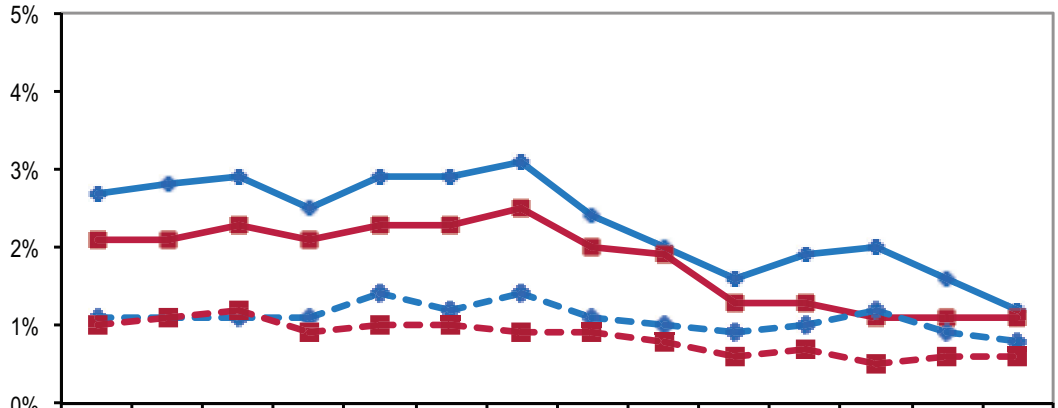
Table 6.2 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Lifetime and Current Cocaine Use, by Gender, Race/Ethnicity, and Grade (Youth Risk Behavior Surveillance System, 2011)

		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: Centers for Disease Control and Prevention, 1991-2011

to the nature of the publicly available data, no statistical significance could be inferred (Gassman, Jun, Samuel, Agley, Lee, Crane, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013). For 2013 data on lifetime and current cocaine and crack use among students in grades 6 through 12, by Indiana region, see Appendix 6B, parts 1 and 2, page 108.

Figure 6.4 Percentage of Indiana and U.S. High School Seniors (Grade 12) Reporting Current Cocaine and Crack Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2000–2013)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana Cocaine	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%
U.S. Cocaine	2.1%	2.1%	2.3%	2.1%	2.3%	2.3%	2.5%	2.0%	1.9%	1.3%	1.3%	1.1%	1.1%	1.1%
Indiana Crack	1.1%	1.1%	1.1%	1.1%	1.4%	1.2%	1.4%	1.1%	1.0%	0.9%	1.0%	1.2%	0.9%	0.8%
U.S. Crack	1.0%	1.1%	1.2%	0.9%	1.0%	1.0%	0.9%	0.9%	0.8%	0.6%	0.7%	0.5%	0.6%	0.6%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

CONSEQUENCES

Health Consequences

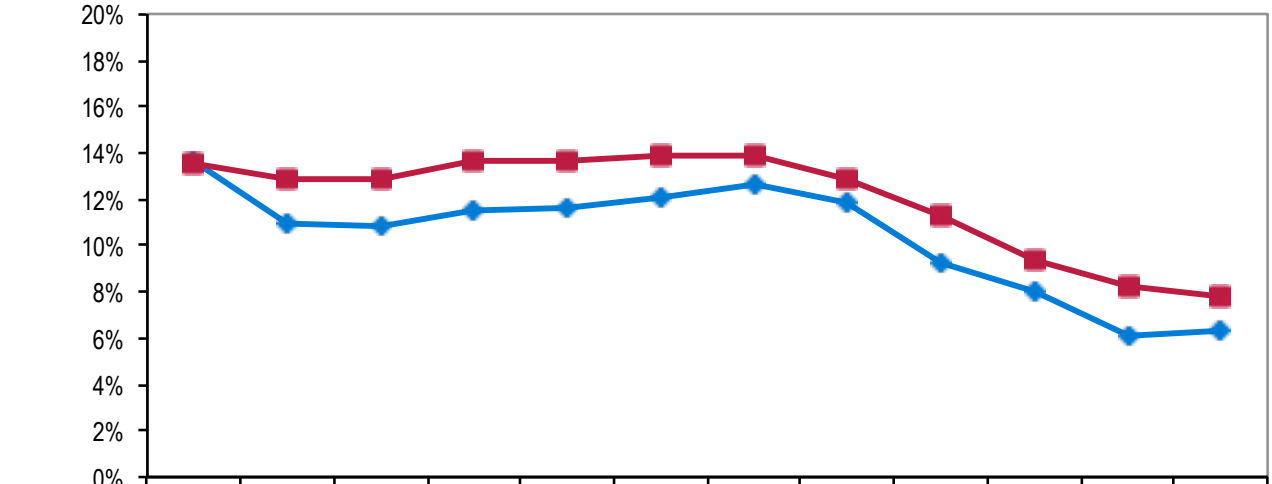
Cocaine is an addictive drug and powerful stimulant. The effects of cocaine depend on the amount of the drug taken and the route of administration. Taken in small amounts, it can make the user feel euphoric, energetic, talkative, and mentally alert; it might temporarily decrease the need for food and 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. A user might suffer sudden death with the first use of cocaine or unexpectedly during any use thereafter. Long-term effects of cocaine use include dependence, irritability, mood disturbances, restlessness, paranoia, and auditory hallucinations (National Institute on Drug Abuse, 2010).

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 (National Institute on Drug Abuse, 2010).

Cocaine Dependence

Results from the Treatment Episode Data Set (TEDS) show that the percentage of treatment episodes for cocaine dependence[4] has been significantly lower in

Figure 6.5 Percentage of Indiana and U.S. Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

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

Indiana than the nation for the past 11 years (2001 through 2011) ($P < 0.001$). Furthermore, the percentage within Indiana decreased significantly from 13.6% in 2000 to 6.3% in 2011 ($P < 0.001$) (see Figure 6.5) (Substance Abuse and Mental Health Data Archive, 2011).

According to 2011 TEDS data, gender, race, and age were associated with cocaine dependence in Indiana ($P < 0.001$). Higher rates were found among women (7.8%) than among men (5.4%); among blacks (15.8%) than among whites (4.5%) or other races (6.1%); and among 45- to 54-year-olds (10.8%) compared to other age groups (see Table 6.3) (Substance Abuse and Mental Health Data Archive, 2011). (For county-level information, see Appendix 6A, page 107.)

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 (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). According to 2011 results, just over 2,000 arrests were made in Indiana for possession of cocaine/opiates. However, Indiana's arrest rate, 0.3 (95% CI: 0.3–0.3) per 1,000 population, was below the nation's rate of 0.8 (95% CI: 0.8–0.8) per 1,000 population.

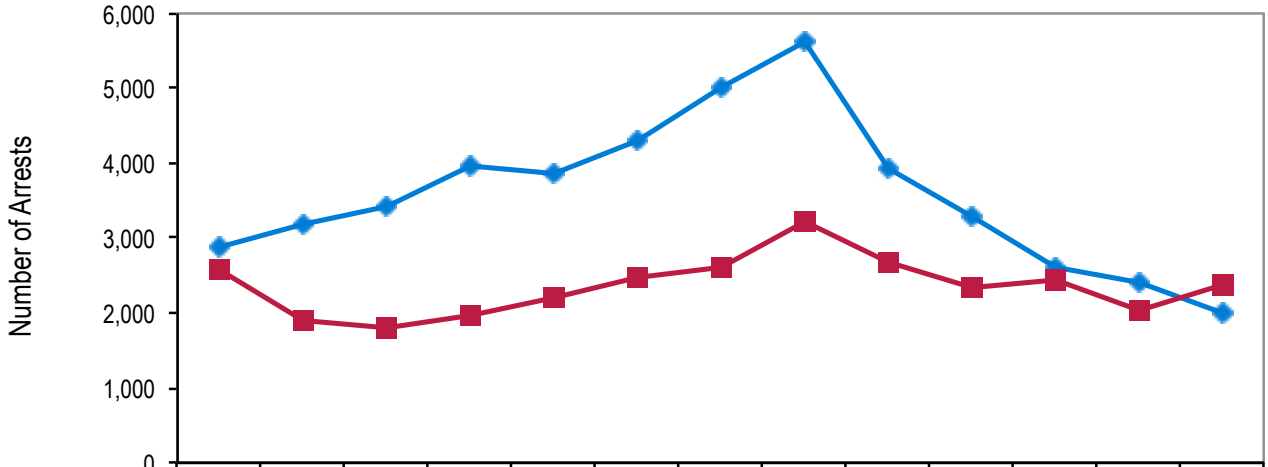
The number of arrests for sale and manufacture of cocaine/opiates in Indiana was more than 2,300, representing an arrest rate of 0.4 per 1,000 population (95% CI: 0.4–0.4); the U.S. rate was 0.3 per 1,000 population (95% CI: 0.3–0.3) (see Figures 6.6 and 6.7). Maps 6.1 and 6.2 (pages 111-112) and Appendix 6C (pages 109-110) show Indiana's cocaine/opiates possession and sale/manufacture arrests by county for 2011.

Table 6.3 Percentage of Indiana Treatment Episodes with Cocaine Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2011)

		Cocaine Dependence
Gender	Male	5.4%
	Female	7.8%
Race	White	4.5%
	Black	15.8%
	Other	6.1%
Age Group	Under 18	1.8%
	18-24	2.8%
	25-34	5.2%
	35-44	9.8%
	45-54	10.8%
	55 and over	7.4%
Total		**6.3%**

Source: Substance Abuse and Mental Health Data Archive, 2011

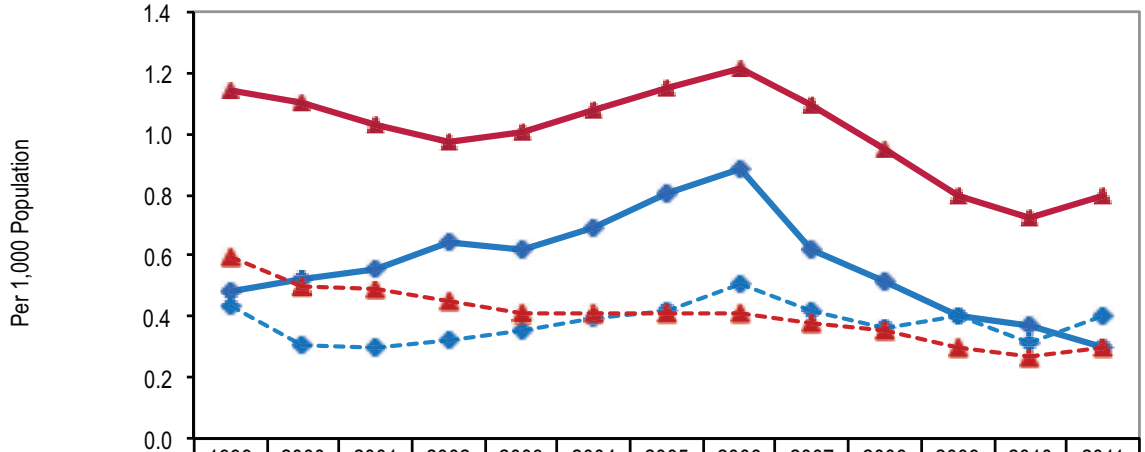
Figure 6.6 Number of Arrests for Cocaine and Opiates Possession and Sale/Manufacture in Indiana (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Possession	2,872	3,185	3,410	3,964	3,856	4,317	5,020	5,608	3,937	3,301	2,617	2,397	2,004
Sale	2,585	1,885	1,803	1,977	2,207	2,464	2,617	3,227	2,668	2,336	2,425	2,028	2,368

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IN Possession	0.5	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.6	0.5	0.4	0.4	0.3
U.S. Possession	1.1	1.1	1.0	1.0	1.0	1.1	1.2	1.2	1.1	1.0	0.8	0.7	0.8
IN Sale	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.4
U.S. Sale	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

APPENDIX 6A

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, 2013)

	Treatment Episodes	Cocaine Use		Cocaine Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Adams	136	22	16.2%	5	3.7%
Allen	1,856	459	24.7%	165	8.9%
Bartholomew	653	54	8.3%	10	1.5%
Benton	45	<5	N/A	<5	N/A
Blackford	43	<5	N/A	<5	N/A
Boone	181	10	5.5%	<5	N/A
Brown	98	<5	N/A	<5	N/A
Carroll	99	14	14.1%	<5	N/A
Cass	248	31	12.5%	<5	N/A
Clark	392	51	13.0%	24	6.1%
Clay	196	<5	N/A	<5	N/A
Clinton	122	5	4.1%	<5	N/A
Crawford	71	<5	N/A	<5	N/A
Daviess	177	7	4.0%	<5	N/A
Dearborn	508	53	10.4%	11	2.2%
Decatur	192	8	4.2%	<5	N/A
DeKalb	202	18	8.9%	<5	N/A
Delaware	990	100	10.1%	34	3.4%
Dubois	298	9	3.0%	<5	N/A
Elkhart	810	104	12.8%	51	6.3%
Fayette	207	12	5.8%	<5	N/A
Floyd	186	22	11.8%	7	3.8%
Fountain	59	7	11.9%	<5	N/A
Franklin	168	9	5.4%	<5	N/A
Fulton	215	21	9.8%	<5	N/A
Gibson	216	<5	N/A	<5	N/A
Grant	495	57	11.5%	19	3.8%
Greene	207	5	2.4%	<5	N/A
Hamilton	813	56	6.9%	16	2.0%
Hancock	164	16	9.8%	<5	N/A
Harrison	54	7	13.0%	<5	N/A
Hendricks	358	17	4.7%	5	1.4%
Henry	259	27	10.4%	8	3.1%
Howard	649	62	9.6%	15	2.3%
Huntington	86	15	17.4%	9	10.5%
Jackson	292	14	4.8%	5	1.7%
Jasper	109	11	10.1%	<5	N/A
Jay	84	7	8.3%	<5	N/A
Jefferson	340	24	7.1%	9	2.6%
Jennings	247	20	8.1%	<5	N/A
Johnson	234	30	12.8%	<5	N/A
Knox	374	6	1.6%	<5	N/A
Kosciusko	343	85	24.8%	46	13.4%
LaGrange	95	10	10.5%	<5	N/A
Lake	2,886	456	15.8%	187	6.5%
LaPorte	623	90	14.4%	31	5.0%
Lawrence	481	12	2.5%	<5	N/A

	Treatment Episodes	Cocaine Use		Cocaine Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Madison	708	91	12.9%	27	3.8%
Marion	4,177	891	21.3%	360	8.6%
Marshall	249	44	17.7%	21	8.4%
Martin	51	<5	N/A	<5	N/A
Miami	265	26	9.8%	7	2.6%
Monroe	1,412	122	8.6%	31	2.2%
Montgomery	330	20	6.1%	5	1.5%
Morgan	479	19	4.0%	<5	N/A
Newton	29	5	17.2%	<5	N/A
Noble	331	62	18.7%	32	9.7%
Ohio	44	<5	N/A	<5	N/A
Orange	113	6	5.3%	<5	N/A
Owen	245	7	2.9%	<5	N/A
Parke	103	6	5.8%	<5	N/A
Perry	126	<5	N/A	<5	N/A
Pike	56	<5	N/A	<5	N/A
Porter	664	93	14.0%	22	3.3%
Posey	108	5	4.6%	<5	N/A
Pulaski	111	9	8.1%	<5	N/A
Putnam	207	7	3.4%	<5	N/A
Randolph	193	28	14.5%	<5	N/A
Ripley	236	12	5.1%	<5	N/A
Rush	168	6	3.6%	<5	N/A
Saint Joseph	1,462	464	31.7%	240	16.4%
Scott	154	<5	N/A	<5	N/A
Shelby	139	22	15.8%	<5	N/A
Spencer	194	8	4.1%	<5	N/A
Starke	218	14	6.4%	<5	N/A
Steuben	191	17	8.9%	<5	N/A
Sullivan	72	<5	N/A	<5	N/A
Switzerland	64	<5	N/A	<5	N/A
Tippecanoe	406	54	13.3%	9	2.2%
Tipton	68	5	7.4%	<5	N/A
Union	43	<5	N/A	<5	N/A
Vanderburgh	1,191	127	10.7%	47	3.9%
Vermillion	114	5	4.4%	<5	N/A
Vigo	755	43	5.7%	12	1.6%
Wabash	222	25	11.3%	14	6.3%
Warren	16	<5	N/A	<5	N/A
Warrick	320	16	5.0%	<5	N/A
Washington	58	<5	N/A	<5	N/A
Wayne	475	84	17.7%	25	5.3%
Wells	111	13	11.7%	<5	N/A
White	151	8	5.3%	<5	N/A
Whitley	131	30	22.9%	11	8.4%
County Info Missing	149	24	16.1%	11	7.4%
Indiana	**34,670**	**4,504**	**13.0%**	**1,628**	**4.7%**

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, 2014

APPENDIX 6B - PART 1

Percentage of Indiana Students Reporting Lifetime and Monthly Cocaine Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.4	0.4	0.2	0.8	0.7	0.5	1.0	0.3	0.4
	Monthly	0.3	0.2	0.1	*0.8	0.5	0.2	0.5	0.2	0.2
7th Grade	Lifetime	0.6	0.5	0.8	0.1	0.3	0.7	0.7	0.5	0.9
	Monthly	0.3	0.2	0.4	0.0	0.2	0.4	0.2	0.3	0.6
8th Grade	Lifetime	1.2	1.1	1.2	0.9	*0.5	1.4	*2.1	1.0	*1.6
	Monthly	0.5	0.6	0.5	0.2	*0.2	0.7	0.5	0.5	0.6
9th Grade	Lifetime	1.9	1.8	1.8	1.3	1.9	1.7	*3.4	1.7	2.5
	Monthly	0.5	0.7	0.7	0.4	0.4	0.6	0.4	0.6	0.5
10th Grade	Lifetime	2.5	2.9	2.5	2.0	2.3	2.4	*4.6	2.4	2.6
	Monthly	1.0	1.3	0.8	0.7	0.7	0.8	*1.9	1.0	1.0
11th Grade	Lifetime	3.2	3.3	3.8	*2.2	3.0	3.3	4.1	2.8	4.0
	Monthly	1.0	1.0	1.3	0.5	1.2	0.9	1.7	0.9	1.1
12th Grade	Lifetime	4.1	4.6	4.4	*2.4	3.9	*5.4	6.0	3.4	4.1
	Monthly	1.2	1.2	1.3	1.0	1.0	*2.1	*3.5	0.9	1.2

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman et al., 2013

APPENDIX 6B - PART 2

Percentage of Indiana Students Reporting Lifetime and Monthly Crack Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.5	0.5	0.3	*1.0	0.8	0.5	0.0	0.3	0.4
	Monthly	0.3	0.3	0.2	0.5	*0.7	0.3	0.0	0.1	0.2
7th Grade	Lifetime	0.7	0.7	0.6	0.3	0.3	0.7	0.7	0.8	1.0
	Monthly	0.4	0.3	0.4	0.2	0.3	0.4	0.4	0.5	0.6
8th Grade	Lifetime	0.9	0.9	1.0	0.3	*0.5	1.0	1.4	0.9	*1.4
	Monthly	0.5	0.6	0.4	0.3	0.2	0.4	0.5	0.6	0.5
9th Grade	Lifetime	1.2	1.3	1.2	0.8	1.3	1.3	1.9	1.0	1.4
	Monthly	0.4	0.6	0.7	0.3	0.4	0.2	0.0	0.3	0.5
10th Grade	Lifetime	1.4	1.6	1.1	1.2	1.1	1.1	*2.5	1.5	1.5
	Monthly	0.6	0.7	0.5	0.6	0.6	0.3	1.0	0.6	0.7
11th Grade	Lifetime	1.7	1.9	2.2	1.5	1.6	1.8	2.6	1.4	1.3
	Monthly	0.7	0.8	0.8	0.5	0.7	0.7	1.5	0.8	0.6
12th Grade	Lifetime	1.8	1.6	1.9	1.2	1.9	*2.7	3.0	1.3	2.1
	Monthly	0.8	0.7	0.8	0.6	0.7	1.2	2.0	0.6	0.7

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman et al., 2013

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, 2011)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	4	*0.1	6	*0.2
Allen	66	0.2	84	0.2
Bartholomew	3	*0.0	4	*0.1
Benton	1	*0.1	1	*0.1
Blackford	1	*0.1	0	*0.0
Boone	6	*0.1	8	*0.1
Brown	2	*0.1	0	*0.0
Carroll	1	*0.0	0	*0.0
Cass	0	*0.0	26	0.7
Clark	29	0.3	40	0.4
Clay	2	*0.1	4	*0.1
Clinton	8	*0.2	4	*0.1
Crawford	1	*0.1	0	*0.0
Daviess	1	*0.0	8	*0.3
Dearborn	2	*0.0	2	*0.0
Decatur	5	*0.2	4	*0.2
DeKalb	6	*0.1	9	*0.2
Delaware	20	0.2	16	*0.1
Dubois	4	*0.1	6	*0.1
Elkhart	48	0.2	49	0.2
Fayette	6	*0.2	9	*0.4
Floyd	3	*0.0	75	1.0
Fountain	4	*0.2	6	*0.3
Franklin	0	*0.0	4	*0.2
Fulton	2	*0.1	3	*0.1
Gibson	2	*0.1	1	*0.0
Grant	10	*0.1	19	*0.3
Greene	2	*0.1	4	*0.1
Hamilton	18	*0.1	62	0.2
Hancock	11	*0.2	19	*0.3
Harrison	1	*0.0	2	*0.1
Hendricks	28	0.2	28	0.2
Henry	5	*0.1	8	*0.2
Howard	95	1.1	80	1.0
Huntington	1	*0.0	1	*0.0
Jackson	12	*0.3	17	*0.4
Jasper	5	*0.1	7	*0.2
Jay	4	*0.2	4	*0.2
Jefferson	7	*0.2	11	*0.3
Jennings	0	*0.0	1	*0.0
Johnson	19	*0.1	12	*0.1
Knox	19	*0.5	14	*0.4
Kosciusko	13	*0.2	17	*0.2
LaGrange	6	*0.2	54	1.4
Lake	158	0.3	267	0.5
LaPorte	50	0.4	269	2.4
Lawrence	3	*0.1	2	*0.0
Madison	25	0.2	43	0.3
Marion	819	0.9	598	0.7

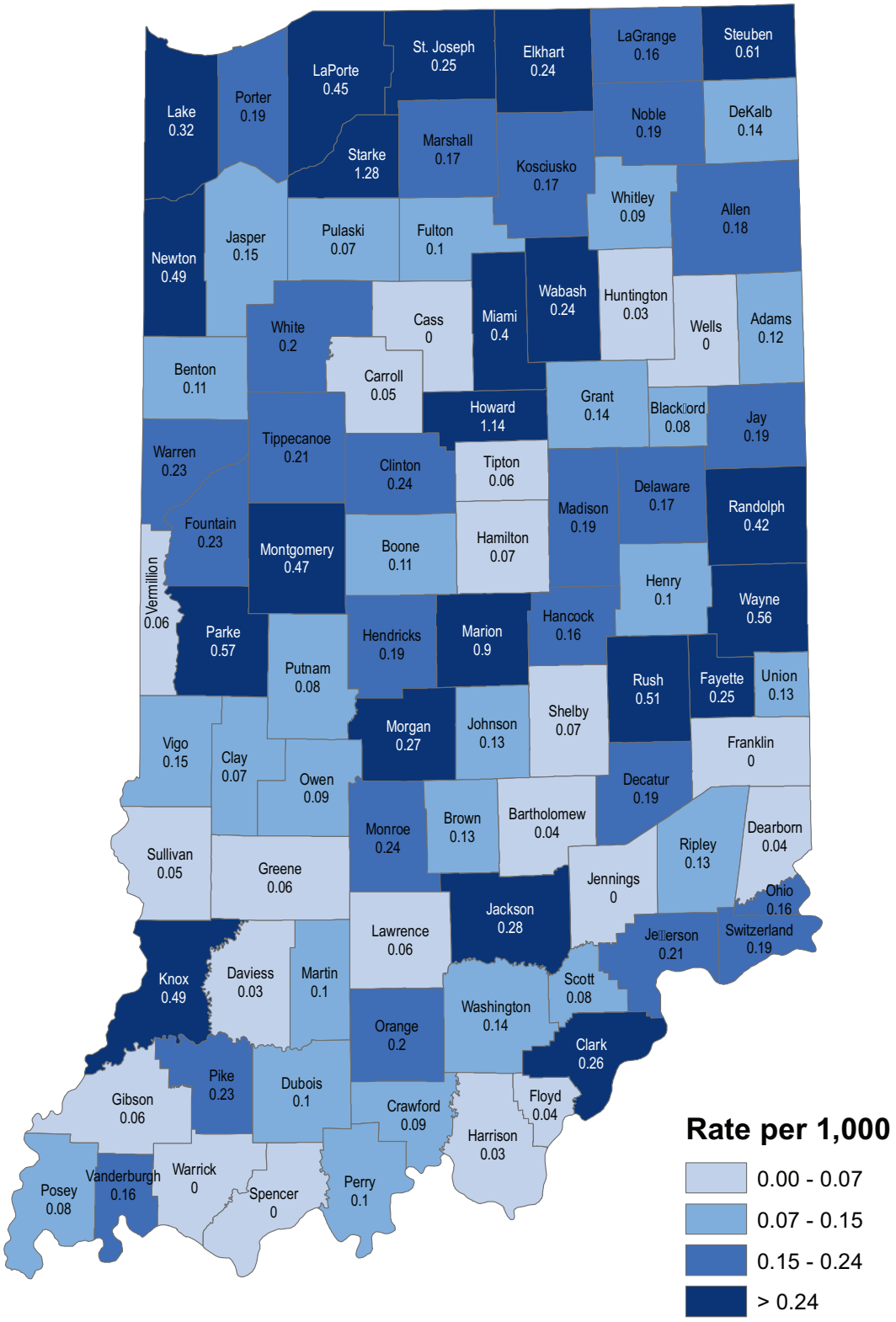
(continued on next page)

APPENDIX 6C *(Continued from previous page)*

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	8	*0.2	10	*0.2
Martin	1	*0.1	1	*0.1
Miami	15	*0.4	33	0.9
Monroe	33	0.2	29	0.2
Montgomery	18	*0.5	19	*0.5
Morgan	19	*0.3	17	*0.2
Newton	7	*0.5	0	*0.0
Noble	9	*0.2	14	*0.3
Ohio	1	*0.2	1	*0.2
Orange	4	*0.2	6	*0.3
Owen	2	*0.1	5	*0.2
Parke	10	*0.6	0	*0.0
Perry	2	*0.1	5	*0.3
Pike	3	*0.2	4	*0.3
Porter	32	0.2	18	*0.1
Posey	2	*0.1	4	*0.2
Pulaski	1	*0.1	2	*0.1
Putnam	3	*0.1	7	*0.2
Randolph	11	*0.4	13	*0.5
Ripley	4	*0.1	7	*0.2
Rush	9	*0.5	0	*0.0
Saint Joseph	67	0.2	20	0.1
Scott	2	*0.1	4	*0.2
Shelby	3	*0.1	3	*0.1
Spencer	0	*0.0	0	*0.0
Starke	30	1.3	0	*0.0
Steuben	21	0.6	18	*0.5
Sullivan	1	*0.0	3	*0.1
Switzerland	2	*0.2	3	*0.3
Tippecanoe	37	0.2	76	0.4
Tipton	1	*0.1	1	*0.1
Union	1	*0.1	2	*0.3
Vanderburgh	29	0.2	52	0.3
Vermillion	1	*0.1	0	*0.0
Vigo	16	*0.1	5	*0.0
Wabash	8	*0.2	12	*0.4
Warren	2	*0.2	2	*0.2
Warrick	0	*0.0	3	*0.1
Washington	4	*0.1	7	*0.2
Wayne	39	0.6	35	0.5
Wells	0	*0.0	8	*0.3
White	5	*0.2	6	*0.2
Whitley	3	*0.1	5	*0.1
Indiana	**2,004**	**0.3**	**2,368**	**0.4**

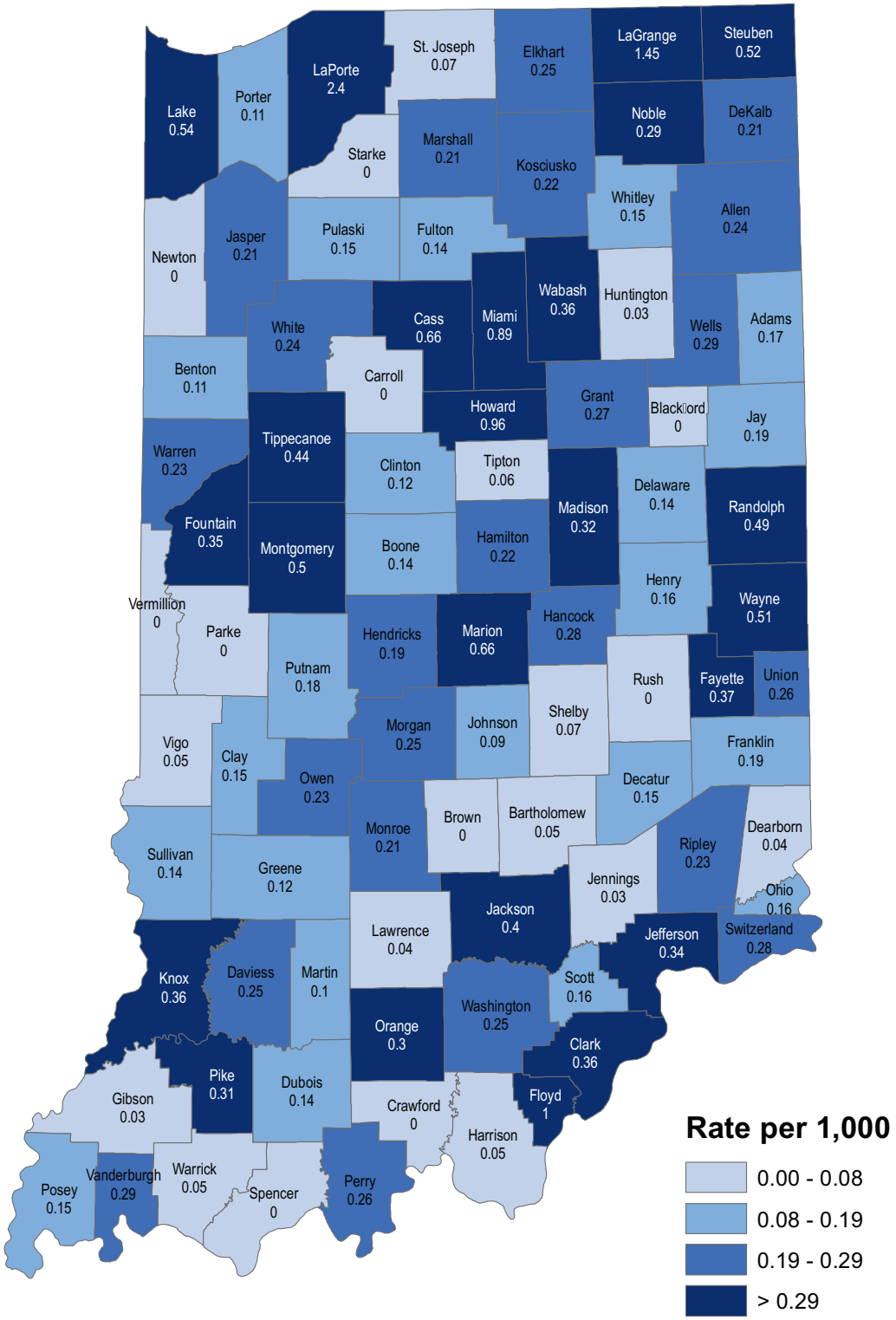
* Rates that are based on arrest numbers lower than 20 are unreliable.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 6.1 Cocaine/Opiate Possession Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 6C (pages 109-110) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 6.2 Cocaine/Opiate Sales Arrest Rates in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 6C (pages 109-1110) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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7 Heroin Use in Indiana: Consumption Patterns and Consequences

HEROIN CONSUMPTION

Heroin is an illegal, highly addictive drug. It is the most abused and the most rapidly acting of the illegal opiate-type drugs. It is processed from morphine, a naturally occurring substance extracted from the seed pod of certain varieties of poppy plants. Heroin can be injected, smoked, or sniffed/snorted (National Institute on Drug Abuse, 2005).

General Consumption Patterns

Only limited information on heroin use is available, especially at the state level. According to the 2012 National Survey on Drug Use and Health (NSDUH), 1.8% of all U.S. citizens ages 12 or older had tried heroin at least once in their lifetime; 0.3% had used it in the past year; and 0.1% were current (past month) users. The annual averages in Indiana for heroin use, based on 2002–2004 NSDUH data,[1] were as follows:

- lifetime use: 1.1% (approximately 54,000 residents)
- past-year use: 0.2% (approximately 9,000 residents)
- current use: less than 0.1% (approximately 1,000 residents)

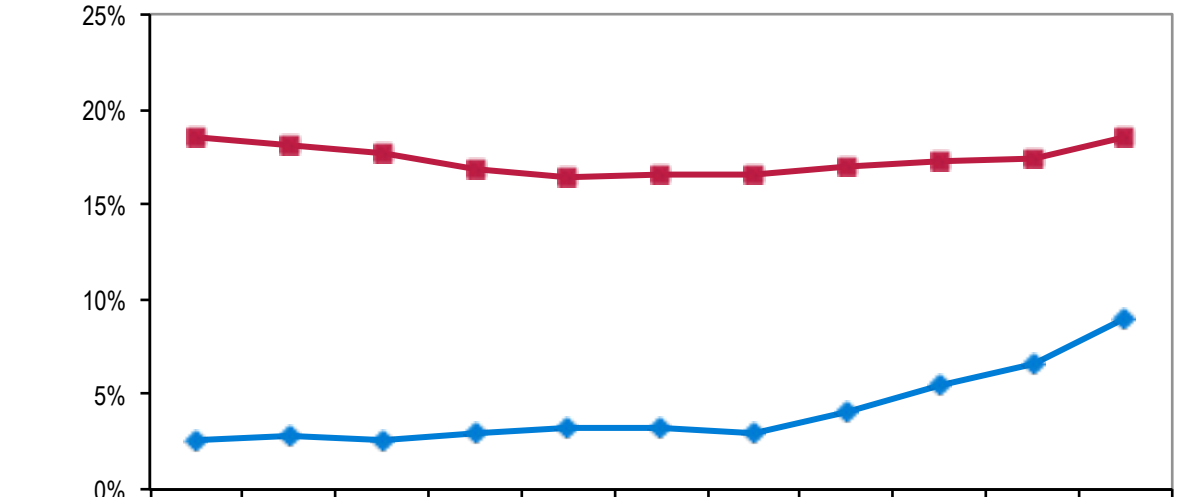
(Substance Abuse and Mental Health Services Administration, 2013).

Adult Consumption Patterns

Heroin use prevalence in the general population is very low. Based on findings from the 2012 NSDUH, past-year use was an estimated 0.8% among 18- to 25-year-old U.S. residents and 0.2 % among those ages 26 and older (Substance Abuse and Mental Health Services Administration, 2013). Prevalence rates by age group were not available at the state level.

The Indiana College Substance Use Survey[2] provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to 2013 results, 0.3% of Indiana college students had used heroin in the past year (U.S.: 0.1%) and 0.1% had used

Figure 7.1 Percentage of Indiana and U.S. Treatment Episodes with Heroin Use Reported at Treatment Admission (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	2.6%	2.8%	2.6%	3.0%	3.3%	3.2%	2.9%	4.1%	5.5%	6.6%	9.0%
U.S.	18.5%	18.1%	17.7%	16.8%	16.4%	16.6%	16.5%	17.0%	17.3%	17.4%	18.5%

Source: Substance Abuse and Mental Health Data Archive, 2011

[1]Estimates based on NSDUH averages from 2002 through 2004 represent the most recent state-level data available.
[2]Eleven Indiana colleges participated in the survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

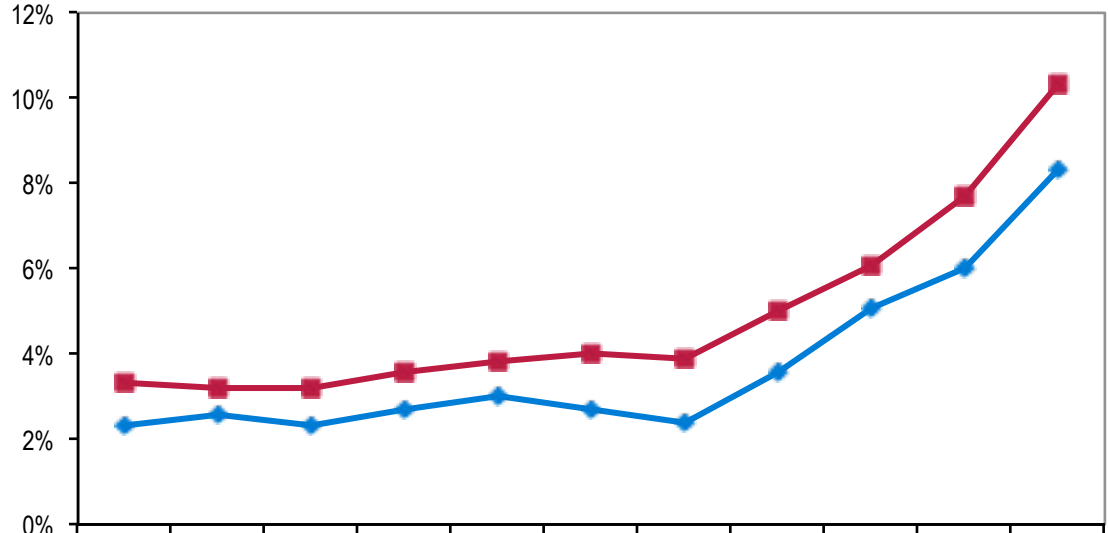
it in the past month (U.S.: 0.1%); Indiana and U.S. rates were not statistically significantly different from one another. Among Indiana college students, past-year prevalence rates were higher for males (0.6%) than for females (0.2%), but current use for males and females was the same (0.1%). No significant differences were detected by age group (under 21 vs. 21 or over) or type of academic institution (private vs. public) (King & Jun, 2013).

Data from the Treatment Episode Data Set (TEDS) spanning 2001 through 2011 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 2011, 9.0% of Hoosiers in treatment reported heroin use, as compared to 18.5% of Americans. Reported heroin use, however, significantly increased in Indiana from 2.6% in 2001 to 9.0% in 2011, whereas it remained stable (18.5%) for the nation during the same time period (see Figure 7.1) (Substance Abuse and Mental Health Data Archive, 2011). For 2012 county-level information on treatment admissions with reported heroin use in Indiana, see Appendix 7A, page 124.

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

- **Gender**—From 2001 through 2011, 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 for most years examined (2001 through 2011, except 2007). Until 2005, blacks had higher percentages of reported use than whites or other races. Since 2008, the percentage of whites reporting heroin use has seen a sharp increase and is currently the highest (see Figure 7.3).
- **Age**—For most years, heroin use within Indiana's treatment population was associated with older adults aged 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 11 years. Furthermore, the percentage of youth less than 18 years old abusing heroin saw a sharp increase from 1.1% in 2010 to 9.1% in 2011 (see Figure 7.4) (Substance Abuse and Mental Health Data Archive, 2011).

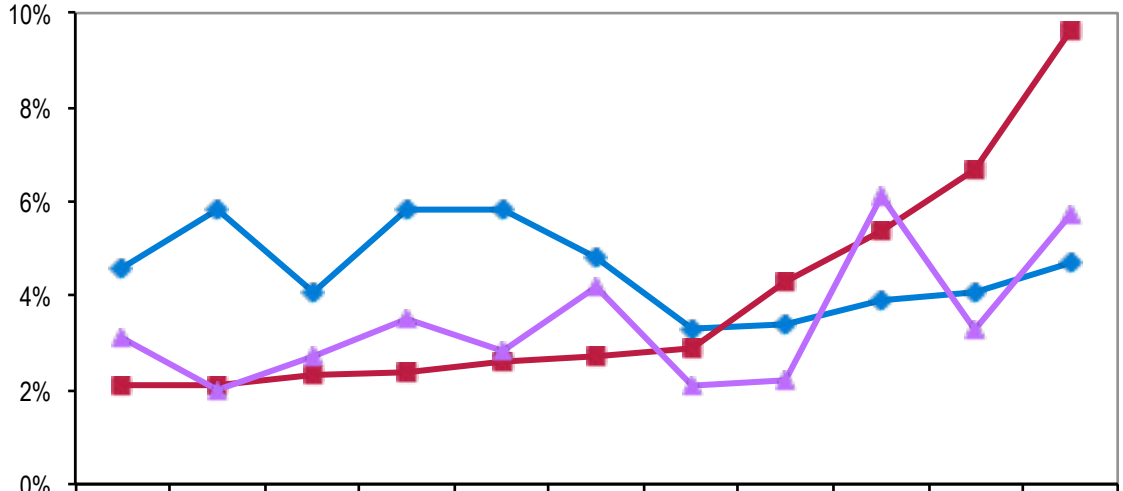
Figure 7.2 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2011)



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

Source: Substance Abuse and Mental Health Data Archive, 2011

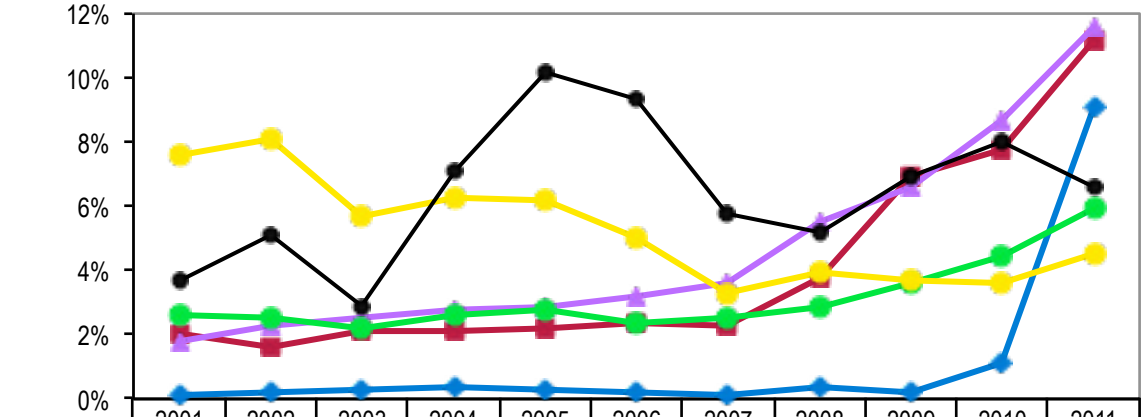
Figure 7.3 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Black	4.6%	5.8%	4.1%	5.8%	5.8%	4.8%	3.3%	3.4%	3.9%	4.1%	4.7%
White	2.1%	2.1%	2.3%	2.4%	2.6%	2.7%	2.9%	4.3%	5.4%	6.7%	9.6%
Other	3.1%	2.0%	2.7%	3.5%	2.8%	4.2%	2.1%	2.2%	6.1%	3.3%	5.7%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 7.4 Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Under 18	0.1%	0.2%	0.3%	0.4%	0.3%	0.2%	0.1%	0.4%	0.2%	1.1%	9.1%
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%
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%
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Youth Consumption Patterns

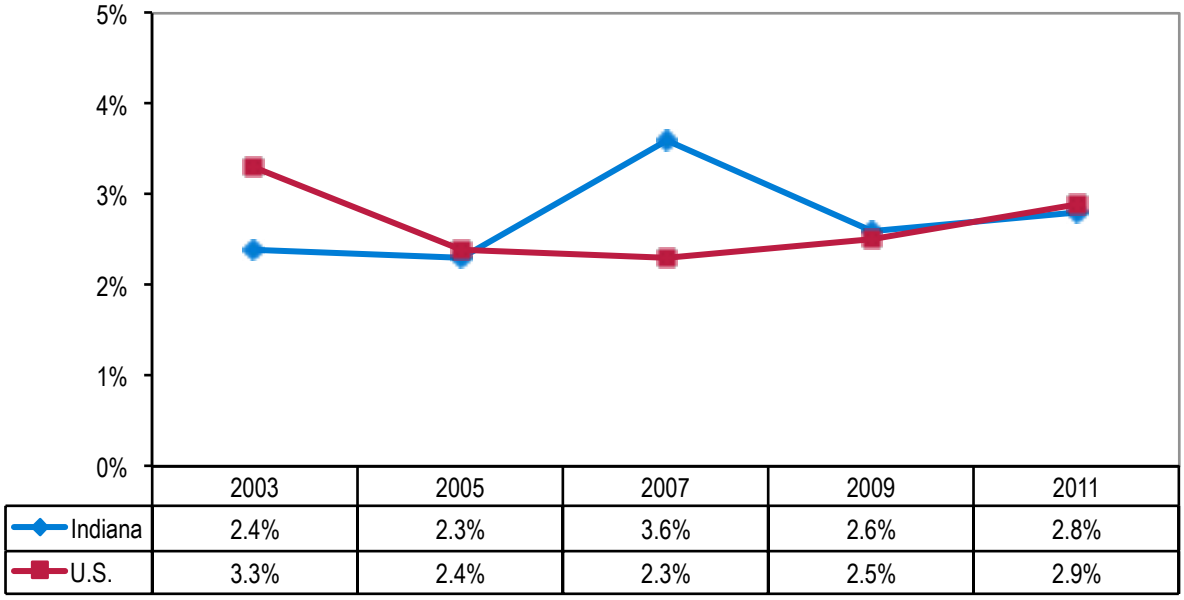
According to the 2011 Youth Risk Behavior Surveillance System (YRBSS), 2.8% (95% Confidence Interval [CI]: 1.7–4.5) of high school students (grades 9 through 12) in Indiana tried heroin at least once in their life. Indiana's rate was statistically similar to the national YRBSS rate (2.9%; 95% CI: 2.5–3.3) (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, 1991-2011).

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 (Centers for Disease Control and Prevention, 1991-2011).

Based on results from the 2013 Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey, 1.9% of Hoosier 12th grade students reported lifetime use (U.S. 1.0%) and 0.8% reported monthly (current) heroin use (U.S.: 0.3%) (see Figures 7.6 and 7.7) (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013)[3].

Heroin use among Hoosier students appeared to increase with age, with lower rates in earlier grades and highest rates in high school seniors; however, statistical significance could not be determined (Gassman, et al., 2013). For lifetime and monthly heroin use rates in Indiana by region and grade level, see Appendix 7B, page 125.

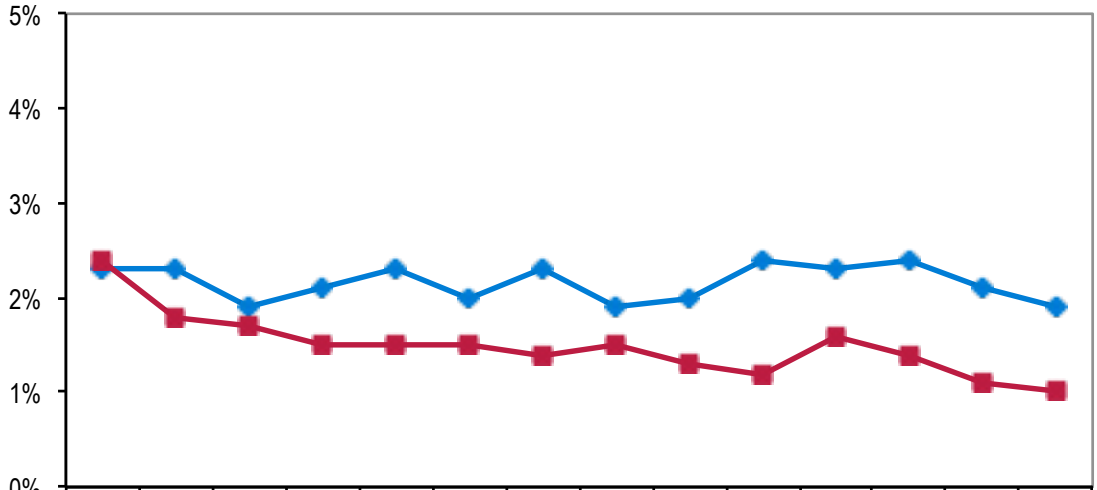
Figure 7.5 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Who Have Used Heroin at Least Once During their Lifetime (Youth Risk Behavior Surveillance System, 2003–2011)



Source: Centers for Disease Control and Prevention, 1991-2011

[3]Due to lack of detail provided in the publicly available data sets, statistical significance between Indiana and U.S. rate differences could not be ascertained.

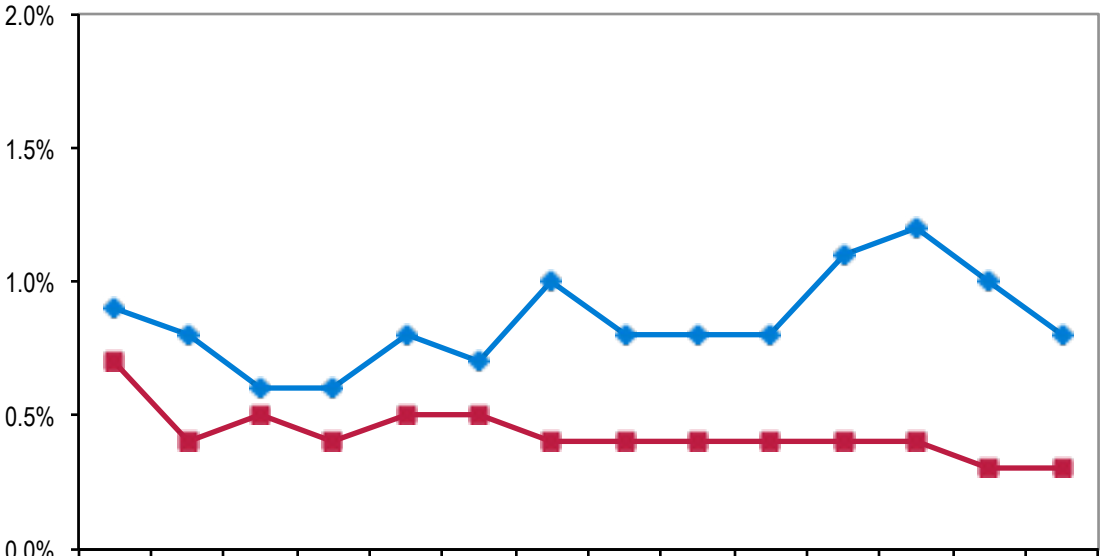
Figure 7.6 Percentage of Indiana and U.S. 12th Grade Students Reporting Lifetime Heroin Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2000–2013)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Indiana	2.3%	2.3%	1.9%	2.1%	2.3%	2.0%	2.3%	1.9%	2.0%	2.4%	2.3%	2.4%	2.1%	1.9%
U.S.	2.4%	1.8%	1.7%	1.5%	1.5%	1.5%	1.4%	1.5%	1.3%	1.2%	1.6%	1.4%	1.1%	1.0%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

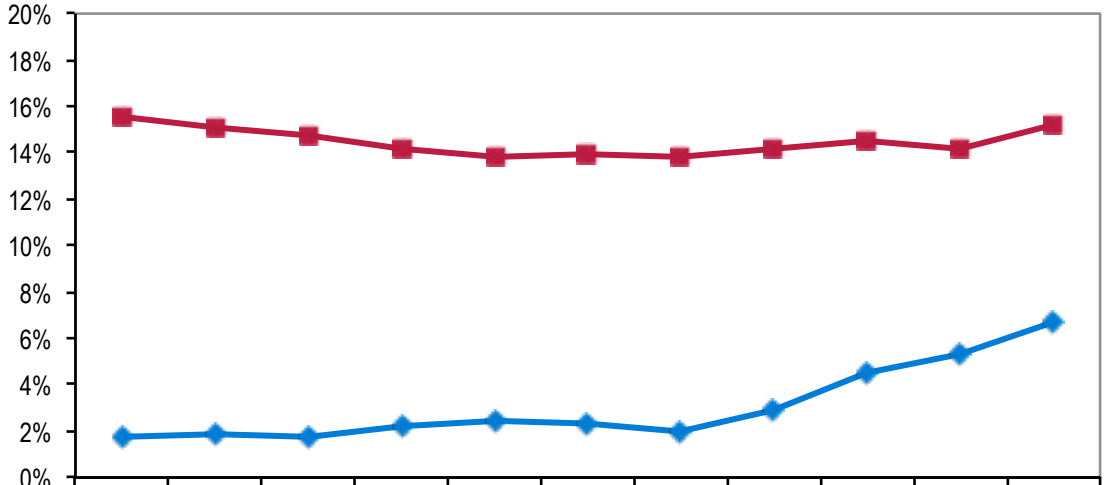
Figure 7.7 Percentage of Indiana and U.S. 12th Grade Students Reporting Monthly Heroin Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2000–2013)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
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%
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%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

Figure 7.8 Percentage of Indiana and U.S. Treatment Episodes with Heroin Dependence Reported at Treatment Admission (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	1.8%	1.9%	1.7%	2.2%	2.4%	2.3%	2.0%	2.9%	4.5%	5.3%	6.7%
U.S.	15.5%	15.1%	14.8%	14.2%	13.8%	13.9%	13.8%	14.2%	14.5%	14.2%	15.2%

Source: Substance Abuse and Mental Health Data Archive, 2011

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). Other health problems reported in heroin abusers are infections of the heart lining and valves, abscesses, liver disease, and pulmonary complications (National Institute on Drug Abuse, 2005).

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 (National Institute on Drug Abuse, 2005). 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

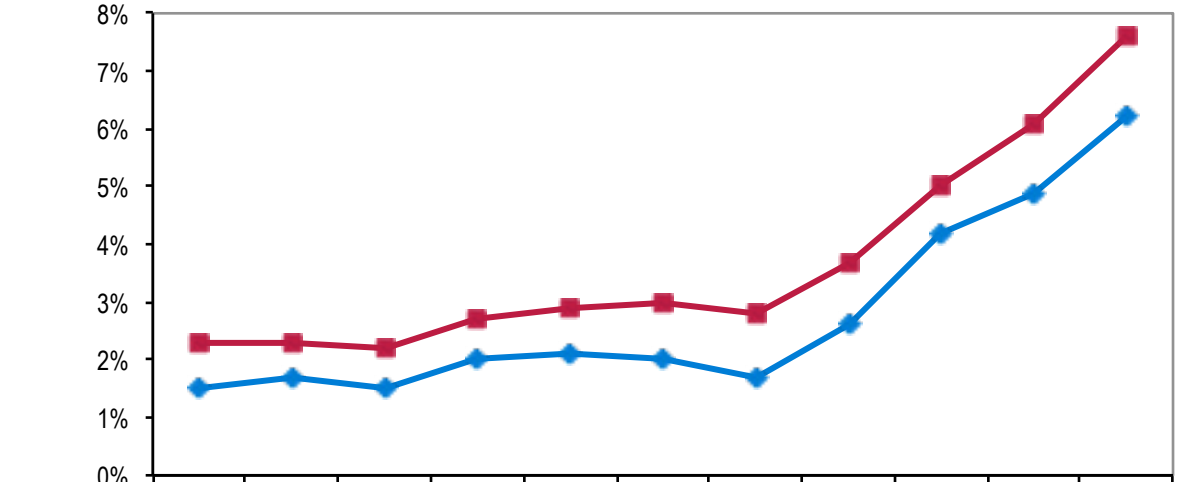
A comparison of data from the Treatment Episode Data Set (TEDS) from 2001 through 2011 shows that the percentage of drug treatment admissions for heroin dependence[4] has consistently been lower in Indiana than the rest of the United States ($P < 0.001$). In addition, heroin dependence in Indiana has increased considerably, from 1.8% in 2001 to 6.7% in 2011 (see Figure 7.8).

Statistically significant differences in treatment admissions for heroin dependence were observed in Indiana by gender, race, and age group (Substance Abuse and Mental Health Data Archive, 2011):

- **Gender**—The percentage of women with heroin dependence was greater than the percentage of men, at 7.6% and 6.2% 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 (see Figure 7.10).
- **Age**—Heroin dependence was reported predominantly by young adults ages 18 to 34. However, the most significant increase occurred in those under the age of 18, which rose from 0.9% in 2010 to 6.9% in 2011 (see Figure 7.11). For county-level information on heroin dependence, see Appendix 7A, page 124.

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

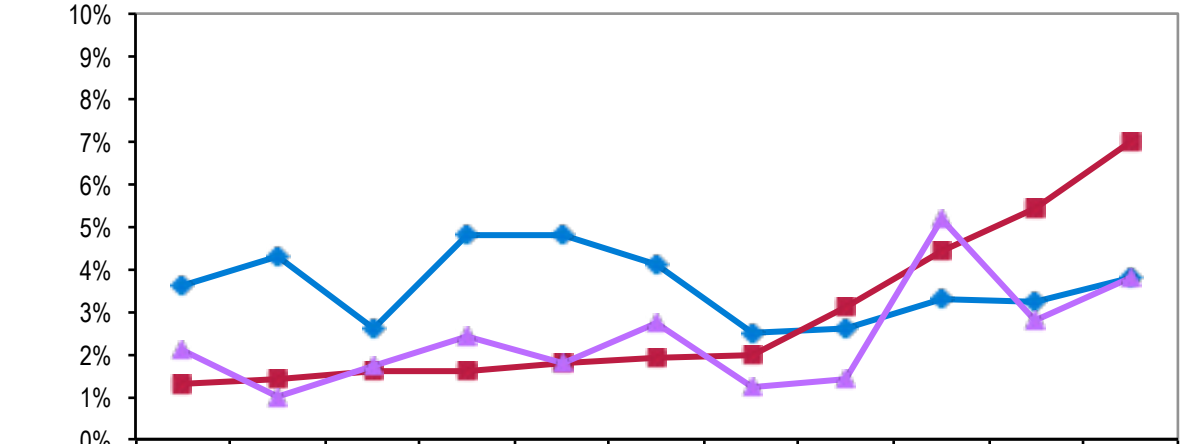
Figure 7.9 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male	1.5%	1.7%	1.5%	2.0%	2.1%	2.0%	1.7%	2.6%	4.2%	4.9%	6.2%
Female	2.3%	2.3%	2.2%	2.7%	2.9%	3.0%	2.8%	3.7%	5.0%	6.1%	7.6%

Source: Substance Abuse and Mental Health Data Archive, 2011

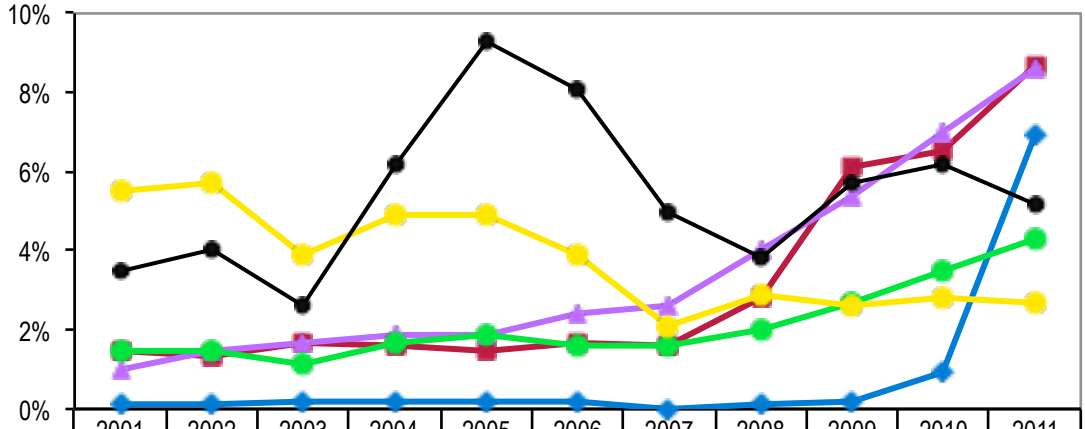
Figure 7.10 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Black	3.6%	4.3%	2.6%	4.8%	4.8%	4.1%	2.5%	2.6%	3.3%	3.2%	3.8%
White	1.3%	1.4%	1.6%	1.6%	1.8%	1.9%	2.0%	3.1%	4.4%	5.4%	7.0%
Other	2.1%	1.0%	1.7%	2.4%	1.8%	2.7%	1.2%	1.4%	5.2%	2.8%	3.8%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 7.11 Percentage of Indiana Treatment Episodes with Heroin Dependence Reported at Treatment Admission, by Age Group (Treatment Episode Data Set, 2001–2011)



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Under 18	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.0%	0.1%	0.2%	0.9%	6.9%
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%
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%
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

HIV/AIDS

One of the most serious consequences of heroin abuse is contraction of HIV from contaminated needles; injection drug use (IDU) remains a significant risk factor for HIV/AIDS. In 2012, 413 new HIV infections and 105 new AIDS cases were reported in Indiana. As of December 31, 2012, a total of 10,688 persons were living with HIV disease[5] in Indiana; the mode of transmission in 841 of these cases involved IDU (Indiana State Department of Health, 2012).[6] The estimated annual rate of AIDS diagnoses in Indiana adults and adolescents was 6.6 per 100,000 population in 2011 (U.S.: 12.4) (The Kaiser Family Foundation, 2013). Indiana's age-adjusted HIV/AIDS mortality rate for 2010 was 1.5 per 100,000 population (95% CI: 1.2–1.8), which was significantly lower than the U.S. rate of 2.6 per 100,000 population (95% CI: 2.6-2.7) (Centers for Disease Control and Prevention, 2013a).[7]

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 (Centers for Disease Control and Prevention, 2013b).

In 2011, 70 acute cases of hepatitis B and 84 acute cases of hepatitis C occurred in Indiana, representing rates of 1.1 for HBV (U.S.: 0.9) and 1.3 for HCV (U.S.: 0.4), per 100,000 population (Centers for Disease Control and Prevention, 2013b).

The 2010 age-adjusted mortality rate attributable to HBV and HCV[8] was 1.3 per 100,000 population (95% CI: 1.1–1.6) in Indiana, which was significantly lower than the national rate of 2.1 per 100,000 population (95% CI: 2.0–2.1) (Centers for Disease Control and Prevention, 2013a).

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 (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). According to the 2011 dataset, law enforcement made just over 2,000 arrests for possession and more than 2,300 arrests for sale/manufacture of opiates and cocaine in Indiana in that year. This represents arrest rates of 0.3 per 1,000 population (95% CI: 0.3–0.3) for possession and 0.4 per 1,000 population (95% CI: 0.4–0.4) for sale/manufacture. For trend information and comparisons with the United States, refer to Chapter 6, Cocaine, on pages 99-114; for county-level data, see Maps 6.1 and 6.2 (pages 111 and 112) and Appendix 6C (pages 109-110).

[5]HIV disease includes both HIV infections and AIDS cases.
[6]A total of 378 cases were attributed to IDU alone and 463 to IDU and MSM (men having sex with men) together.
[7]Mortality rates for HIV/AIDS are based on ICD-10 codes B20-B24 (Human immunodeficiency virus [HIV] disease).
[8]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, 2013)

	Treatment Episodes	Heroin Use		Heroin Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Adams	136	6	4.4%	<5	N/A
Allen	1,856	156	8.4%	101	5.4%
Bartholomew	653	18	2.8%	11	1.7%
Benton	45	<5	N/A	<5	N/A
Blackford	43	<5	N/A	<5	N/A
Boone	181	30	16.6%	24	13.3%
Brown	98	<5	N/A	<5	N/A
Carroll	99	<5	N/A	<5	N/A
Cass	248	<5	N/A	<5	N/A
Clark	392	58	14.8%	42	10.7%
Clay	196	<5	N/A	<5	N/A
Clinton	122	16	13.1%	11	9.0%
Crawford	71	5	7.0%	<5	N/A
Daviess	177	<5	N/A	<5	N/A
Dearborn	508	132	26.0%	93	18.3%
Decatur	192	<5	N/A	<5	N/A
DeKalb	202	8	4.0%	5	2.5%
Delaware	990	70	7.1%	53	5.4%
Dubois	298	<5	N/A	<5	N/A
Elkhart	810	26	3.2%	18	2.2%
Fayette	207	34	16.4%	15	7.2%
Floyd	186	28	15.1%	26	14.0%
Fountain	59	8	13.6%	6	10.2%
Franklin	168	26	15.5%	18	10.7%
Fulton	215	7	3.3%	5	2.3%
Gibson	216	<5	N/A	<5	N/A
Grant	495	8	1.6%	<5	N/A
Greene	207	8	3.9%	6	2.9%
Hamilton	813	96	11.8%	75	9.2%
Hancock	164	16	9.8%	15	9.1%
Harrison	54	<5	N/A	<5	N/A
Hendricks	358	57	15.9%	50	14.0%
Henry	259	13	5.0%	10	3.9%
Howard	649	75	11.6%	53	8.2%
Huntington	86	13	15.1%	5	5.8%
Jackson	292	18	6.2%	13	4.5%
Jasper	109	23	21.1%	21	19.3%
Jay	84	7	8.3%	5	6.0%
Jefferson	340	41	12.1%	17	5.0%
Jennings	247	19	7.7%	11	4.5%
Johnson	234	35	15.0%	32	13.7%
Knox	374	7	1.9%	<5	N/A
Kosciusko	343	54	15.7%	25	7.3%
LaGrange	95	<5	N/A	<5	N/A
Lake	2,886	437	15.1%	393	13.6%
LaPorte	623	162	26.0%	128	20.5%
Lawrence	481	24	5.0%	10	2.1%

	Treatment Episodes	Heroin Use		Heroin Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Madison	708	32	4.5%	21	3.0%
Marion	4,177	665	15.9%	552	13.2%
Marshall	249	37	14.9%	26	10.4%
Martin	51	<5	N/A	<5	N/A
Miami	265	7	2.6%	<5	N/A
Monroe	1,412	141	10.0%	71	5.0%
Montgomery	330	37	11.2%	30	9.1%
Morgan	479	73	15.2%	58	12.1%
Newton	29	5	17.2%	<5	N/A
Noble	331	41	12.4%	20	6.0%
Ohio	44	11	25.0%	9	20.5%
Orange	113	7	6.2%	<5	N/A
Owen	245	10	4.1%	6	2.4%
Parke	103	<5	N/A	<5	N/A
Perry	126	<5	N/A	<5	N/A
Pike	56	<5	N/A	<5	N/A
Porter	664	186	28.0%	166	25.0%
Posey	108	<5	N/A	<5	N/A
Pulaski	111	6	5.4%	<5	N/A
Putnam	207	13	6.3%	10	4.8%
Randolph	193	37	19.2%	20	10.4%
Ripley	236	38	16.1%	26	11.0%
Rush	168	<5	N/A	<5	N/A
Saint Joseph	1,462	179	12.2%	150	10.3%
Scott	154	10	6.5%	8	5.2%
Shelby	139	17	12.2%	13	9.4%
Spencer	194	5	2.6%	<5	N/A
Starke	218	35	16.1%	28	12.8%
Steuben	191	7	3.7%	<5	N/A
Sullivan	72	<5	N/A	<5	N/A
Switzerland	64	8	12.5%	6	9.4%
Tippecanoe	406	52	12.8%	40	9.9%
Tipton	68	7	10.3%	6	8.8%
Union	43	11	25.6%	<5	N/A
Vanderburgh	1,191	15	1.3%	9	0.8%
Vermillion	114	<5	N/A	<5	N/A
Vigo	755	8	1.1%	<5	N/A
Wabash	222	32	14.4%	16	7.2%
Warren	16	<5	N/A	<5	N/A
Warrick	320	9	2.8%	5	1.6%
Washington	58	12	20.7%	11	19.0%
Wayne	475	137	28.8%	87	18.3%
Wells	111	<5	N/A	<5	N/A
White	151	<5	N/A	<5	N/A
Whitley	131	25	19.1%	9	6.9%
County Info Missing	149	19	12.8%	15	10.1%
Indiana	**34,670**	**3,718**	**10.7%**	**2,771**	**8.0%**

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, 2014

APPENDIX 7B

Percentage of Indiana Students Reporting Lifetime and Monthly Heroin Use in Indiana, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.3	0.3	0.2	0.6	0.5	0.5	0.5	0.3	0.3
	Monthly	0.2	0.1	0.2	0.5	0.4	*0.4	0.0	0.2	0.1
7th Grade	Lifetime	0.4	0.4	0.3	0.0	0.6	0.4	0.9	0.4	0.6
	Monthly	0.3	0.2	0.1	0.0	*0.7	0.2	0.2	0.3	0.3
8th Grade	Lifetime	0.7	0.9	0.9	0.2	0.4	0.8	0.9	0.6	0.9
	Monthly	0.3	*0.6	0.3	0.1	0.1	0.4	0.2	0.3	0.4
9th Grade	Lifetime	1.0	0.8	1.0	*0.3	1.1	1.1	1.7	1.0	1.2
	Monthly	0.4	0.5	0.6	0.1	0.5	0.3	0.2	0.5	0.4
10th Grade	Lifetime	1.3	1.5	1.3	1.0	0.9	1.5	*2.5	1.2	1.3
	Monthly	0.5	0.5	0.5	0.8	0.3	0.5	*1.5	0.5	0.5
11th Grade	Lifetime	1.6	2.3	1.8	1.2	1.6	1.8	*3.2	1.4	1.3
	Monthly	0.7	0.9	0.9	0.3	0.7	0.9	1.5	0.5	0.7
12th Grade	Lifetime	1.9	1.3	1.9	1.5	1.7	*2.9	*4.5	1.3	2.3
	Monthly	0.8	0.7	0.7	0.7	0.7	*1.4	*3.5	0.6	0.9

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman, et al., 2013

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8 Methamphetamine Use in Indiana: Consumption Patterns and Consequences

METHAMPHETAMINE CONSUMPTION

Methamphetamine (meth) is a powerful, highly addictive stimulant that affects the central nervous system. Meth is similar to amphetamine, but it has a more pronounced effect. It can be injected, snorted, smoked, or ingested orally. Methamphetamine users feel a short, yet intense "rush" when the drug is initially administered. The immediate effects of methamphetamine include increased physical activity, wakefulness, and decreased appetite (National Institute on Drug Abuse, 2010).

General Consumption Patterns

The National Survey on Drug Use and Health (NSDUH) measures lifetime, past year, and past month (current) use of methamphetamine in the population ages 12 and older (Substance Abuse and Mental Health Services Administration, 2013). The latest prevalence estimates for the nation are based on results from the 2012 survey. However, state-level rates were calculated using annual averages from 2002 through 2004. Therefore, comparisons between Indiana and U.S. rates should be made with caution, especially since national rates were higher between 2002 and 2004 than they are today. According to NSDUH findings:

- 4.5% of Hoosiers (225,000 residents) used meth at least once in their life (U.S.: 4.7%).
- 0.8% of Hoosiers (40,000 residents) used meth in the past year (U.S.: 0.4%).
- 0.2% of Hoosiers (10,000 residents) used meth in the past month (U.S.: 0.2%) (Substance Abuse and Mental Health Services Administration, 2013).

Adult Consumption Patterns

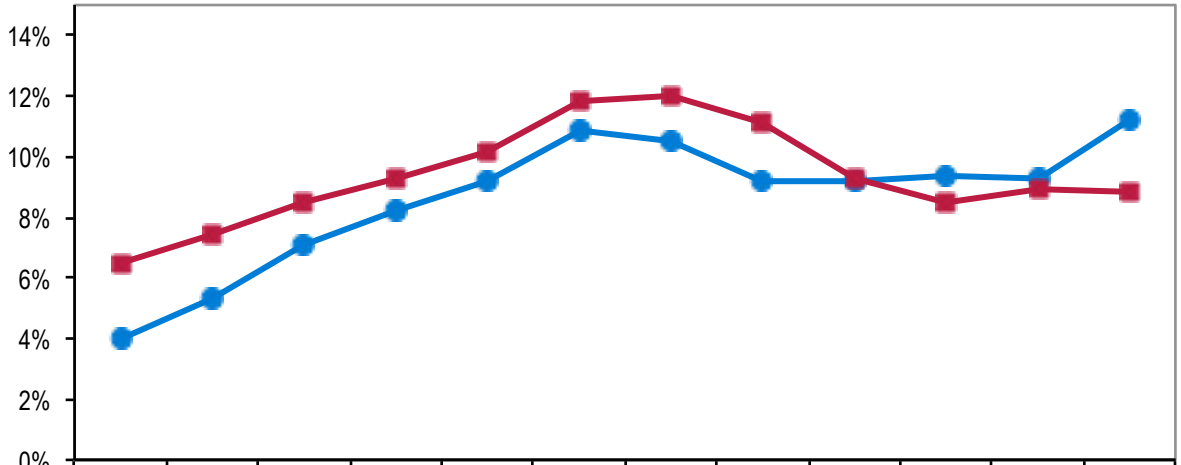
According to pooled NSDUH data from 2002 through 2005, 1.9% of Indiana residents ages 18 to 25 used meth in the past year. In comparison, the highest and lowest rates of past-year meth use among 18- to 25-year-olds were found in young adults from Wyoming (4.6%) and New York (0.3%), respectively (Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2008).

The Indiana College Substance Use Survey provides estimates of alcohol, tobacco, and other drug use among Indiana college students. According to 2013 results, 0.3% of Indiana college students had used meth in the past year (U.S.: less than 0.1%) and 0.1% had used it in the past month (U.S.: less than 0.1%); U.S. rates were not statistically different. Past-year use was statistically higher for males (0.5%) than for females (0.2%), but current use for both genders was the same (0.1%). Prevalence rates for meth use among Indiana college students did not differ by age group (under 21 vs. 21 or over), or type of academic institution (private vs. public) (King & Jun, 2013).[1]

The Treatment Episode Data Set (TEDS) includes information gathered from patients at the time of substance abuse treatment admission (Substance Abuse and Mental Health Data Archive, 2011). Indiana TEDS data show an increase in the percentage of patients reporting meth use at admission, from 4.0% in 2000 to 11.2% in 2011. 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).

[1]Eleven Indiana colleges participated in the 2013 survey; results are based on nonrandom sampling and are not representative of all college students in Indiana.

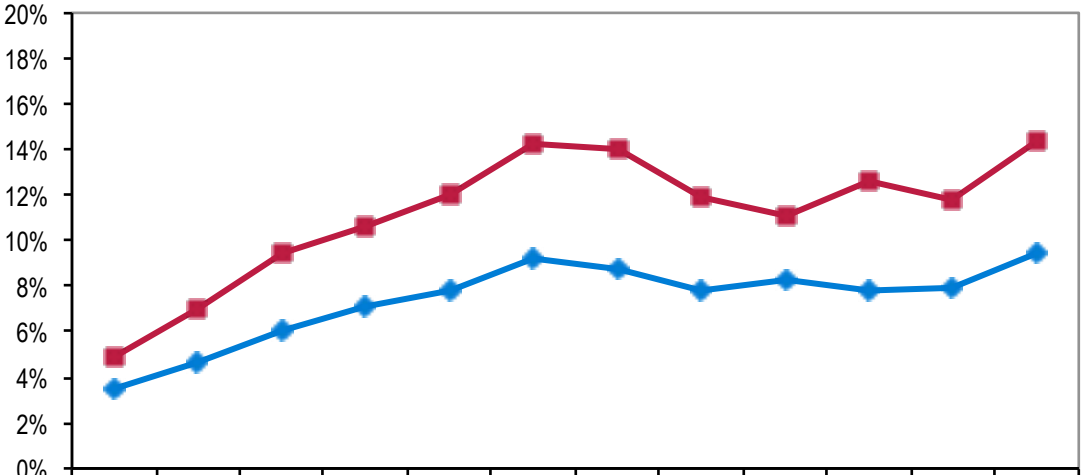
Figure 8.1 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 8.2 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

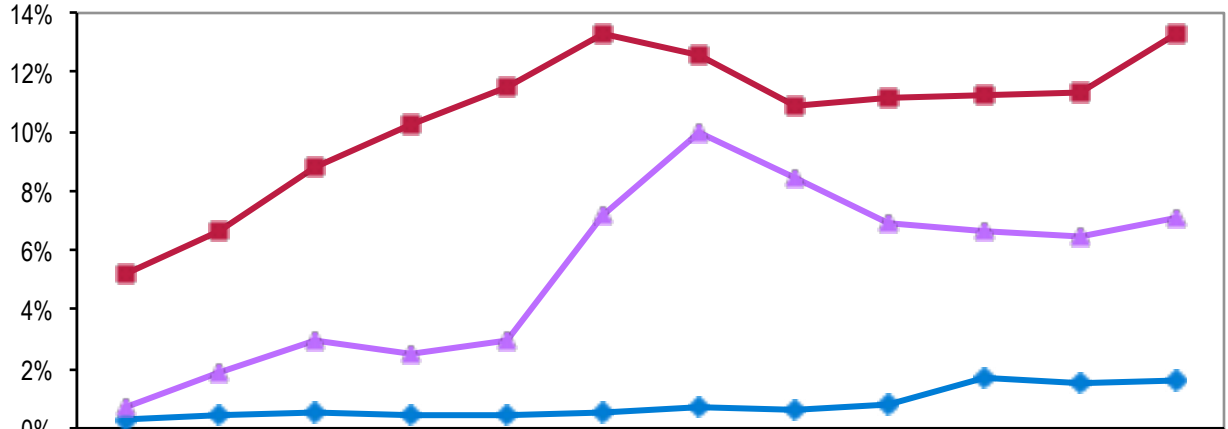
Source: Substance Abuse and Mental Health Data Archive, 2011

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 more than doubled from 5.2% in 2000 to 13.3% in 2011. Even though blacks consistently had the lowest percentage, reported use increased significantly from 0.3% to 1.6% during that time period; however, the greatest increase was found among other races, whose percentage rose tenfold from 0.7% to 7.1% (see Figure 8.3).
- **Age**—With the exception of individuals under the age of 18, younger adults had higher rates of use than older people, with the highest rates among those ages 25 to 34 (see Figure 8.4) (Substance Abuse and Mental Health Data Archive, 2011).

For county-level treatment data, see Appendix 8A, page 139.

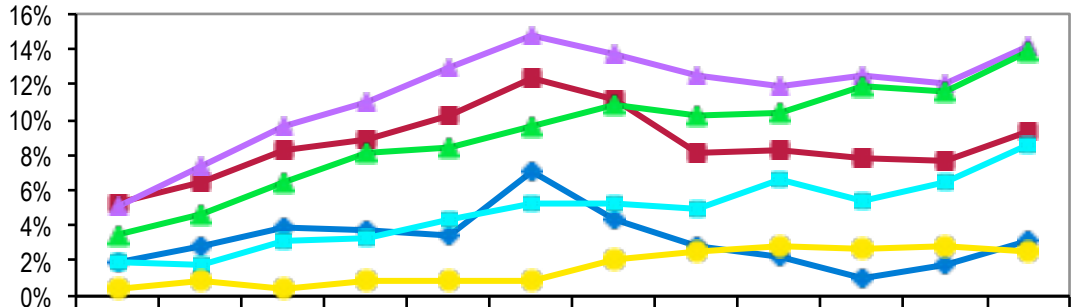
Figure 8.3 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

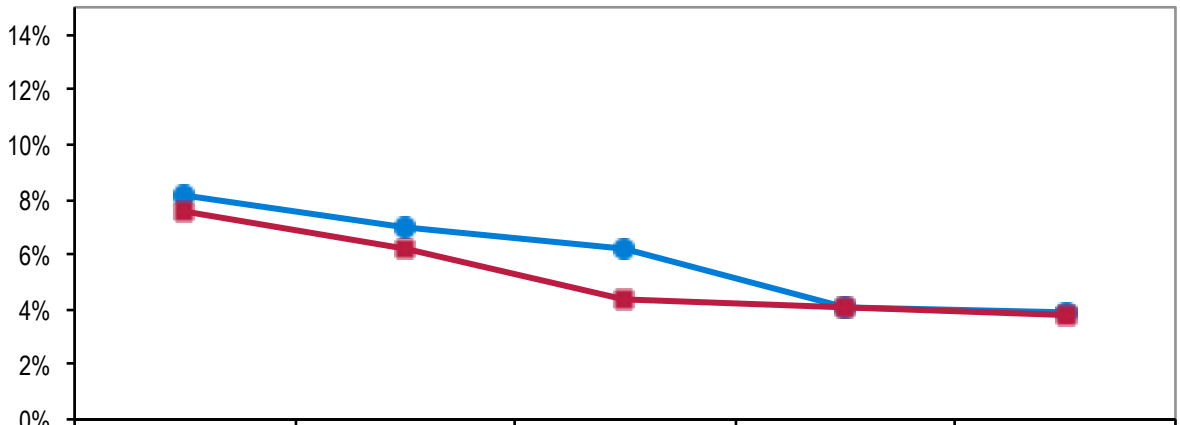
Figure 8.4 Percentage of Treatment Episodes with Meth Use Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 8.5 Percentage of Indiana and U.S. High School Students (9th–12th Grade) Reporting Lifetime Methamphetamine Use (Youth Risk Behavior Surveillance System, 2003–2011)



	2003	2005	2007	2009	2011
Indiana	8.2%	7.0%	6.2%	4.1%	3.9%
U.S.	7.6%	6.2%	4.4%	4.1%	3.8%

Source: Centers for Disease Control and Prevention, 1991-2011

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) (Centers for Disease Control and Prevention, 1991-2011).

Two other surveys of young people that include questions about lifetime and current methamphetamine use are the Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey, conducted among Indiana students in grades 6 through 12 (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, et al., 2013), and the Monitoring the Future (MTF) survey, administered nationally among 8th, 10th, and 12th graders (Inter-university Consortium for Political and Social Research, University of Michigan, 2013).

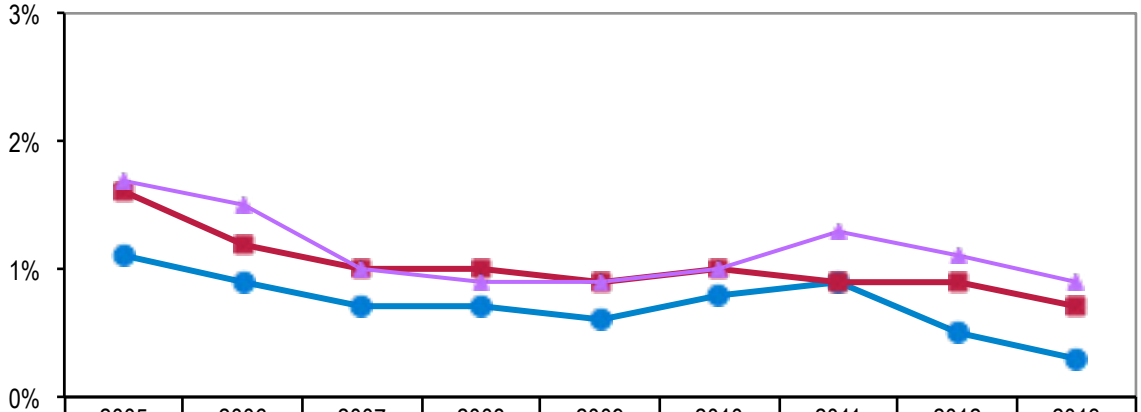
In Indiana, current (past month) rates of meth use in 8th, 10th, and 12th grade students seemed to have decreased from 2005 through 2013 (see Figure 8.6).

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: Centers for Disease Control and Prevention, 1991-2011

Figure 8.6 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current (Past Month) Methamphetamine Use, by Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2005–2013)

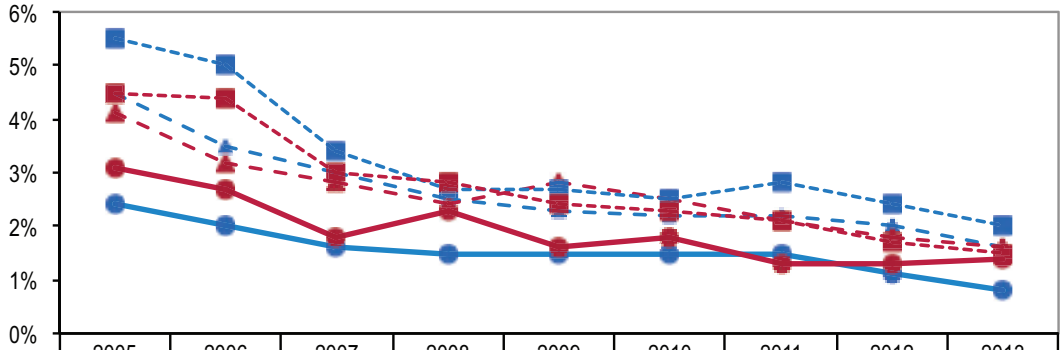


	2005	2006	2007	2008	2009	2010	2011	2012	2013
8th Grade	1.1%	0.9%	0.7%	0.7%	0.6%	0.8%	0.9%	0.5%	0.3%
10th Grade	1.6%	1.2%	1.0%	1.0%	0.9%	1.0%	0.9%	0.9%	0.7%
12th Grade	1.7%	1.5%	1.0%	0.9%	0.9%	1.0%	1.3%	1.1%	0.9%

Source: Gassman, et al., 2013

For grades 8, 10, and 12, Indiana's rates of lifetime meth use seemed comparable to U.S. rates (see Figure 8.7). For lifetime and monthly meth use in Indiana, by region and grade, see Appendix 8B, page 140.

Figure 8.7 Percentage of Indiana and U.S. 8th, 10th, and 12th Grade Students Reporting Lifetime Methamphetamine Use (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey and Monitoring the Future Survey, 2005–2013)



	2005	2006	2007	2008	2009	2010	2011	2012	2013
IN 8th Grade	2.4%	2.0%	1.6%	1.5%	1.5%	1.5%	1.5%	1.1%	0.8%
U.S. 8th Grade	3.1%	2.7%	1.8%	2.3%	1.6%	1.8%	1.3%	1.3%	1.4%
IN 10th Grade	4.5%	3.5%	3.0%	2.5%	2.3%	2.2%	2.2%	2.0%	1.6%
U.S. 10th Grade	4.1%	3.2%	2.8%	2.4%	2.8%	2.5%	2.1%	1.8%	1.6%
IN 12th Grade	5.5%	5.0%	3.4%	2.7%	2.7%	2.5%	2.8%	2.4%	2.0%
U.S. 12th Grade	4.5%	4.4%	3.0%	2.8%	2.4%	2.3%	2.1%	1.7%	1.5%

Source: Gassman, et al., 2013; Inter-university Consortium for Political and Social Research, University of Michigan, 2013

CONSEQUENCES

Health-Related Consequences

The health consequences of meth use include both short-term and chronic impacts. Short-term effects include increased wakefulness, physical activity, decreased appetite, cardiac problems, and hyperthermia (elevated body temperature). When used chronically, meth causes physiological changes that result in impaired memory, mood alterations, diminished motor coordination, and psychiatric problems. Chronic, long-term use can also lead to insomnia, violent behavior, hallucinations, confusion, weight loss, stroke, and withdrawal symptoms including depression. 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; unwanted pregnancy; and death (National Institute on Drug Abuse, 2013, 2010).

Meth labs and parental addiction pose serious risks to children due to the highly toxic fumes generated during production, as well as accidental fires and explosions. Children who are present during or after meth production may face severe health and safety risks, including medical neglect and physical, emotional, and sexual abuse (Messina, Marinelli-Casey, West, & Rawson, 2007).

Meth Dependence

As previously mentioned, meth is considered a highly addictive substance, and 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 changed in 2011, with Indiana and U.S. percentages being statistically similar, 5.8% and 5.5% respectively (Substance Abuse and Mental Health Data Archive, 2011).

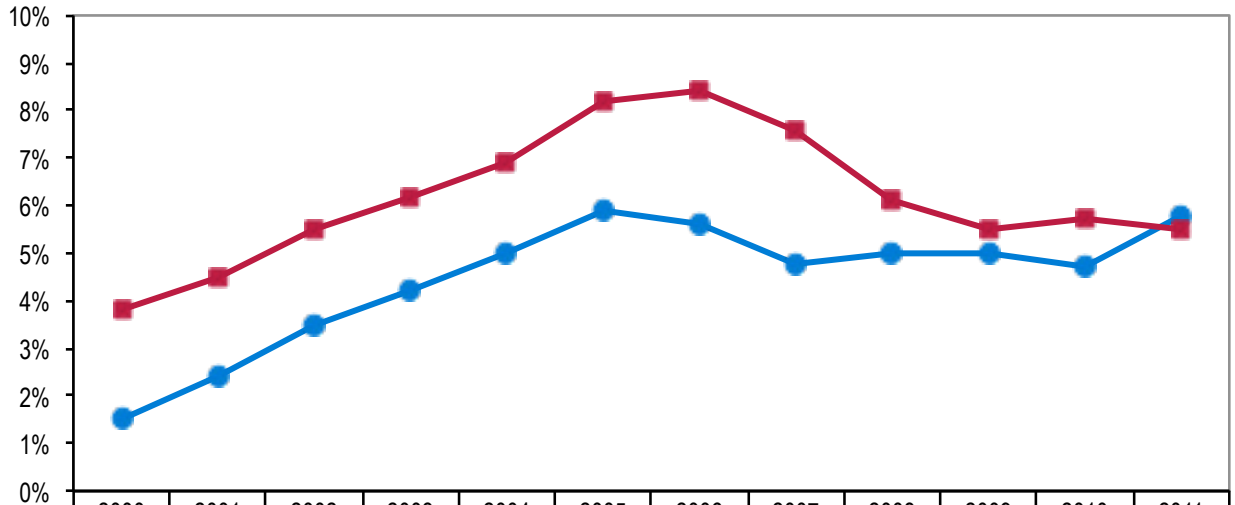
Between 2000 and 2011, the percentage of treatment admissions in Indiana in which meth dependence was indicated increased significantly from 1.5% to 5.8% (see Figure 8.8).

According to the 2011 TEDS dataset, methamphetamine dependence in Indiana's treatment population differed significantly by gender, race, and age group, as follows ($P < 0.001$):

- **Gender**—More women (7.8%) than men (4.7%) listed meth as their primary drug at treatment admission (see Figure 8.9).
- **Race**—The highest and lowest percentages of meth dependence were reported by white patients (6.9%) and black patients (0.5%), respectively (see Figure 8.10).
- **Age**—Meth dependence was indicated primarily among patients ages 25 to 44; Hoosiers ages 55 and older had the lowest percentage (0.7%) (see Figure 8.11) (Substance Abuse and Mental Health Data Archive, 2011).

For county-level treatment data, see Appendix 8A, page 139.

Figure 8.8 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana and the United States (Treatment Episode Data Set, 2000–2011)

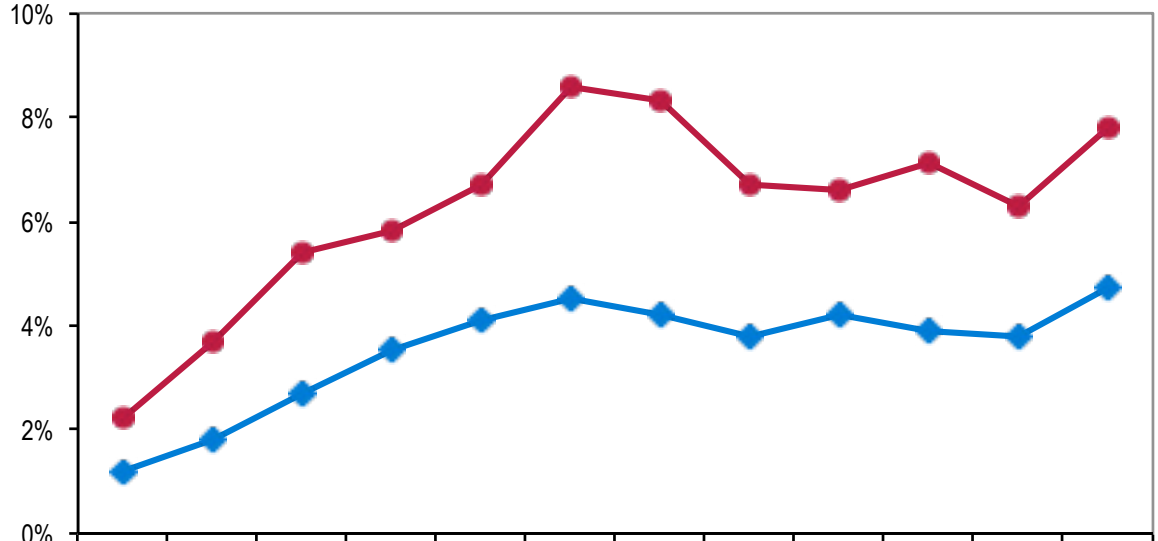


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Indiana	1.5%	2.4%	3.5%	4.2%	5.0%	5.9%	5.6%	4.8%	5.0%	5.0%	4.7%	5.8%
U.S.	3.8%	4.5%	5.5%	6.2%	6.9%	8.2%	8.4%	7.6%	6.1%	5.5%	5.7%	5.5%

Source: Substance Abuse and Mental Health Data Archive, 2011

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

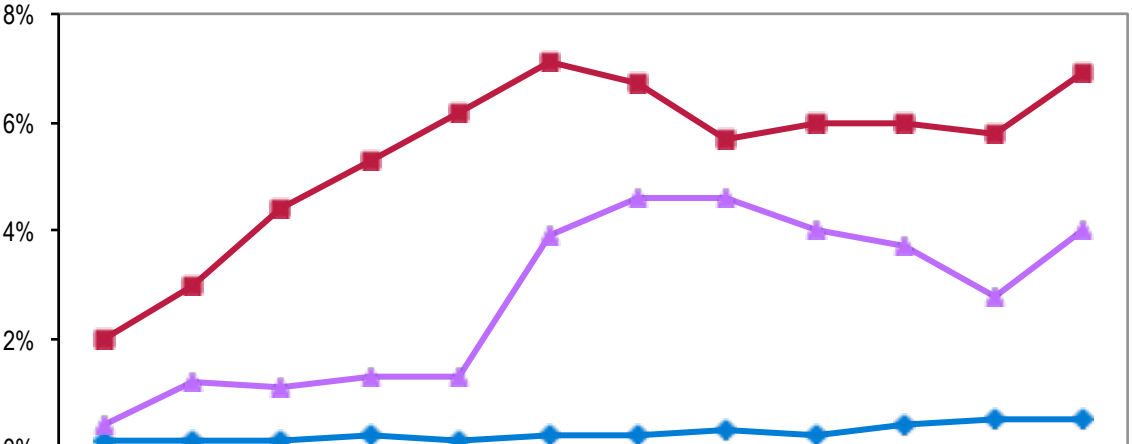
Figure 8.9 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Gender (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

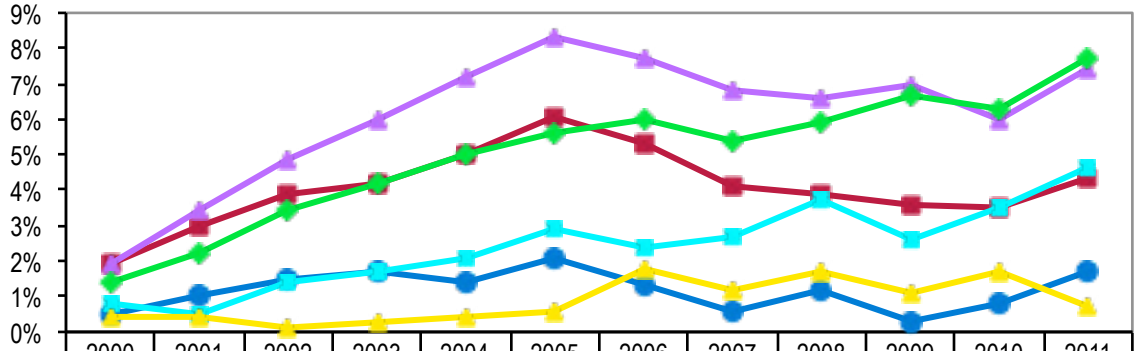
Figure 8.10 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Race (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 8.11 Percentage of Treatment Episodes with Meth Dependence Reported at Treatment Admission in Indiana, by Age Group (Treatment Episode Data Set, 2000–2011)



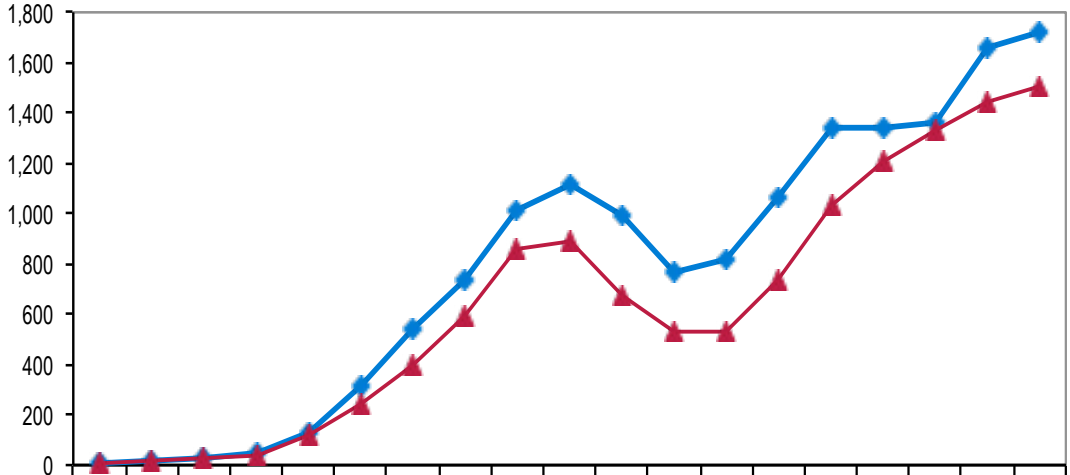
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Under 18	0.5%	1.0%	1.5%	1.7%	1.4%	2.1%	1.3%	0.6%	1.2%	0.3%	0.8%	1.7%
18 to 24	1.9%	3.0%	3.9%	4.2%	5.0%	6.1%	5.3%	4.1%	3.9%	3.6%	3.5%	4.3%
25 to 34	1.9%	3.4%	4.9%	6.0%	7.2%	8.3%	7.7%	6.8%	6.6%	7.0%	6.0%	7.4%
35 to 44	1.4%	2.2%	3.4%	4.2%	5.0%	5.6%	6.0%	5.4%	5.9%	6.7%	6.3%	7.7%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

Criminal Consequences

From January 1 to December 31, 2013, the Indiana State Police (ISP) seized 1,721 clandestine methamphetamine labs and made 1,507 meth lab arrests in the state, which is the highest number of lab seizures and resulting arrests since records have been kept (see Figure 8.12) (Indiana State Police, 2014). However, not all seizures involved the "traditional" clandestine lab. A popular technique to produce meth is the one-pot or "shake and bake" method, for which all ingredients are combined in one container (often a 2-liter or 20-ounce plastic soda bottle) and then shaken. This can be done almost anywhere, even in a moving vehicle. Waste is often disposed along roadsides, in discarded plastic bottles (Blostein, Plaisier, Maltz, Davidson, Wideman, Feucht, & VandenBerg, 2009; Greene, Williams, & Wright, 2010). The number of ISP's meth lab seizures included all meth incidents, such as labs, "dump sites," and "chemical and glassware" seizures. In 2013, over 1,500 seizures, i.e., 87% of all meth labs seized by ISP, were due to the one-pot method, which is a major increase from 2010 (493 seizures, or 37%) (Indiana State Police, 2014). Map 8.1 (page 143) shows the number of meth labs seized by ISP in each county in 2013.

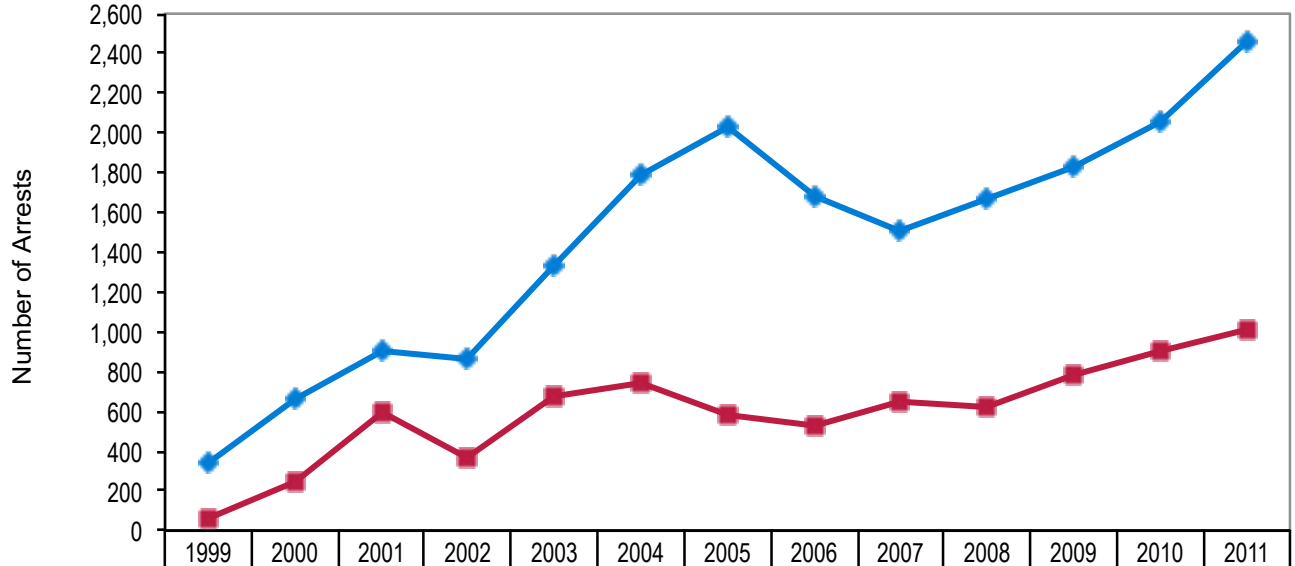
Figure 8.12 Number of Clandestine Methamphetamine Labs Seized and Number of Arrests Made at Methamphetamine Labs by the Indiana State Police (Indiana Meth Lab Statistics, 1995–2013)



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of Lab Seizures	6	13	28	43	129	314	542	732	1,011	1,115	992	766	820	1,059	1,343	1,346	1,363	1,663	1,721
Number of Arrests	6	13	25	39	117	248	395	587	860	885	674	530	534	739	1,031	1,212	1,328	1,448	1,507

Source: Indiana State Police, 2014

Figure 8.13 Number of Arrests for Synthetic Drug Possession and Sale/Manufacture in Indiana (Uniform Crime Reporting Program, 1999–2011)



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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

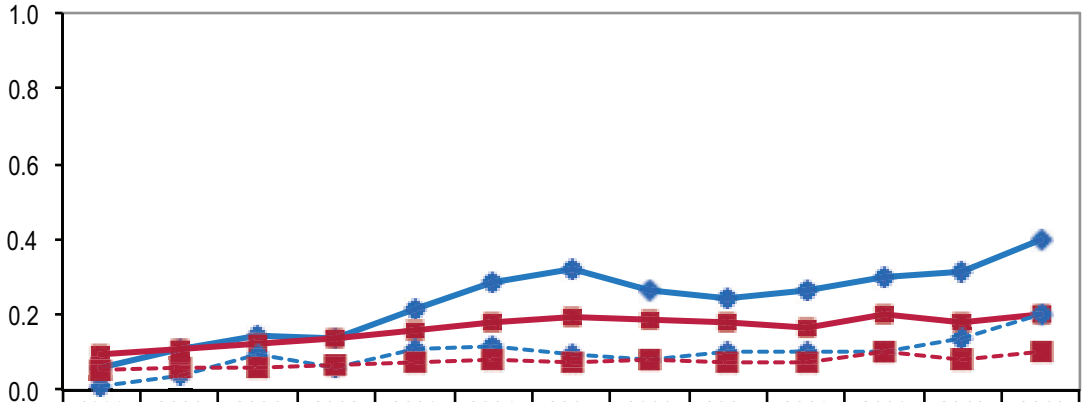
Meth is classified as a synthetic stimulant. The Uniform Crime Reporting (UCR) Program describes crimes associated with synthetic drug possession and sale/manufacture. Substances defined as "synthetic" include a number of drugs in addition to methamphetamine, such as Demerol and methadone (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). According to 2011 results, over 2,400 Hoosiers were arrested for possession of synthetic drugs. This represents an arrest rate of 0.4 (95% CI: 0.4–0.4) per 1,000 population, a rate that was statistically higher than the nation's, at 0.2 (95% CI: 0.2–0.2). Additionally, over 1,000 arrests were made in Indiana for the sale and manufacture of synthetic drugs; Indiana's arrest rate of 0.2 (95% CI: 0.2–0.2) per 1,000 population also was statistically higher than the U.S. rate of 0.1 (95% CI: 0.1-0.1) (see Figures 8.13 and 8.14).

Maps 8.2 and 8.3 (pages 144 and 145), and Appendix 8C (pages 141–142) 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 consequences discussed above, 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, financial problems, poor parenting, incarceration of parents, and placement of children in protective custody. According to data from the Indiana State Police (ISP), the number of children who were taken from meth lab homes in Indiana rose from 125 in 2003 to 440 in 2013 (see Figure 8.15) (Indiana State Police, 2014).

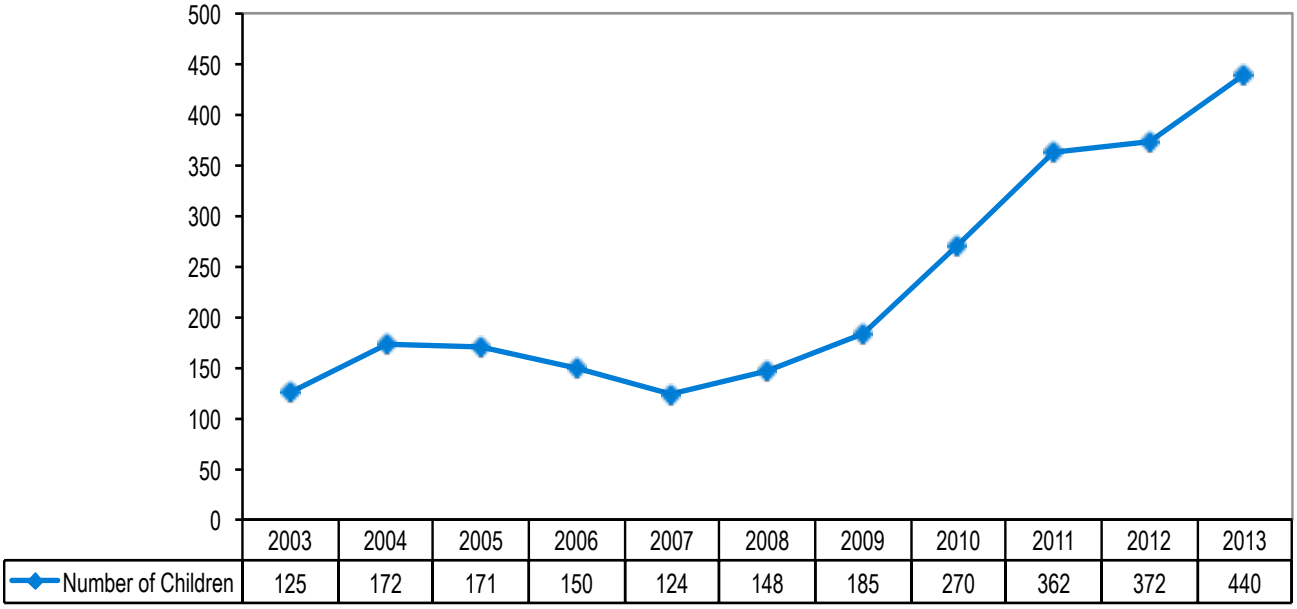
Figure 8.14 Arrest Rates for Synthetic Drug Possession and Sale/Manufacture per 1,000 Population, Indiana and United States (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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
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
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
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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Figure 8.15 Number of Indiana Children Taken by the Indiana State Police from Methamphetamine Lab Homes (Indiana Meth Lab Statistics, 2003–2013)



Source: Indiana State Police, 2014

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, 2013)

	Treatment Episodes	Meth Use		Meth Dependence	
County	**Total**	**Number**	**%**	**Number**	**%**
Adams	136	8	5.9%	<5	N/A
Allen	1,856	82	4.4%	38	2.0%
Bartholomew	653	244	37.4%	214	32.8%
Benton	45	<5	N/A	<5	N/A
Blackford	43	<5	N/A	<5	N/A
Boone	181	8	4.4%	5	2.8%
Brown	98	18	18.4%	12	12.2%
Carroll	99	15	15.2%	<5	N/A
Cass	248	48	19.4%	20	8.1%
Clark	392	27	6.9%	22	5.6%
Clay	196	57	29.1%	37	18.9%
Clinton	122	<5	N/A	<5	N/A
Crawford	71	19	26.8%	9	12.7%
Daviess	177	61	34.5%	32	18.1%
Dearborn	508	22	4.3%	6	1.2%
Decatur	192	35	18.2%	31	16.1%
DeKalb	202	43	21.3%	23	11.4%
Delaware	990	58	5.9%	33	3.3%
Dubois	298	56	18.8%	21	7.0%
Elkhart	810	91	11.2%	65	8.0%
Fayette	207	10	4.8%	9	4.3%
Floyd	186	9	4.8%	9	4.8%
Fountain	59	14	23.7%	<5	N/A
Franklin	168	6	3.6%	<5	N/A
Fulton	215	60	27.9%	36	16.7%
Gibson	216	60	27.8%	32	14.8%
Grant	495	13	2.6%	7	1.4%
Greene	207	41	19.8%	19	9.2%
Hamilton	813	18	2.2%	<5	N/A
Hancock	164	7	4.3%	<5	N/A
Harrison	54	6	11.1%	6	11.1%
Hendricks	358	24	6.7%	13	3.6%
Henry	259	10	3.9%	<5	N/A
Howard	649	102	15.7%	44	6.8%
Huntington	86	<5	N/A	<5	N/A
Jackson	292	110	37.7%	88	30.1%
Jasper	109	9	8.3%	6	5.5%
Jay	84	10	11.9%	<5	N/A
Jefferson	340	59	17.4%	45	13.2%
Jennings	247	72	29.1%	65	26.3%
Johnson	234	19	8.1%	17	7.3%
Knox	374	146	39.0%	85	22.7%
Kosciusko	343	36	10.5%	18	5.2%
LaGrange	95	35	36.8%	21	22.1%
Lake	2,886	35	1.2%	16	0.6%
LaPorte	623	19	3.0%	12	1.9%
Lawrence	481	66	13.7%	52	10.8%
Madison	708	55	7.8%	26	3.7%
Marion	4,177	156	3.7%	66	1.6%
Marshall	249	34	13.7%	21	8.4%
Martin	51	14	27.5%	6	11.8%
Miami	265	49	18.5%	22	8.3%
Monroe	1,412	163	11.5%	111	7.9%
Montgomery	330	50	15.2%	24	7.3%
Morgan	479	97	20.3%	61	12.7%
Newton	29	<5	N/A	<5	N/A
Noble	331	91	27.5%	58	17.5%
Ohio	44	<5	N/A	<5	N/A
Orange	113	22	19.5%	8	7.1%
Owen	245	39	15.9%	31	12.7%
Parke	103	20	19.4%	13	12.6%
Perry	126	38	30.2%	16	12.7%
Pike	56	19	33.9%	10	17.9%
Porter	664	12	1.8%	6	0.9%
Posey	108	38	35.2%	25	23.1%
Pulaski	111	15	13.5%	8	7.2%
Putnam	207	42	20.3%	25	12.1%
Randolph	193	10	5.2%	9	4.7%
Ripley	236	11	4.7%	5	2.1%
Rush	168	12	7.1%	10	6.0%
Saint Joseph	1,462	147	10.1%	54	3.7%
Scott	154	25	16.2%	20	13.0%
Shelby	139	11	7.9%	5	3.6%
Spencer	194	70	36.1%	32	16.5%
Starke	218	69	31.7%	38	17.4%
Steuben	191	54	28.3%	34	17.8%
Sullivan	72	27	37.5%	10	13.9%
Switzerland	64	<5	N/A	<5	N/A
Tippecanoe	406	40	9.9%	21	5.2%
Tipton	68	5	7.4%	<5	N/A
Union	43	<5	N/A	<5	N/A
Vanderburgh	1,191	325	27.3%	162	13.6%
Vermillion	114	26	22.8%	17	14.9%
Vigo	755	286	37.9%	172	22.8%
Wabash	222	18	8.1%	13	5.9%
Warren	16	<5	N/A	<5	N/A
Warrick	320	101	31.6%	66	20.6%
Washington	58	5	8.6%	<5	N/A
Wayne	475	16	3.4%	13	2.7%
Wells	111	13	11.7%	<5	N/A
White	151	25	16.6%	12	7.9%
Whitley	131	15	11.5%	9	6.9%
County Info Missing	149	19	12.8%	11	7.4%
Indiana	**34,670**	**4,188**	**12.1%**	**2,460**	**7.1%**

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, 2014

APPENDIX 8B

Percentage of Indiana Students Reporting Lifetime and Monthly Methamphetamine Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	0.3	0.3	0.2	0.5	0.5	0.4	0.5	0.3	0.3
	Monthly	0.3	0.1	0.2	0.5	0.5	0.4	0.0	0.2	0.2
7th Grade	Lifetime	0.5	0.5	0.5	0.0	0.8	0.4	0.6	0.6	0.8
	Monthly	0.3	0.3	0.2	0.0	0.4	0.2	0.2	0.3	0.5
8th Grade	Lifetime	0.8	0.7	0.8	0.5	0.5	0.8	1.0	0.9	*1.2
	Monthly	0.3	0.4	0.3	0.1	0.2	0.3	0.3	0.5	0.4
9th Grade	Lifetime	1.3	1.0	1.2	*0.7	1.4	1.3	1.1	1.3	*1.8
	Monthly	0.5	0.6	0.6	0.2	0.5	0.3	0.2	0.3	0.7
10th Grade	Lifetime	1.6	1.6	*1.0	1.1	1.3	1.7	2.5	1.7	2.0
	Monthly	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.8	0.9
11th Grade	Lifetime	2.1	2.2	1.8	2.0	1.9	2.2	2.9	2.4	2.1
	Monthly	0.9	0.9	0.7	0.7	0.7	0.9	1.2	0.9	1.0
12th Grade	Lifetime	2.0	1.5	1.4	1.7	1.7	*3.1	*4.5	1.8	2.5
	Monthly	0.9	0.8	0.7	0.9	0.9	*1.5	*3.0	0.6	1.0

Note: * Indicates a local rate that is significantly different from the overall state rate ($P < 0.05$).
Source: Gassman, et al., 2013

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, 2011)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	14	*0.4	5	*0.1
Allen	0	*0.0	0	*0.0
Bartholomew	122	1.6	11	*0.1
Benton	1	*0.1	1	*0.1
Blackford	14	*1.1	6	*0.5
Boone	8	*0.1	3	*0.1
Brown	3	*0.2	6	*0.4
Carroll	10	*0.5	0	*0.0
Cass	9	*0.2	17	*0.4
Clark	133	1.2	26	0.2
Clay	10	*0.4	2	*0.1
Clinton	0	*0.0	4	*0.1
Crawford	4	*0.4	0	*0.0
Daviess	29	0.9	28	0.9
Dearborn	1	*0.0	1	*0.0
Decatur	16	*0.6	20	0.8
DeKalb	13	*0.3	10	*0.2
Delaware	52	0.4	1	*0.0
Dubois	24	0.6	10	*0.2
Elkhart	21	0.1	11	*0.1
Fayette	11	*0.5	4	*0.2
Floyd	71	0.9	1	*0.0
Fountain	8	*0.5	4	*0.2
Franklin	0	*0.0	0	*0.0
Fulton	5	*0.2	1	*0.0
Gibson	22	0.7	29	0.9
Grant	71	1.0	13	*0.2
Greene	17	*0.5	16	*0.5
Hamilton	70	0.3	13	*0.0
Hancock	17	*0.3	8	*0.1
Harrison	6	*0.2	3	*0.1
Hendricks	41	0.3	20	0.1
Henry	8	*0.2	2	*0.0
Howard	1	*0.0	7	*0.1
Huntington	1	*0.0	1	*0.0
Jackson	18	*0.4	14	*0.3
Jasper	5	*0.1	12	*0.4
Jay	38	1.8	34	1.6
Jefferson	14	*0.4	7	*0.2
Jennings	0	*0.0	0	*0.0
Johnson	7	*0.0	1	*0.0
Knox	34	0.9	26	0.7
Kosciusko	27	0.3	14	*0.2
LaGrange	8	*0.2	0	*0.0
Lake	43	0.1	11	*0.0
LaPorte	8	*0.1	4	*0.0
Lawrence	34	0.7	3	*0.1
Madison	33	0.2	17	*0.1
Marion	531	0.6	110	0.1

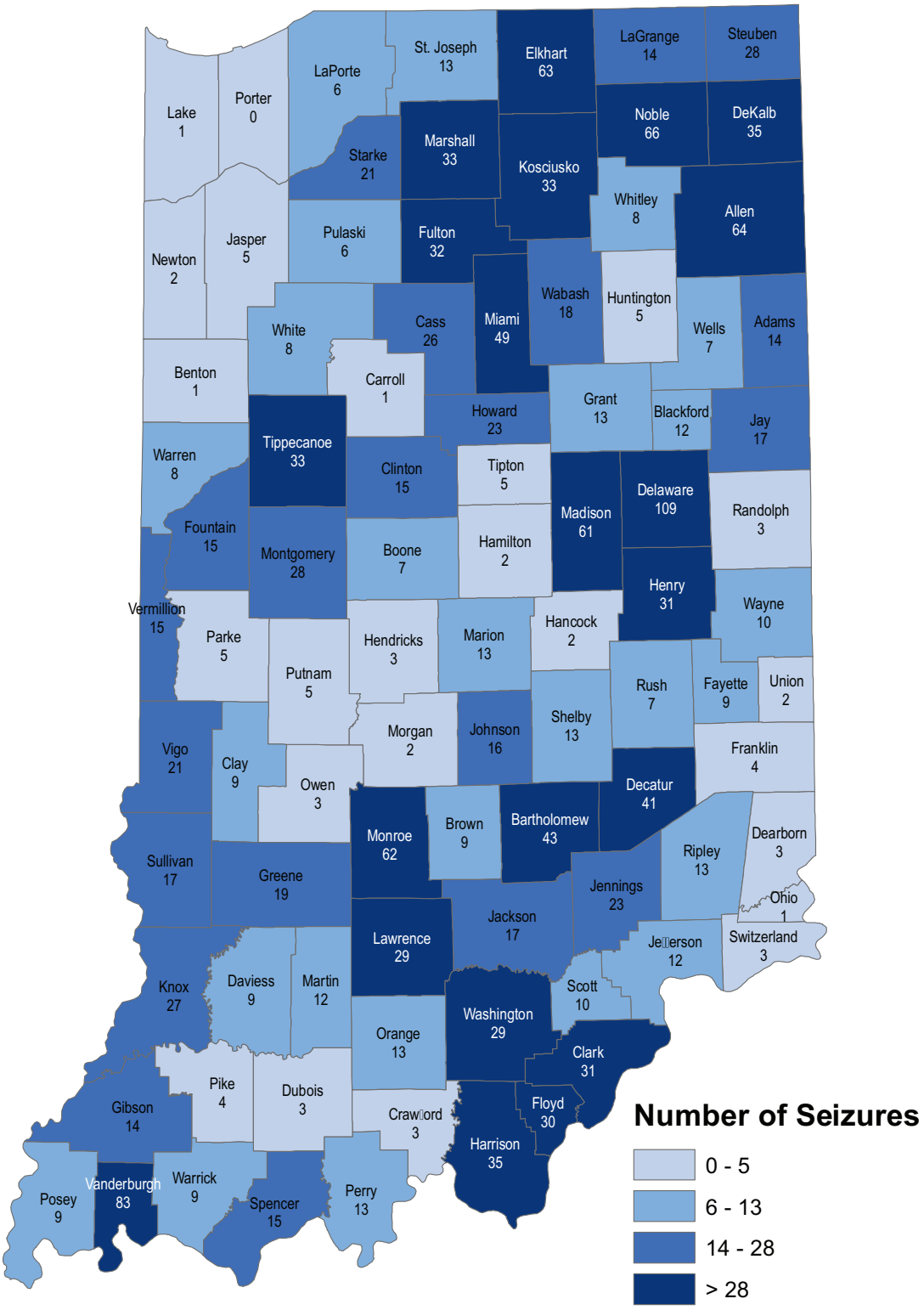
(continued on next page)

APPENDIX 8C *(Continued from previous page)*

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	32	0.7	3	*0.1
Martin	3	*0.3	0	*0.0
Miami	12	*0.3	20	0.5
Monroe	17	*0.1	7	*0.1
Montgomery	10	*0.3	5	*0.1
Morgan	9	*0.1	6	*0.1
Newton	5	*0.3	1	*0.1
Noble	26	0.5	9	*0.2
Ohio	1	*0.2	1	*0.2
Orange	9	*0.5	5	*0.3
Owen	4	*0.2	3	*0.1
Parke	21	1.2	26	1.5
Perry	21	1.1	3	*0.2
Pike	6	*0.5	3	*0.2
Porter	14	*0.1	2	*0.0
Posey	11	*0.4	10	*0.4
Pulaski	19	*1.4	9	*0.7
Putnam	24	0.6	13	*0.3
Randolph	1	*0.0	0	*0.0
Ripley	11	*0.4	6	*0.2
Rush	0	*0.0	3	*0.2
Saint Joseph	70	0.3	1	*0.0
Scott	22	0.9	4	*0.2
Shelby	7	*0.2	7	*0.2
Spencer	0	*0.0	0	*0.0
Starke	17	*0.7	10	*0.4
Steuben	2	*0.1	7	*0.2
Sullivan	2	*0.1	2	*0.1
Switzerland	5	*0.5	3	*0.3
Tippecanoe	126	0.7	31	0.2
Tipton	13	*0.8	9	*0.6
Union	3	*0.4	2	*0.3
Vanderburgh	106	0.6	143	0.8
Vermillion	6	*0.4	11	*0.7
Vigo	88	0.8	23	0.2
Wabash	15	*0.5	6	*0.2
Warren	4	*0.5	2	*0.2
Warrick	49	0.8	54	0.9
Washington	7	*0.2	3	*0.1
Wayne	12	*0.2	10	*0.1
Wells	0	*0.0	0	*0.0
White	9	*0.4	5	*0.2
Whitley	6	*0.2	3	*0.1
Indiana	**2,458**	**0.4**	**1,008**	**0.2**

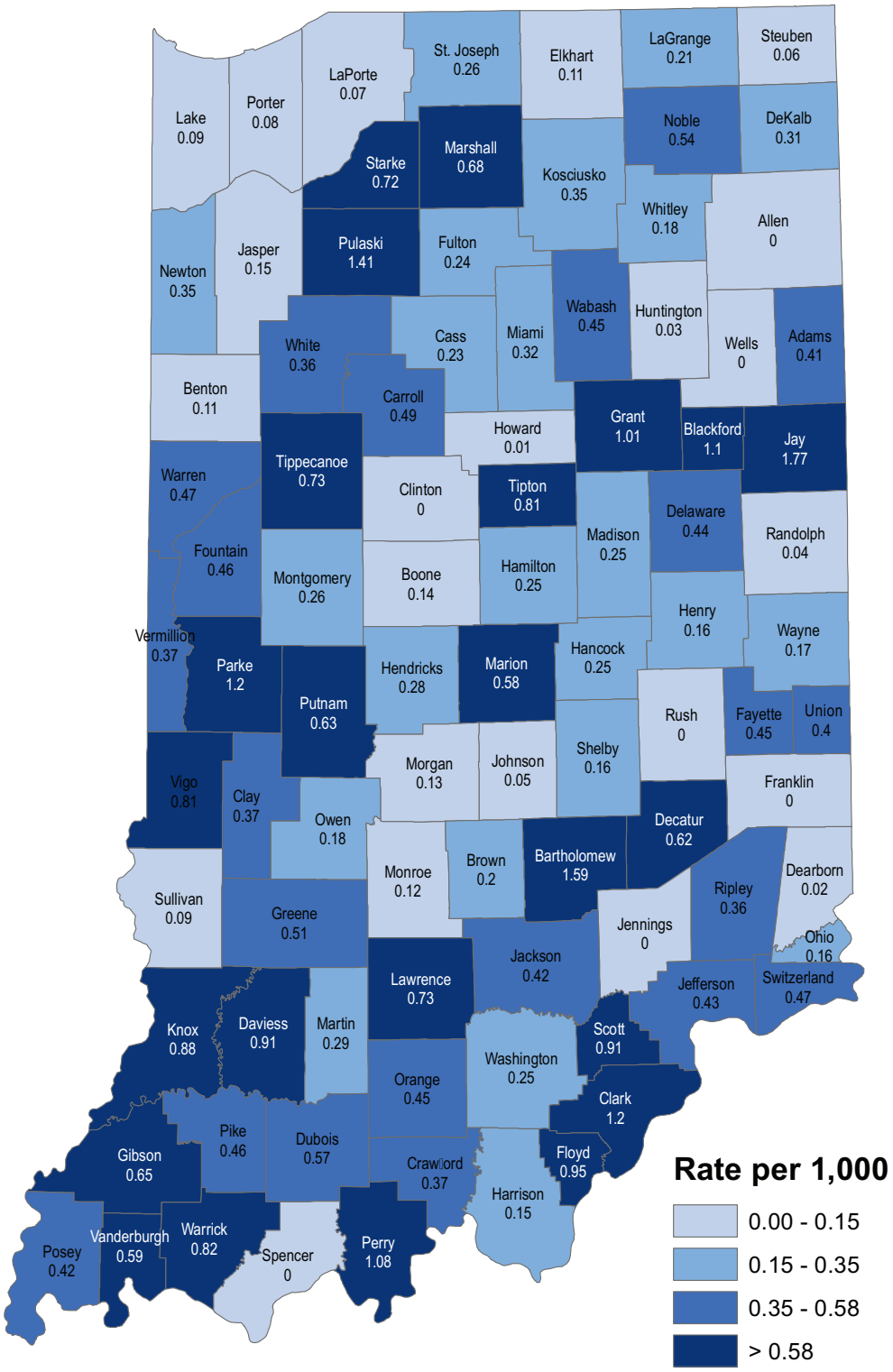
*Rates based on arrest numbers lower than 20 are unreliable.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 8.1 Number of Clandestine Methamphetamine Labs Seized by the Indiana State Police in Indiana, by County, (Indiana Lab Statistics, 2013)



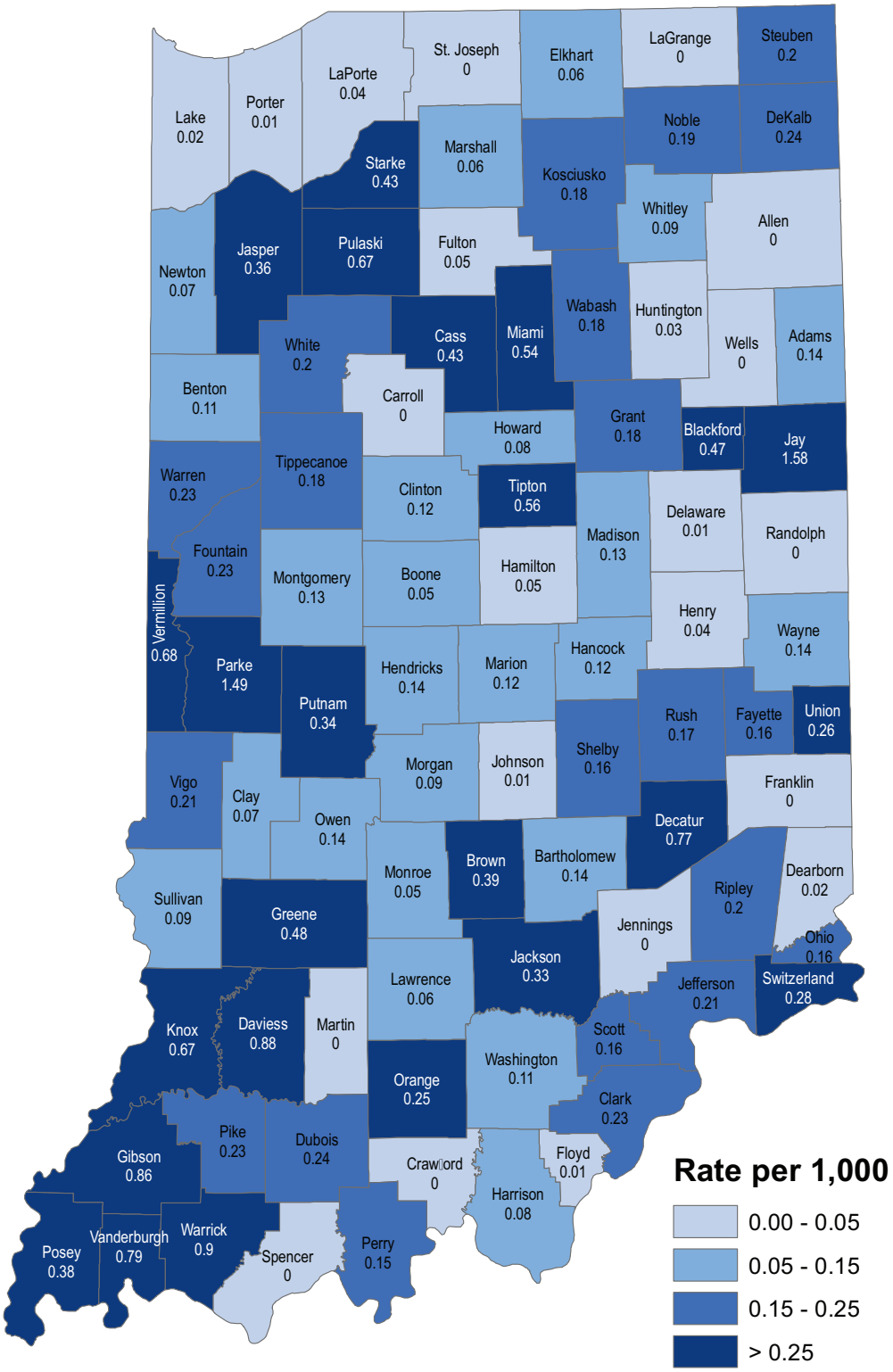
Source: Indiana State Police, 2014

Map 8.2 Arrest Rates for Synthetic Drug Possession, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 141–142) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 8.3 Arrest Rates for Synthetic Drug Sale/Manufacture, per 1,000 Population, in Indiana, by County (Uniform Crime Reporting Program, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 8C (pages 141–142) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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9 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 2012 over 54 million Americans (20.9%) 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. In Indiana alone, over one million Hoosiers reported that they misused psychotherapeutics at least once in their life (20.7%)[3] (Substance Abuse and Mental Health Services Administration, 2013). The National Institute on Drug Abuse (NIDA) lists the three most commonly abused types of prescription medicine as:

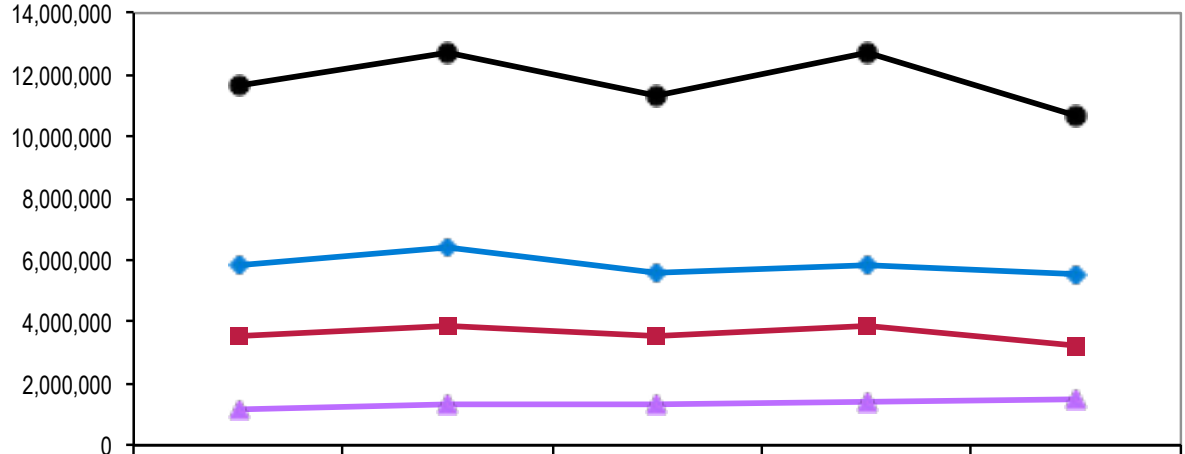
- *Opioids*, which are primarily prescribed to treat pain—examples include oxycodone (e.g., OxyContin®, Percocet®), hydrocodone (e.g., Vicodin®), codeine, and morphine;
- *Central nervous system (CNS) depressants,* such as sedatives and tranquilizers to treat sleep and anxiety disorders—examples include barbiturates (e.g., Mebaral®, Nembutal®) and benzodiazepines (e.g., Valium®, Xanax®); and
- *Stimulants*, which are often prescribed to treat narcolepsy, attention-deficit hyperactivity disorder (ADHD), and obesity—examples include dextroamphetamine (Dexedrine® and Adderall®) and methylphenidate (Ritalin® and Concerta®) (National Institute on Drug Abuse, 2011).

Prescription drugs are regulated at the state level and can only be dispensed by licensed physicians and pharmacists. In addition, "all state pharmacy laws require that records of prescription drugs dispensed to patients be maintained and that state pharmacy boards have access to the prescription records" (United States General Accounting Office, 2003). Indiana maintains a statewide prescription drug monitoring database, the Indiana Scheduled Prescription Electronic Collection & Tracking (INSPECT) program, which collects information on the dispensing of all controlled substances (Schedules II through V; Schedule I drugs are not included because they contain substances that have no currently accepted medical use in the United States).

In 2012, nearly 10.7 million controlled prescription drugs were dispensed in Indiana. The most widely dispensed prescription drug categories were opioids (51.9%), depressants of the central nervous system (30.2%), and stimulants (14.0%); for trend information, see Figure 9.1 and for number and percentage of prescription drugs dispensed at the county level, see Appendix 9A, pages 157-160 (Indiana Board of Pharmacy, 2013a). 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.

[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.
[3]Indiana rates are based on annual NSDUH averages from 2002 through 2004, the most recent state-level estimate available.

Figure 9.1 Number of Controlled Substance Prescriptions Dispensed in Indiana (INSPECT, 2008–2012)



	2008	2009	2010	2011	2012
Opioids	5,849,460	6,376,664	5,591,679	5,830,367	5,541,537
CNS Depressants	3,558,007	3,902,414	3,514,361	3,889,652	3,226,288
Stimulants	1,149,939	1,353,939	1,309,265	1,419,003	1,499,324
Total	11,635,092	12,713,931	11,341,539	12,743,236	10,676,075

Source: Indiana Board of Pharmacy, 2013a

General Consumption Patterns

According to NSDUH annual averages from 2002 through 2004, a total of 7.6% of Hoosiers ages 12 and older (383,000 residents) engaged in the nonmedical use of psychotherapeutics in the past year, and 2.7% (138,000 residents) reported past-month use. The highest misuse was reported for pain relievers, which include OxyContin®, one of the most abused drugs among the psychotherapeutics. Due to the nature of the data, statistical significance could not be assessed (see Table 9.1) (Substance Abuse and Mental Health Services Administration, 2013).

Based on 2012 NSDUH results, an estimated 5.6% (95% Confidence Interval [CI]: 4.7–6.8) of the Indiana population ages 12 and older reported nonmedical use of pain relievers in the past year (U.S.: 4.6; 95% CI: 4.4–4.8); prevalence rates between Indiana and the nation were similar.

Adult Consumption Patterns

According to 2012 NSDUH results, young people ages 18 through 25 had the highest rate of prescription pain medication abuse. Indiana's past-year usage rate of 13.5% (95% CI: 11.1–16.2) was statistically higher than the nation's rate (10.0%; 95 % CI: 9.6-10.4) (see Figure 9.2).

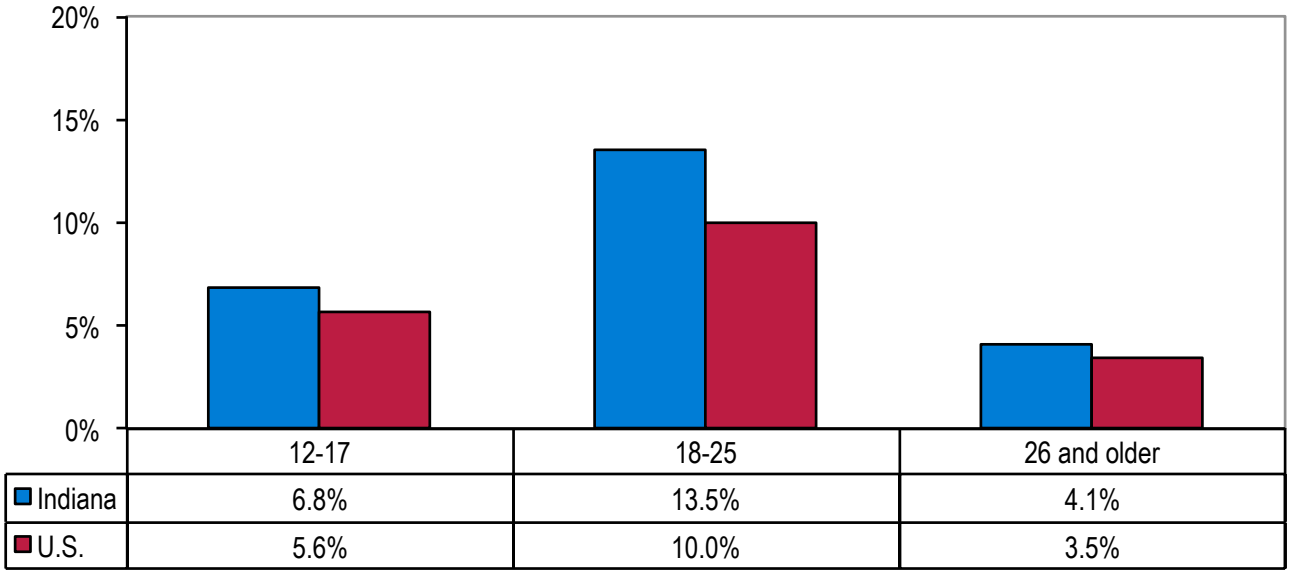
Table 9.1 Lifetime, Past Year, and Current Nonmedical Use of Psychotherapeutics, Indiana[4] and United States[5] (National Survey on Drug Use and Health)

	Lifetime Misuse		Past-Year Misuse		Past-Month Misuse	
	Indiana	U.S.	Indiana	U.S.	Indiana	U.S.
All Psychotherapeutics	20.7%	20.9%	7.6%	6.4%	2.7%	2.6%
Pain Relievers	15.0%	14.2%	6.1%	4.8%	2.0%	1.9%
OxyContin	2.5%	2.5%	0.8%	0.6%	0.3%	0.1%
Tranquilizers	9.1%	9.1%	2.8%	2.3%	0.8%	0.8%
Sedatives	3.9%	3.1%	0.4%	0.2%	0.1%	0.1%
Stimulants	8.3%	8.3%	1.7%	1.3%	0.8%	0.5%

Source: Substance Abuse and Mental Health Services Administration, 2013

[4]Indiana rates are based on annual NSDUH averages from 2002 through 2004.
[5]U.S. rates are based on 2012 NSDUH survey results.

Figure 9.2 Prevalence of Past-Year Pain Reliever Use in Indiana and the United States, by Age Group (National Survey on Drug Use and Health, 2012)



Source: Substance Abuse and Mental Health Services Administration, 2013

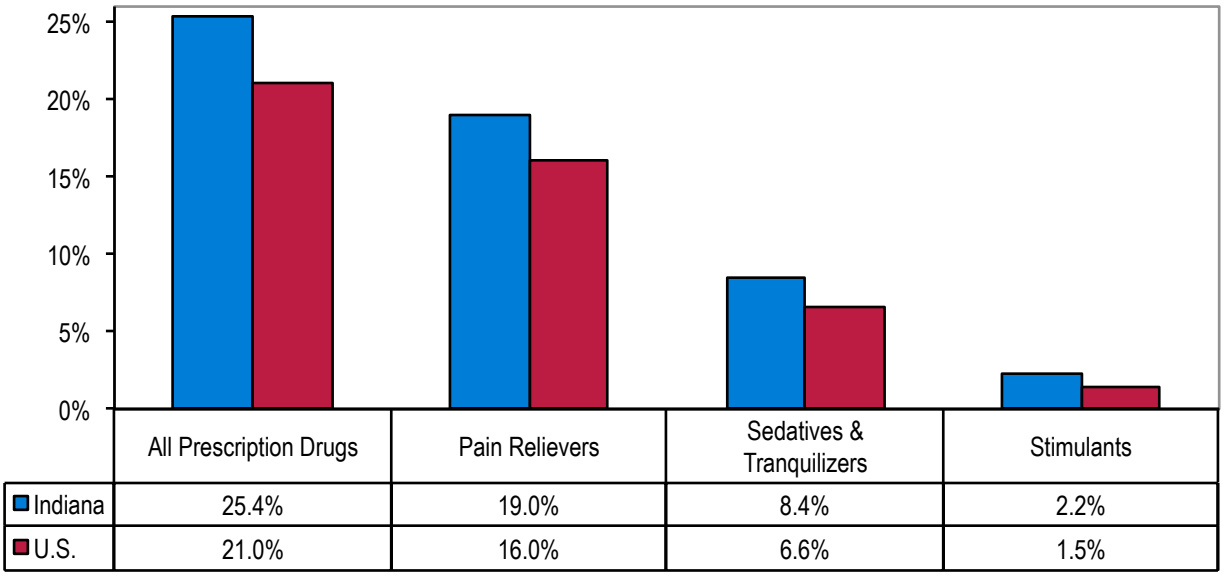
The Indiana College Substance Use Survey includes questions on (a) use of prescription medications not prescribed to the student and (b) use of prescription medication prescribed to student but misused. Findings from the 2013 survey are as follows:

a) Misuse of prescription medications not prescribed to the student:
   - 12.7% of Indiana college students used prescription medications not prescribed to them in the past year, and 4.9% currently use them.
   - Rates were significantly higher among males for both past-year use (16.4%) and current use (6.8%) than among females (10.6% and 3.8% respectively).
   - Rates were significantly higher for those attending public institutions of higher education (past-year use: 14.1%; current use: 5.4%) than for those who attended private institutions (past-year use: 8.5%; current use: 3.2%).
   - No significant differences in past-year or current use were found for college students ages 21 or over compared to those under 21.

b) Misuse of prescription medication prescribed to the student:
   - 3.1% of Indiana college students misused their prescription medication in the past year, and 1.0% of students reported current misuse.
   - Rates were significantly higher for past-year misuse among males (4.3%) than females (2.5%), but current misuse for both groups was not significantly different (males: 1.2%, females: 0.9%).
   - Rates were not significantly different for those attending public versus private institutions of higher education for either past-year misuse (public: 3.4%, private: 2.4%) or current misuse (public: 1.1%, private 0.8%).
   - 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, 2013).

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),[6] CNS depressants (sedatives and tranquilizers),[7] and stimulants[8] at the time of admission to substance abuse treatment (Substance Abuse and Mental Health Data Archive, 2011). Overall reported use of these drug categories in 2011, when combined, was 25.4% in Indiana, which was significantly higher than the rest of the nation's rate of 21.0% ($P < 0.001$). A look at the individual drug types shows that Indiana's rates were significantly higher for pain relievers, CNS depressants, and stimulants ($P < 0.001$) (see Figure 9.3).

Figure 9.3 Percentage of Indiana and U.S. Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2011)



Source: Substance Abuse and Mental Health Data Archive, 2011

In Indiana, significant differences in reported prescription drug abuse were seen by gender, race, and age group (see Table 9.2) (Substance Abuse and Mental Health Data Archive, 2011):

- **Gender—**Women reported higher rates of use across all prescription drug categories.
- **Race—**Whites had the highest rates across all prescription drug categories.
- **Age group—**Differences by age group were observed for all prescription drug categories.

[6]We used TEDS variables "nonprescription methadone" and "other opiates/synthetics" to define pain reliever use.
[7]We used TEDS variables "benzodiazepines," "other tranquilizers," "barbiturates," and "other sedatives/hypnotics" to define CNS depressant use.
[8]We used TEDS variables "other amphetamines" and "other stimulants" to define stimulant use.

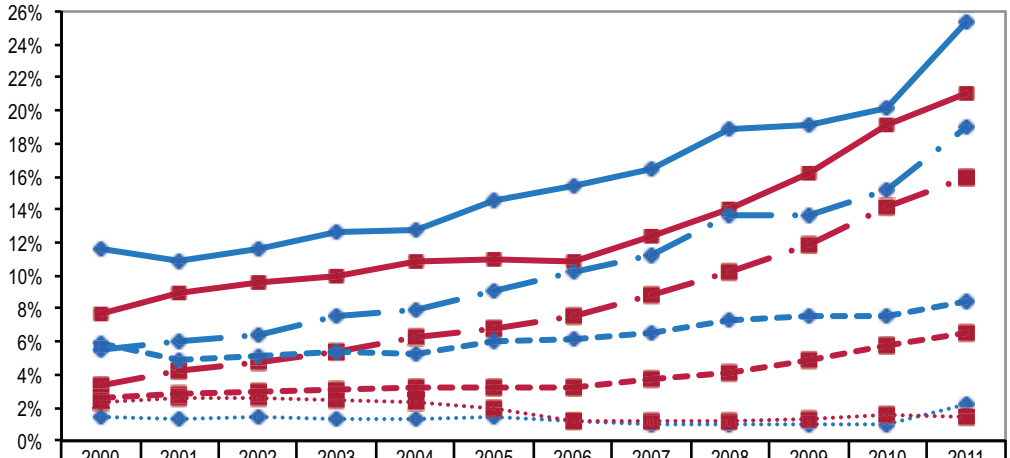
Table 9.2 Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Drug Category, Gender, Race, and Age Group (Treatment Episode Data Set, 2011)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	20.9%	15.3%	6.6%	2.1%
	Female	33.5%	25.6%	11.5%	2.4%
Race	White	28.9%	21.7%	9.5%	2.5%
	Black	6.6%	4.0%	2.6%	0.5%
	Other	16.8%	12.6%	5.0%	1.1%
Age Group	Under 18	18.1%	9.1%	6.8%	4.1%
	18-24	27.8%	20.1%	9.5%	2.6%
	25-34	32.4%	25.6%	10.1%	2.4%
	35-44	21.5%	16.2%	6.9%	1.9%
	45-54	15.5%	10.5%	5.7%	1.6%
	55+	14.8%	10.5%	5.2%	1.2%

Source: Substance Abuse and Mental Health Data Archive, 2011

A review of TEDS data from 2000 through 2011 shows that the percentages of treatment episodes with reported prescription drug abuse have increased significantly in Indiana (see Figure 9.4). For county-level information, see Appendix 9B, pages 161-164.

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, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
US: 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%
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%
US: 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%
IN: Sedatives/Tranquilizers	5.9%	4.9%	5.2%	5.4%	5.3%	6.0%	6.1%	6.6%	7.3%	7.6%	7.5%	8.4%
US: Sedatives/Tranquilizers	2.6%	2.9%	3.0%	3.1%	3.2%	3.2%	3.2%	3.7%	4.1%	4.9%	5.8%	6.6%
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%
US: 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%

Source: Substance Abuse and Mental Health Data Archive, 2011

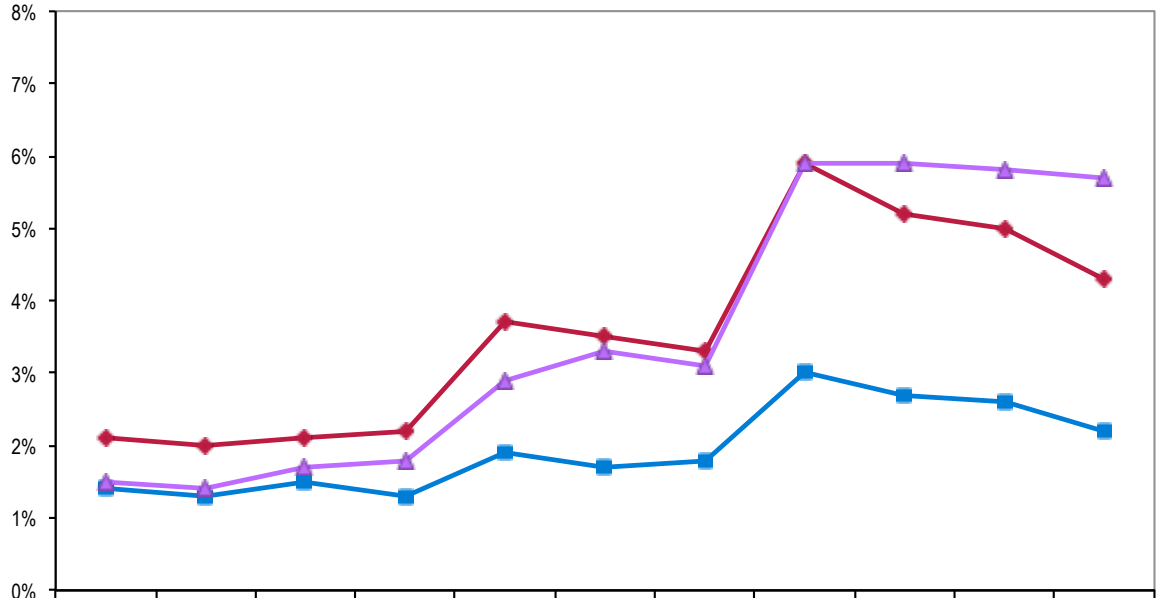
Youth Consumption Patterns

Estimates from the 2012 NSDUH suggest that 6.8% (95% CI: 5.3-8.7) 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 5.6% (95% CI: 5.4-5.9) (Substance Abuse and Mental Health Services Administration, 2013).

For Indiana prevalence rates of current nonmedical use of prescription drugs[9] among 8th, 10th, and 12th grade students, see Figure 9.5 (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, et al., 2013). For regional prevalence rates among grades 6 through 12, see Appendix 9C, page 165.

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 but more likely to use stimulants than their older counterparts. No significant differences between age groups were observed for sedatives/tranquilizers (see Figure 9.6).

Figure 9.5 Percentage of Indiana 8th, 10th, and 12th Grade Students Reporting Current Nonmedical Use of Prescription Drugs (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2003-2013)



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
8th	1.4%	1.3%	1.5%	1.3%	1.9%	1.7%	1.8%	3.0%	2.7%	2.6%	2.2%
10th	2.1%	2.0%	2.1%	2.2%	3.7%	3.5%	3.3%	5.9%	5.2%	5.0%	4.3%
12th	1.5%	1.4%	1.7%	1.8%	2.9%	3.3%	3.1%	5.9%	5.9%	5.8%	5.7%

Source: Gassman, et al., 2013

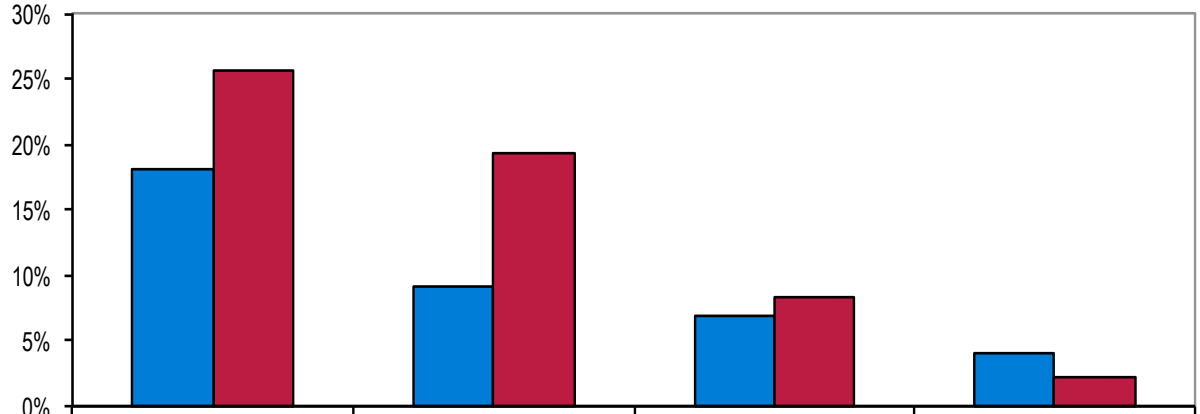
PRESCRIPTION DRUG ABUSE CONSEQUENCES

Prescription Drug Dependence

The most common consequences of prescription drug abuse are addiction and/or dependence.[10] 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 2011, all categories of prescription drug dependence were significantly higher in Indiana than the United States, including dependence on any prescription drug, pain relievers, sedatives or tranquilizers, and stimulants (see Figure 9.7).

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

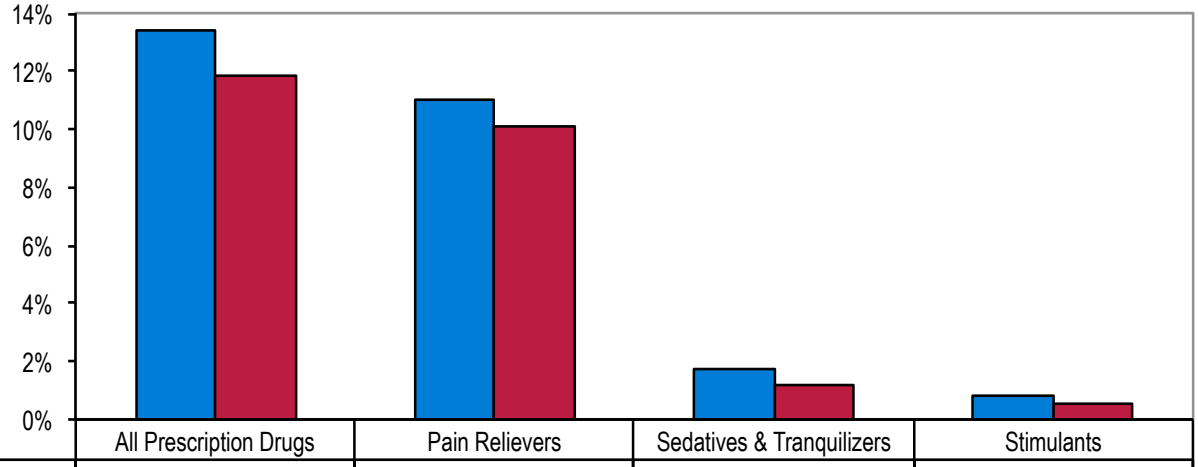
Figure 9.6 Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission in Indiana, by Drug Category and Underage Status (Treatment Episode Data Set, 2011)



	All Prescription Drugs	Pain Relievers	Sedatives & Tranquilizers	Stimulants
Under 18	18.1%	9.1%	6.8%	4.1%
Over 18	25.7%	19.4%	8.4%	2.2%

Source: Substance Abuse and Mental Health Data Archive, 2011

Figure 9.7 Percentage of Indiana and U.S. Treatment Episodes with Nonmedical Prescription Drug Dependence Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2011)



	All Prescription Drugs	Pain Relievers	Sedatives & Tranquilizers	Stimulants
Indiana	13.4%	11.0%	1.7%	0.8%
U.S.	11.8%	10.1%	1.2%	0.5%

Source: Substance Abuse and Mental Health Data Archive, 2011

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 9.3) (Substance Abuse and Mental Health Data Archive, 2011):

- **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, except for stimulants.
- **Age group**—Significant differences by age category were only found for overall prescription drug dependence and the pain reliever category, with the highest percentage among 25- to 34- year-olds.

For county-level information, see Appendix 9B, pages 161-164.

Table 9.3 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, 2011)

		All Prescription Drugs	Pain Relievers	Sedatives/Tranquilizers	Stimulants
Gender	Male	9.9%	8.0%	1.2%	0.7%
	Female	19.7%	16.2%	2.6%	0.9%
Race	White	15.3%	12.5%	1.9%	0.1%
	Black	2.5%	1.8%	0.6%	0.9%
	Other	7.6%	6.5%	1.0%	0.2%
Age Group	Under 18	4.1%	2.2%	1.1%	0.8%
	18 to 24	13.4%	10.7%	1.8%	0.9%
	25 to 34	18.7%	16.0%	1.8%	0.8%
	35 to 44	11.8%	9.3%	1.7%	0.7%
	45 to 54	7.6%	5.7%	1.3%	0.6%
	55+	7.3%	5.4%	1.5%	0.4%

Source: Substance Abuse and Mental Health Data Archive, 2011

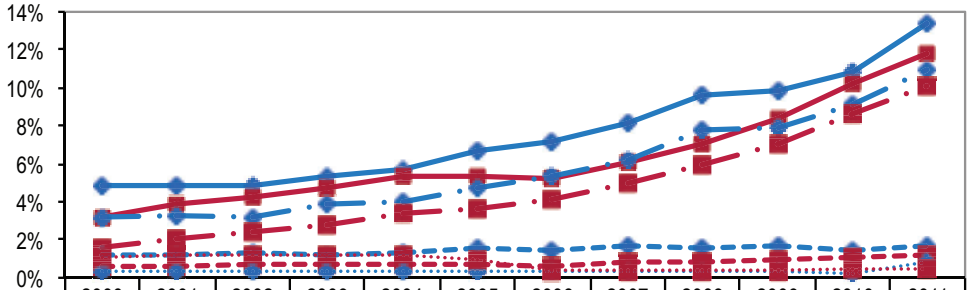
A review of TEDS data from 2000 through 2011 reveals that dependence on overall prescription medications increased significantly in Indiana. This holds true for each prescription drug category, including pain relievers, sedatives/tranquilizers, and stimulants (see Figure 9.8).

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 or family members. Patients may also obtain controlled substances when physicians overprescribe, either negligently or intentionally (Substance Abuse and Mental Health Services Administration, 2013).

The Uniform Crime Reporting (UCR) Program collects information on criminal activities, including possession and sale/manufacture of various drugs (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). The "other drugs" category in the data set refers to arrests involving barbiturates (sedatives) and Benzedrine (amphetamine/stimulant). In 2011, over 3,200 arrests were made for possession and over 1,000 arrests for sale/manufacture of "other drugs" in Indiana. This represents arrest rates of 0.5 (95% CI: 0.5–0.5) and 0.2 (95% CI: 0.2–0.2) 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). But 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 9.9 and 9.10) (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011). The distribution of arrest rates for possession and sale/manufacture in Indiana by county for 2011 is depicted on Maps 9.1 and 9.2, pages 169 and 170, and in Appendix 9D, pages 166-167.

Figure 9.8 Percentage of Indiana and U.S. Treatment Episodes with Prescription Drug Dependence Reported at Treatment Admission, by Drug Category (Treatment Episode Data Set, 2000–2011)

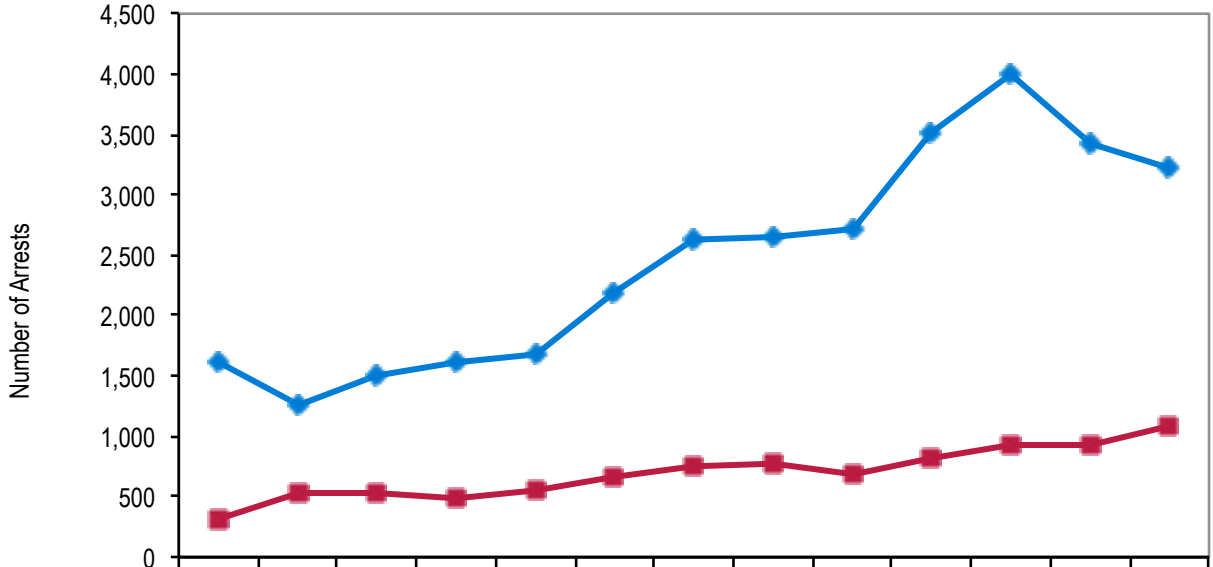


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
IN: Rx	4.8%	4.8%	4.9%	5.4%	5.7%	6.7%	7.2%	8.2%	9.6%	9.8%	10.8%	13.4%
U.S.: Rx	3.2%	3.9%	4.3%	4.7%	5.3%	5.3%	5.2%	6.1%	7.1%	8.4%	10.2%	11.8%
IN: Pain Reliever	3.2%	3.3%	3.2%	3.9%	4.0%	4.7%	5.4%	6.2%	7.8%	7.9%	9.1%	11.0%
U.S.: Pain Reliever	1.6%	2.1%	2.4%	2.8%	3.4%	3.6%	4.1%	5.0%	5.9%	7.1%	8.6%	10.1%
IN: Sedatives/Tranquilizers	1.2%	1.2%	1.3%	1.2%	1.3%	1.6%	1.4%	1.7%	1.6%	1.7%	1.5%	1.7%
U.S.: Sedatives/Tranquilizers	0.6%	0.6%	0.7%	0.7%	0.7%	0.7%	0.6%	0.8%	0.8%	1.0%	1.1%	1.2%
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

The Indiana Board of Pharmacy collects information on pharmacy robberies in the state. Between January 1, 2012, and December 31, 2012, 113 pharmacy robberies occurred, with the most being in Marion County (41). Of the total number of pharmacy robberies, 105 were armed robbery; 2 were from customer theft; and 6 were from night break-ins. For county-level information, see Appendix 9E, page 168 (Indiana Board of Pharmacy, 2013b).

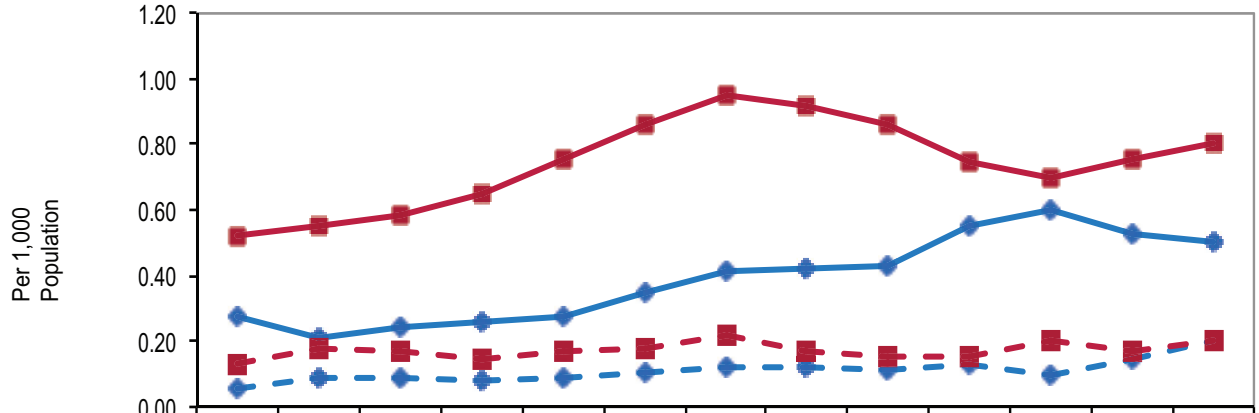
Figure 9.9 Number of Arrests for Possession and Sale/Manufacture of "Other Drugs" (Barbiturates and Benzedrine) in Indiana (Uniform Crime Reporting Program, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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
Sale	316	528	537	476	556	659	746	767	690	815	930	931	1,074

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Figure 9.10 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, 1999–2011)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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
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
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
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

Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Fatal Drug Overdoses

Since 1990, mortality rates due to prescription drug overdoses have more than tripled in the United States, with an estimated 100 people dying every day (Centers for Disease Control and Prevention, 2012). The number of fatal overdoses increased in Indiana from 848 in 2008 to 1,009 in 2011; over the four-year period, almost 73% of these poisoning deaths were accidental, 12% were intentional, and 15% were of undetermined intent (Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2013).[11] For the number of prescription drug overdose deaths by county from 2002-2011, see Map 9.3 on page 171.

[11]Includes ICD-10 causes of death: X40, X41, X42, X43, X44, X60, X61, X62, X63, X64, Y10, Y11, Y12, Y13, and Y14

APPENDIX 9A

Number and Percentage of Controlled Prescriptions Dispensed in Indiana, by Prescription Type and County (INSPECT De-identified Dataset, 2012)

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Adams	17,046	8,572	4,047	1,196	30,861
	55.2%	27.8%	13.1%	3.9%	
Allen	226,206	115,900	66,567	21,131	429,804
	52.6%	27.0%	15.5%	4.9%	
Bartholomew	73,671	40,454	13,837	4,728	132,690
	55.5%	30.5%	10.4%	3.6%	
Benton	7,088	5,238	2,922	563	15,811
	44.8%	33.1%	18.5%	3.6%	
Blackford	19,681	9,444	3,139	1,230	33,494
	58.8%	28.2%	9.4%	3.7%	
Boone	44,276	31,288	20,745	4,584	100,893
	43.9%	31.0%	20.6%	4.5%	
Brown	18,367	10,266	3,140	1,313	33,086
	55.5%	31.0%	9.5%	4.0%	
Carroll	14,386	10,285	4,181	1,261	30,113
	47.8%	34.2%	13.9%	4.2%	
Cass	30,785	17,496	8,939	2,349	59,569
	51.7%	29.4%	15.0%	3.9%	
Clark	98,609	59,528	19,698	6,708	184,543
	53.4%	32.3%	10.7%	3.6%	
Clay	20,738	14,450	5,070	1,503	41,761
	49.7%	34.6%	12.1%	3.6%	
Clinton	40,755	25,285	7,824	2,519	76,383
	53.4%	33.1%	10.2%	3.3%	
Crawford	10,876	4,913	1,585	738	18,112
	60.0%	27.1%	8.8%	4.1%	
Daviess	26,299	19,762	6,308	1,647	54,016
	48.7%	36.6%	11.7%	3.0%	
Dearborn	33,587	22,258	6,379	2,163	64,387
	52.2%	34.6%	9.9%	3.4%	
Decatur	19,101	9,989	3,961	1,425	34,476
	55.4%	29.0%	11.5%	4.1%	
DeKalb	22,401	12,250	7,488	2,024	44,163
	50.7%	27.7%	17.0%	4.6%	
Delaware	148,445	71,006	29,394	9,102	257,947
	57.5%	27.5%	11.4%	3.5%	
Dubois	35,420	23,884	10,288	2,308	71,900
	49.3%	33.2%	14.3%	3.2%	
Elkhart	124,064	67,782	63,650	8,135	263,631
	47.1%	25.7%	24.1%	3.1%	
Fayette	25,949	14,763	7,574	1,515	49,801
	52.1%	29.6%	15.2%	3.0%	
Floyd	64,669	40,431	14,205	4,824	124,129
	52.1%	32.6%	11.4%	3.9%	
Fountain	20,935	13,665	3,802	1,338	39,740
	52.7%	34.4%	9.6%	3.4%	

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APPENDIX 9A *(Continued from previous page)*

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Franklin	24,264	14,777	5,576	1,335	45,952
	52.8%	32.2%	12.1%	2.9%	
Fulton	16,670	8,354	5,399	1,548	31,971
	52.1%	26.1%	16.9%	4.8%	
Gibson	33,801	22,793	11,257	2,687	70,538
	47.9%	32.3%	16.0%	3.8%	
Grant	92,652	44,497	24,504	5,922	167,575
	55.3%	26.6%	14.6%	3.5%	
Greene	31,665	21,218	7,180	2,260	62,323
	50.8%	34.0%	11.5%	3.6%	
Hamilton	154,018	119,461	96,822	20,273	390,574
	39.4%	30.6%	24.8%	5.2%	
Hancock	62,839	36,862	25,063	6,503	131,267
	47.9%	28.1%	19.1%	5.0%	
Harrison	33,751	16,669	6,023	2,112	58,555
	57.6%	28.5%	10.3%	3.6%	
Hendricks	85,961	56,190	31,453	8,681	182,285
	47.2%	30.8%	17.3%	4.8%	
Henry	72,316	34,124	12,392	3,972	122,804
	58.9%	27.8%	10.1%	3.2%	
Howard	106,273	59,738	25,120	8,146	199,277
	53.3%	30.0%	12.6%	4.1%	
Huntington	30,221	12,708	7,641	2,398	52,968
	57.1%	24.0%	14.4%	4.5%	
Jackson	48,843	23,170	7,349	3,485	82,847
	59.0%	28.0%	8.9%	4.2%	
Jasper	34,764	21,737	7,517	2,238	66,256
	52.5%	32.8%	11.3%	3.4%	
Jay	22,107	10,358	3,754	1,608	47,487
	46.6%	21.8%	7.9%	3.4%	
Jefferson	37,554	24,732	6,794	2,931	72,011
	52.2%	34.3%	9.4%	4.1%	
Jennings	28,062	12,648	5,424	1,581	47,715
	58.8%	26.5%	11.4%	3.3%	
Johnson	125,286	76,756	32,374	10,253	244,669
	51.2%	31.4%	13.2%	4.2%	
Knox	52,629	36,887	11,218	3,705	104,439
	50.4%	35.3%	10.7%	3.5%	
Kosciusko	55,762	26,030	13,847	4,811	100,450
	55.5%	25.9%	13.8%	4.8%	
LaGrange	16,709	8,902	3,614	1,246	30,471
	54.8%	29.2%	11.9%	4.1%	
Lake	381,388	243,207	76,012	26,493	727,100
	52.5%	33.4%	10.5%	3.6%	
LaPorte	116,576	57,822	26,630	5,990	207,018
	56.3%	27.9%	12.9%	2.9%	
Lawrence	58,447	32,978	11,746	3,831	107,002
	54.6%	30.8%	11.0%	3.6%	

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APPENDIX 9A *(Continued from previous page)*

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Madison	172,842	93,705	37,643	12,284	316,474
	54.6%	29.6%	11.9%	3.9%	
Marion	741,163	374,456	201,437	51,919	1,368,975
	54.1%	27.4%	14.7%	3.8%	
Marshall	33,196	19,910	14,077	2,428	69,611
	47.7%	28.6%	20.2%	3.5%	
Martin	15,024	10,845	3,236	813	29,918
	50.2%	36.2%	10.8%	2.7%	
Miami	29,183	14,824	8,706	1,954	54,667
	53.4%	27.1%	15.9%	3.6%	
Monroe	75,084	51,466	20,431	6,756	153,737
	48.8%	33.5%	13.3%	4.4%	
Montgomery	30,958	20,054	7,568	2,490	61,070
	50.7%	32.8%	12.4%	4.1%	
Morgan	80,336	42,022	15,905	5,165	143,428
	56.0%	29.3%	11.1%	3.6%	
Newton	9,591	6,715	2,100	610	19,016
	50.4%	35.3%	11.0%	3.2%	
Noble	36,705	19,185	7,227	2,333	65,450
	56.1%	29.3%	11.0%	3.6%	
Ohio	5,163	2,961	655	369	9,148
	56.4%	32.4%	7.2%	4.0%	
Orange	26,251	16,004	5,187	1,640	49,082
	53.5%	32.6%	10.6%	3.3%	
Owen	23,085	13,090	4,210	1,708	42,093
	54.8%	31.1%	10.0%	4.1%	
Parke	10,933	8,176	2,622	983	22,714
	48.1%	36.0%	11.5%	4.3%	
Perry	14,615	9,481	3,057	1,555	28,708
	50.9%	33.0%	10.6%	5.4%	
Pike	18,361	11,844	4,408	1,281	35,894
	51.2%	33.0%	12.3%	3.6%	
Porter	151,212	90,023	38,092	11,095	290,422
	52.1%	31.0%	13.1%	3.8%	
Posey	28,336	17,248	6,778	2,014	54,376
	52.1%	31.7%	12.5%	3.7%	
Pulaski	16,128	8,441	3,685	918	29,172
	55.3%	28.9%	12.6%	3.1%	
Putnam	22,912	13,910	5,216	1,856	43,894
	52.2%	31.7%	11.9%	4.2%	
Randolph	22,256	9,948	4,374	1,318	37,896
	58.7%	26.3%	11.5%	3.5%	
Ripley	22,436	12,160	3,609	1,713	39,918
	56.2%	30.5%	9.0%	4.3%	
Rush	14,612	7,535	3,454	1,110	26,711
	54.7%	28.2%	12.9%	4.2%	
Saint Joseph	184,105	119,391	76,340	14,361	394,197
	46.7%	30.3%	19.4%	3.6%	

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APPENDIX 9A *(Continued from previous page)*

County	Opioids	CNS Depressants	Stimulants	Other*	Total (all dispensed controlled substances)
Scott	34,142	20,348	4,961	2,031	61,482
	55.5%	33.1%	8.1%	3.3%	
Shelby	34,336	18,890	8,325	2,628	64,179
	53.5%	29.4%	13.0%	4.1%	
Spencer	22,031	14,397	6,201	1,452	44,081
	50.0%	32.7%	14.1%	3.3%	
Starke	32,541	16,592	5,694	1,428	56,255
	57.8%	29.5%	10.1%	2.5%	
Steuben	21,357	10,791	4,858	1,719	38,725
	55.2%	27.9%	12.5%	4.4%	
Sullivan	20,781	15,037	3,734	1,484	41,036
	50.6%	36.6%	9.1%	3.6%	
Switzerland	8,803	5,122	1,260	686	15,871
	55.5%	32.3%	7.9%	4.3%	
Tippecanoe	100,926	72,404	37,310	7,865	218,505
	46.2%	33.1%	17.1%	3.6%	
Tipton	16,030	9,789	4,075	1,363	31,257
	51.3%	31.3%	13.0%	4.4%	
Union	5,335	3,285	1,695	419	10,734
	49.7%	30.6%	15.8%	3.9%	
Vanderburgh	229,890	147,105	70,797	14,717	462,509
	49.7%	31.8%	15.3%	3.2%	
Vermillion	13,353	8,581	2,949	1,112	25,995
	51.4%	33.0%	11.3%	4.3%	
Vigo	93,201	66,896	21,872	7,663	189,632
	49.1%	35.3%	11.5%	4.0%	
Wabash	30,651	13,395	6,869	2,219	53,134
	57.7%	25.2%	12.9%	4.2%	
Warren	5,682	3,416	1,070	540	10,708
	53.1%	31.9%	10.0%	5.0%	
Warrick	57,500	41,484	22,924	4,461	126,369
	45.5%	32.8%	18.1%	3.5%	
Washington	22,451	13,918	3,691	1,590	41,650
	53.9%	33.4%	8.9%	3.8%	
Wayne	77,954	44,994	15,737	4,436	143,121
	54.5%	31.4%	11.0%	3.1%	
Wells	17,195	8,654	3,731	1,385	30,965
	55.5%	27.9%	12.0%	4.5%	
White	16,768	11,284	5,327	1,127	34,506
	48.6%	32.7%	15.4%	3.3%	
Whitley	24,719	11,331	5,491	2,385	43,926
	56.3%	25.8%	12.5%	5.4%	
Indiana	**5,536,045**	**3,222,634**	**1,498,040**	**409,696**	**10,676,075**
	51.9%	**30.2%**	**14.0%**	**3.8%**	
Out of State	**5,492**	**3,654**	**1,284**	**432**	**10,862**

* Other category contains controlled substances not defined as opioids, depressants, or stimulants.
Source: Indiana Board of Pharmacy, 2013a

APPENDIX 9B — PART 1

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, 2013)

County	Treatment Episodes Total	All Rx Abuse Number	All Rx Abuse %	All Rx Dependence Number	All Rx Dependence %	Opioid Abuse Number	Opioid Abuse %	Opioid Dependence Number	Opioid Dependence %
Adams	136	24	17.6%	8	5.9%	20	14.7%	6	4.4%
Allen	1,856	272	14.7%	129	7.0%	197	10.6%	108	5.8%
Bartholomew	653	204	31.2%	84	12.9%	167	25.6%	59	9.0%
Benton	45	15	33.3%	9	20.0%	7	15.6%	6	13.3%
Blackford	43	27	62.8%	21	48.8%	26	60.5%	20	46.5%
Boone	181	44	24.3%	23	12.7%	38	21.0%	22	12.2%
Brown	98	29	29.6%	17	17.3%	25	25.5%	14	14.3%
Carroll	99	27	27.3%	13	13.1%	23	23.2%	12	12.1%
Cass	248	59	23.8%	22	8.9%	38	15.3%	14	5.6%
Clark	392	163	41.6%	126	32.1%	138	35.2%	105	26.8%
Clay	196	38	19.4%	15	7.7%	30	15.3%	15	7.7%
Clinton	122	38	31.1%	15	12.3%	29	23.8%	13	10.7%
Crawford	71	27	38.0%	18	25.4%	24	33.8%	17	23.9%
Daviess	177	58	32.8%	30	16.9%	44	24.9%	28	15.8%
Dearborn	508	219	43.1%	120	23.6%	196	38.6%	111	21.9%
Decatur	192	48	25.0%	24	12.5%	35	18.2%	17	8.9%
DeKalb	202	31	15.3%	10	5.0%	19	9.4%	7	3.5%
Delaware	990	405	40.9%	296	29.9%	372	37.6%	277	28.0%
Dubois	298	86	28.9%	48	16.1%	70	23.5%	40	13.4%
Elkhart	810	89	11.0%	43	5.3%	63	7.8%	34	4.2%
Fayette	207	104	50.2%	59	28.5%	77	37.2%	30	14.5%
Floyd	186	73	39.2%	64	34.4%	66	35.5%	59	31.7%
Fountain	59	25	42.4%	10	16.9%	20	33.9%	9	15.3%
Franklin	168	56	33.3%	36	21.4%	49	29.2%	34	20.2%
Fulton	215	54	25.1%	18	8.4%	36	16.7%	11	5.1%
Gibson	216	47	21.8%	17	7.9%	33	15.3%	11	5.1%
Grant	495	175	35.4%	108	21.8%	144	29.1%	89	18.0%
Greene	207	88	42.5%	52	25.1%	65	31.4%	37	17.9%
Hamilton	813	231	28.4%	121	14.9%	170	20.9%	99	12.2%
Hancock	164	61	37.2%	36	22.0%	50	30.5%	31	18.9%
Harrison	54	14	25.9%	13	24.1%	14	25.9%	13	24.1%
Hendricks	358	89	24.9%	58	16.2%	73	20.4%	48	13.4%
Henry	259	141	54.4%	106	40.9%	126	48.6%	93	35.9%
Howard	649	310	47.8%	186	28.7%	281	43.3%	163	25.1%
Huntington	86	35	40.7%	23	26.7%	21	24.4%	17	19.8%
Jackson	292	95	32.5%	41	14.0%	82	28.1%	34	11.6%
Jasper	109	39	35.8%	15	13.8%	28	25.7%	9	8.3%
Jay	84	29	34.5%	20	23.8%	24	28.6%	17	20.2%
Jefferson	340	137	40.3%	71	20.9%	119	35.0%	53	15.6%
Jennings	247	86	34.8%	40	16.2%	76	30.8%	33	13.4%
Johnson	234	83	35.5%	46	19.7%	67	28.6%	36	15.4%
Knox	374	104	27.8%	49	13.1%	75	20.1%	38	10.2%
Kosciusko	343	95	27.7%	39	11.4%	31	9.0%	21	6.1%
LaGrange	95	14	14.7%	6	6.3%	9	9.5%	<5	N/A
Lake	2,886	377	13.1%	214	7.4%	274	9.5%	177	6.1%
LaPorte	623	162	26.0%	97	15.6%	148	23.8%	93	14.9%
Lawrence	481	186	38.7%	133	27.7%	160	33.3%	97	20.2%
Madison	708	318	44.9%	165	23.3%	249	35.2%	144	20.3%
Marion	4,177	1247	29.9%	754	18.1%	1,079	25.8%	690	16.5%
Marshall	249	65	26.1%	40	16.1%	36	14.5%	26	10.4%
Martin	51	21	41.2%	16	31.4%	18	35.3%	10	19.6%
Miami	265	89	33.6%	44	16.6%	70	26.4%	36	13.6%

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APPENDIX 9B — PART 1 *(Continued from previous page)*

County	Treatment Episodes Total	All Rx Abuse Number	All Rx Abuse %	All Rx Dependence Number	All Rx Dependence %	Opioid Abuse Number	Opioid Abuse %	Opioid Dependence Number	Opioid Dependence %
Monroe	1,412	410	29.0%	213	15.1%	308	21.8%	135	9.6%
Montgomery	330	98	29.7%	50	15.2%	68	20.6%	39	11.8%
Morgan	479	173	36.1%	93	19.4%	137	28.6%	72	15.0%
Newton	29	8	27.6%	5	17.2%	6	20.7%	5	17.2%
Noble	331	69	20.8%	28	8.5%	17	5.1%	<5	N/A
Ohio	44	19	43.2%	7	15.9%	17	38.6%	7	15.9%
Orange	113	58	51.3%	36	31.9%	49	43.4%	32	28.3%
Owen	245	56	22.9%	34	13.9%	42	17.1%	25	10.2%
Parke	103	26	25.2%	12	11.7%	17	16.5%	8	7.8%
Perry	126	36	28.6%	16	12.7%	25	19.8%	11	8.7%
Pike	56	18	32.1%	11	19.6%	15	26.8%	10	17.9%
Porter	664	235	35.4%	145	21.8%	193	29.1%	132	19.9%
Posey	108	33	30.6%	15	13.9%	27	25.0%	14	13.0%
Pulaski	111	38	34.2%	17	15.3%	29	26.1%	14	12.6%
Putnam	207	49	23.7%	30	14.5%	39	18.8%	25	12.1%
Randolph	193	59	30.6%	29	15.0%	46	23.8%	16	8.3%
Ripley	236	76	32.2%	46	19.5%	66	28.0%	37	15.7%
Rush	168	40	23.8%	19	11.3%	27	16.1%	11	6.5%
Saint Joseph	1,462	237	16.2%	100	6.8%	180	12.3%	85	5.8%
Scott	154	82	53.2%	66	42.9%	73	47.4%	58	37.7%
Shelby	139	51	36.7%	27	19.4%	41	29.5%	25	18.0%
Spencer	194	48	24.7%	22	11.3%	33	17.0%	18	9.3%
Starke	218	95	43.6%	55	25.2%	78	35.8%	51	23.4%
Steuben	191	18	9.4%	9	4.7%	15	7.9%	9	4.7%
Sullivan	72	31	43.1%	19	26.4%	25	34.7%	18	25.0%
Switzerland	64	27	42.2%	17	26.6%	25	39.1%	15	23.4%
Tippecanoe	406	118	29.1%	49	12.1%	82	20.2%	41	10.1%
Tipton	68	24	35.3%	13	19.1%	23	33.8%	11	16.2%
Union	43	20	46.5%	12	27.9%	15	34.9%	6	14.0%
Vanderburgh	1,191	352	29.6%	178	14.9%	262	22.0%	153	12.8%
Vermillion	114	35	30.7%	20	17.5%	29	25.4%	17	14.9%
Vigo	755	180	23.8%	80	10.6%	122	16.2%	64	8.5%
Wabash	222	87	39.2%	42	18.9%	57	25.7%	27	12.2%
Warren	16	7	43.8%	<5	N/A	6	37.5%	<5	N/A
Warrick	320	102	31.9%	48	15.0%	78	24.4%	42	13.1%
Washington	58	19	32.8%	12	20.7%	14	24.1%	9	15.5%
Wayne	475	140	29.5%	69	14.5%	94	19.8%	31	6.5%
Wells	111	34	30.6%	17	15.3%	30	27.0%	16	14.4%
White	151	32	21.2%	14	9.3%	23	15.2%	10	6.6%
Whitley	131	48	36.6%	21	16.0%	27	20.6%	15	11.5%
County Info Missing	149	38	25.5%	20	13.4%	27	18.1%	18	12.1%
Indiana	**34,670**	**9,879**	**28.5%**	**5,488**	**15.8%**	**7,818**	**22.5%**	**4,527**	**13.1%**

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, 2014

APPENDIX 9B — PART 2

County	CNS Depressant Abuse Number	CNS Depressant Abuse %	CNS Depressant Dependence Number	CNS Depressant Dependence %	Stimulant Abuse Number	Stimulant Abuse %	Stimulant Dependence Number	Stimulant Dependence %
Adams	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Allen	56	3.0%	7	0.4%	60	3.2%	14	0.8%
Bartholomew	53	8.1%	20	3.1%	9	1.4%	5	0.8%
Benton	11	24.4%	<5	N/A	<5	N/A	<5	N/A
Blackford	8	18.6%	<5	N/A	<5	N/A	<5	N/A
Boone	8	4.4%	<5	N/A	<5	N/A	<5	N/A
Brown	5	5.1%	<5	N/A	<5	N/A	<5	N/A
Carroll	13	13.1%	<5	N/A	<5	N/A	<5	N/A
Cass	13	5.2%	<5	N/A	11	4.4%	6	2.4%
Clark	35	8.9%	19	4.8%	6	1.5%	<5	N/A
Clay	12	6.1%	<5	N/A	<5	N/A	<5	N/A
Clinton	11	9.0%	<5	N/A	<5	N/A	<5	N/A
Crawford	7	9.9%	<5	N/A	<5	N/A	<5	N/A
Daviess	27	15.3%	<5	N/A	<5	N/A	<5	N/A
Dearborn	38	7.5%	5	1.0%	7	1.4%	<5	N/A
Decatur	17	8.9%	6	3.1%	<5	N/A	<5	N/A
DeKalb	10	5.0%	<5	N/A	5	2.5%	<5	N/A
Delaware	84	8.5%	14	1.4%	15	1.5%	5	0.5%
Dubois	34	11.4%	8	2.7%	<5	N/A	<5	N/A
Elkhart	21	2.6%	<5	N/A	13	1.6%	5	0.6%
Fayette	35	16.9%	25	12.1%	6	2.9%	<5	N/A
Floyd	10	5.4%	<5	N/A	<5	N/A	<5	N/A
Fountain	9	15.3%	<5	N/A	<5	N/A	<5	N/A
Franklin	11	6.5%	<5	N/A	<5	N/A	<5	N/A
Fulton	17	7.9%	5	2.3%	9	4.2%	<5	N/A
Gibson	22	10.2%	5	2.3%	<5	N/A	<5	N/A
Grant	72	14.5%	16	3.2%	11	2.2%	<5	N/A
Greene	27	13.0%	13	6.3%	6	2.9%	<5	N/A
Hamilton	80	9.8%	18	2.2%	10	1.2%	<5	N/A
Hancock	24	14.6%	<5	N/A	<5	N/A	<5	N/A
Harrison	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Hendricks	21	5.9%	6	1.7%	<5	N/A	<5	N/A
Henry	34	13.1%	10	3.9%	12	4.6%	<5	N/A
Howard	91	14.0%	20	3.1%	15	2.3%	<5	N/A
Huntington	<5	N/A	<5	N/A	12	14.0%	6	7.0%
Jackson	16	5.5%	5	1.7%	<5	N/A	<5	N/A
Jasper	15	13.8%	<5	N/A	<5	N/A	<5	N/A
Jay	6	7.1%	<5	N/A	<5	N/A	<5	N/A
Jefferson	29	8.5%	15	4.4%	<5	N/A	<5	N/A
Jennings	13	5.3%	5	2.0%	<5	N/A	<5	N/A
Johnson	27	11.5%	9	3.8%	<5	N/A	<5	N/A
Knox	48	12.8%	11	2.9%	<5	N/A	<5	N/A
Kosciusko	14	4.1%	<5	N/A	58	16.9%	14	4.1%
LaGrange	5	5.3%	<5	N/A	<5	N/A	<5	N/A
Lake	110	3.8%	32	1.1%	22	0.8%	5	0.2%
LaPorte	26	4.2%	<5	N/A	<5	N/A	<5	N/A
Lawrence	53	11.0%	35	7.3%	<5	N/A	<5	N/A
Madison	137	19.4%	18	2.5%	19	2.7%	<5	N/A
Marion	324	7.8%	51	1.2%	39	0.9%	13	0.3%
Marshall	12	4.8%	<5	N/A	22	8.8%	11	4.4%
Martin	8	15.7%	5	9.8%	<5	N/A	<5	N/A
Miami	21	7.9%	5	1.9%	9	3.4%	<5	N/A
Monroe	140	9.9%	66	4.7%	28	2.0%	12	0.8%
Montgomery	35	10.6%	10	3.0%	5	1.5%	<5	N/A

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APPENDIX 9B — PART 2 *(Continued from previous page)*

County	CNS Depressant Abuse Number	CNS Depressant Abuse %	CNS Depressant Dependence Number	CNS Depressant Dependence %	Stimulant Abuse Number	Stimulant Abuse %	Stimulant Dependence Number	Stimulant Dependence %
Morgan	45	9.4%	15	3.1%	11	2.3%	6	1.3%
Newton	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Noble	13	3.9%	<5	N/A	41	12.4%	20	6.0%
Ohio	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Orange	9	8.0%	<5	N/A	<5	N/A	<5	N/A
Owen	16	6.5%	9	3.7%	<5	N/A	<5	N/A
Parke	11	10.7%	<5	N/A	<5	N/A	<5	N/A
Perry	17	13.5%	<5	N/A	<5	N/A	<5	N/A
Pike	8	14.3%	<5	N/A	<5	N/A	<5	N/A
Porter	61	9.2%	10	1.5%	11	1.7%	<5	N/A
Posey	13	12.0%	<5	N/A	<5	N/A	<5	N/A
Pulaski	10	9.0%	<5	N/A	<5	N/A	<5	N/A
Putnam	15	7.2%	5	2.4%	<5	N/A	<5	N/A
Randolph	21	10.9%	10	5.2%	7	3.6%	<5	N/A
Ripley	15	6.4%	8	3.4%	<5	N/A	<5	N/A
Rush	15	8.9%	5	3.0%	5	3.0%	<5	N/A
Saint Joseph	78	5.3%	13	0.9%	11	0.8%	<5	N/A
Scott	17	11.0%	7	4.5%	<5	N/A	<5	N/A
Shelby	15	10.8%	<5	N/A	<5	N/A	<5	N/A
Spencer	17	8.8%	<5	N/A	<5	N/A	<5	N/A
Starke	32	14.7%	<5	N/A	<5	N/A	<5	N/A
Steuben	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Sullivan	11	15.3%	<5	N/A	<5	N/A	<5	N/A
Switzerland	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Tippecanoe	54	13.3%	6	1.5%	9	2.2%	<5	N/A
Tipton	7	10.3%	<5	N/A	<5	N/A	<5	N/A
Union	9	20.9%	6	14.0%	<5	N/A	<5	N/A
Vanderburgh	165	13.9%	22	1.8%	20	1.7%	<5	N/A
Vermillion	11	9.6%	<5	N/A	<5	N/A	<5	N/A
Vigo	84	11.1%	16	2.1%	8	1.1%	<5	N/A
Wabash	14	6.3%	6	2.7%	26	11.7%	9	4.1%
Warren	<5	N/A	<5	N/A	<5	N/A	<5	N/A
Warrick	37	11.6%	<5	N/A	7	2.2%	<5	N/A
Washington	7	12.1%	<5	N/A	<5	N/A	<5	N/A
Wayne	58	12.2%	36	7.6%	5	1.1%	<5	N/A
Wells	<5	N/A	<5	N/A	<5	N/A	<5	N/A
White	15	9.9%	<5	N/A	<5	N/A	<5	N/A
Whitley	5	3.8%	<5	N/A	20	15.3%	6	4.6%
County Info Missing	16	10.7%	<5	N/A	<5	N/A	<5	N/A
Indiana	**2,902**	**8.4%**	**731**	**2.1%**	**697**	**2.0%**	**230**	**0.7%**

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, 2014

APPENDIX 9C

Percentage of Indiana Students Reporting Lifetime and Monthly Nonmedical Prescription Drug Use, by Region and Grade (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)

		Indiana	Northwest	North Central	Northeast	West	Central	East	Southwest	Southeast
6th Grade	Lifetime	1.9	1.8	*4.6	*1.0	1.6	*1.2	1.6	*1.1	1.4
	Monthly	0.7	1.0	0.7	0.6	0.8	0.7	1.0	0.5	0.7
7th Grade	Lifetime	2.3	2.2	2.3	*1.1	2.6	2.4	*3.7	2.1	2.3
	Monthly	1.2	1.2	1.4	0.5	1.0	1.2	1.7	1.2	1.3
8th Grade	Lifetime	4.7	4.9	5.2	*2.5	4.8	5.2	*7.6	*3.6	5.1
	Monthly	2.2	2.4	2.2	*0.9	2.7	2.1	2.4	1.8	2.3
9th Grade	Lifetime	7.1	6.2	6.5	*5.0	7.2	*8.4	*10.0	6.7	*8.6
	Monthly	3.3	2.6	3.1	*2.3	3.9	3.7	*5.9	3.3	3.3
10th Grade	Lifetime	10.1	11.1	10.4	*7.9	10.3	10.5	12.6	9.2	10.3
	Monthly	4.3	4.6	4.6	3.7	4.0	3.9	*6.5	3.9	4.5
11th Grade	Lifetime	12.2	13.8	13.6	*9.8	11.7	12.8	13.4	11.9	11.9
	Monthly	5.1	*6.8	6.0	*3.9	5.0	*4.0	5.8	5.2	4.9
12th Grade	Lifetime	14.3	*16.2	15.9	*8.8	13.6	16.0	16.0	13.5	14.6
	Monthly	5.7	6.6	*7.2	*3.6	5.0	6.8	7.5	5.4	5.5

Notes: Includes Ritalin®, Oxycontin®, and Xanax®.

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

Source: Gassman, et al., 2013

APPENDIX 9D

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, 2011)

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Adams	12	*0.3	2	*0.1
Allen	83	0.2	48	0.1
Bartholomew	22	0.3	0	*0.0
Benton	3	*0.3	1	*0.1
Blackford	0	*0.0	0	*0.0
Boone	16	*0.3	3	*0.1
Brown	0	*0.0	0	*0.0
Carroll	5	*0.2	0	*0.0
Cass	52	1.3	54	1.4
Clark	29	0.3	3	*0.0
Clay	19	*0.7	4	*0.1
Clinton	13	*0.4	16	*0.5
Crawford	2	*0.2	3	*0.3
Daviess	14	*0.4	3	*0.1
Dearborn	3	*0.1	15	*0.3
Decatur	18	*0.7	10	*0.4
DeKalb	18	*0.4	6	*0.1
Delaware	4	*0.0	3	*0.0
Dubois	14	*0.3	2	*0.0
Elkhart	43	0.2	11	*0.1
Fayette	15	*0.6	4	*0.2
Floyd	175	2.3	163	2.2
Fountain	10	*0.6	2	*0.1
Franklin	5	*0.2	5	*0.2
Fulton	13	*0.6	4	*0.2
Gibson	48	1.4	1	*0.0
Grant	3	*0.0	3	*0.0
Greene	10	*0.3	7	*0.2
Hamilton	22	0.1	9	*0.0
Hancock	33	0.5	13	*0.2
Harrison	0	*0.0	0	*0.0
Hendricks	62	0.4	15	*0.1
Henry	13	*0.3	4	*0.1
Howard	111	1.3	13	*0.2
Huntington	10	*0.3	0	*0.0
Jackson	49	1.2	11	*0.3
Jasper	11	*0.3	10	*0.3
Jay	3	*0.1	1	*0.0
Jefferson	20	0.6	4	*0.1
Jennings	3	*0.1	8	*0.3
Johnson	77	0.5	41	0.3
Knox	35	0.9	13	*0.3
Kosciusko	34	0.4	5	*0.1
LaGrange	5	*0.1	1	*0.0
Lake	420	0.8	76	0.2
LaPorte	12	*0.1	1	*0.0
Lawrence	17	*0.4	5	*0.1
Madison	112	0.8	46	0.3
Marion	78	0.1	115	0.1

(continued on next page)

APPENDIX 9D *(Continued from previous page)*

County	Number of Arrests for Possession	Possession Arrest Rate	Number of Arrests for Sale	Sale Arrest Rate
Marshall	55	1.2	10	*0.2
Martin	2	*0.2	1	*0.1
Miami	28	0.8	2	*0.1
Monroe	172	1.2	26	0.2
Montgomery	61	1.6	2	*0.1
Morgan	80	1.2	17	*0.2
Newton	1	*0.1	0	*0.0
Noble	30	0.6	5	*0.1
Ohio	2	*0.3	1	*0.2
Orange	11	*0.6	2	*0.1
Owen	8	*0.4	4	*0.2
Parke	11	*0.6	0	*0.0
Perry	16	*0.8	3	*0.2
Pike	8	*0.6	1	*0.1
Porter	121	0.7	41	0.2
Posey	13	*0.5	4	*0.2
Pulaski	8	*0.6	0	*0.0
Putnam	7	*0.2	2	*0.1
Randolph	10	*0.4	17	*0.6
Ripley	13	*0.4	2	*0.1
Rush	32	1.8	17	*1.0
Saint Joseph	100	0.4	7	*0.0
Scott	7	*0.3	1	*0.0
Shelby	1	*0.0	0	*0.0
Spencer	0	*0.0	0	*0.0
Starke	14	*0.6	3	*0.1
Steuben	129	3.8	9	*0.3
Sullivan	3	*0.1	1	*0.0
Switzerland	6	*0.6	1	*0.1
Tippecanoe	58	0.3	23	0.1
Tipton	1	*0.1	3	*0.2
Union	4	*0.5	1	*0.1
Vanderburgh	238	1.3	29	0.2
Vermillion	0	*0.0	1	*0.1
Vigo	85	0.8	2	*0.0
Wabash	21	0.6	5	*0.2
Warren	5	*0.6	1	*0.1
Warrick	33	0.6	25	0.4
Washington	13	*0.5	6	*0.2
Wayne	9	*0.1	5	*0.1
Wells	12	*0.4	24	0.9
White	11	*0.4	2	*0.1
Whitley	12	*0.4	4	*0.1
Indiana	**3,227**	**0.5**	**1,074**	**0.2**

* Rates based on arrest numbers lower than 20 are unreliable.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

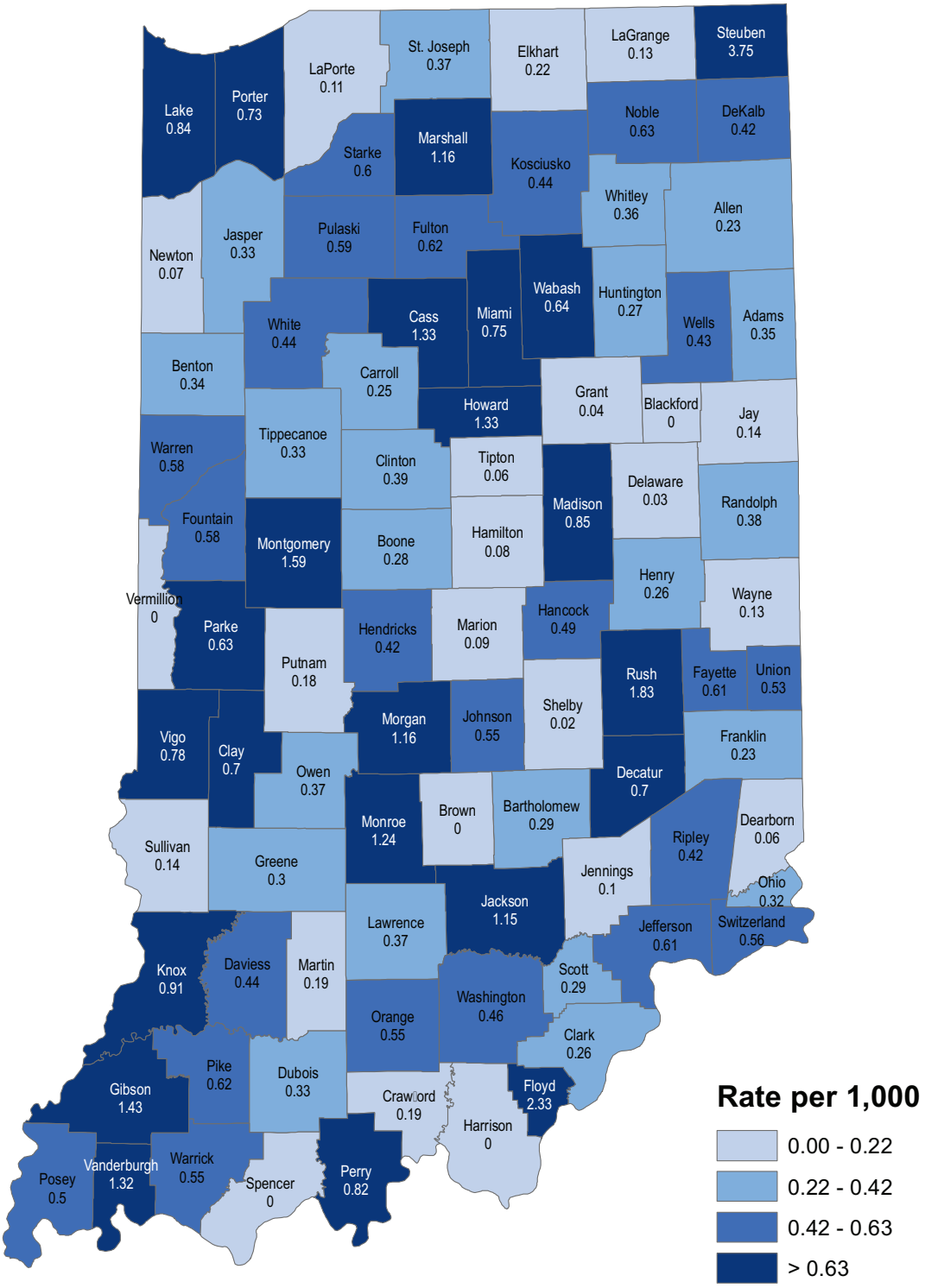
APPENDIX 9E

Robberies of Indiana Pharmacies, by County, January 1, 2012, through December 31, 2012 (Indiana Board of Pharmacy, 2013)

County	Number of Robberies
Adams	1
Allen	17
Cass	1
Clark	1
Clinton	3
Dearborn	2
Delaware	8
Elkhart	1
Floyd	1
Grant	3
Hamilton	4
Hancock	1
Hendricks	1
Henry	2
Howard	4
Huntington	1
Johnson	4
Kosciuskio	2
Lawrence	3
Madison	2
Marion	41
Monroe	1
Morgan	1
Steuben	1
Tippecanoe	2
Vigo	2
Wayne	2
Whitley	1
Indiana	**113**

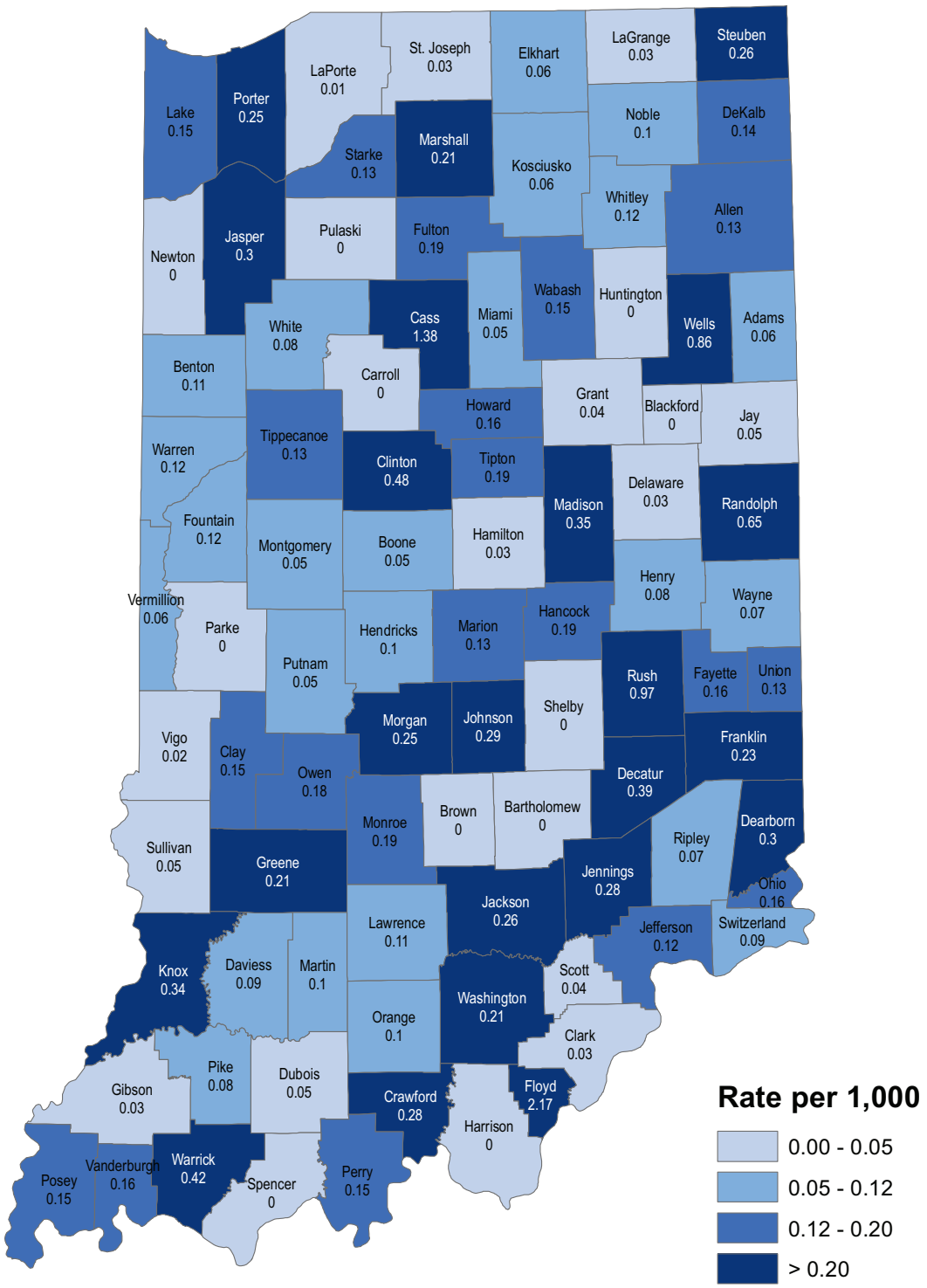
Source: Indiana Board of Pharmacy, 2013b

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, 2011)



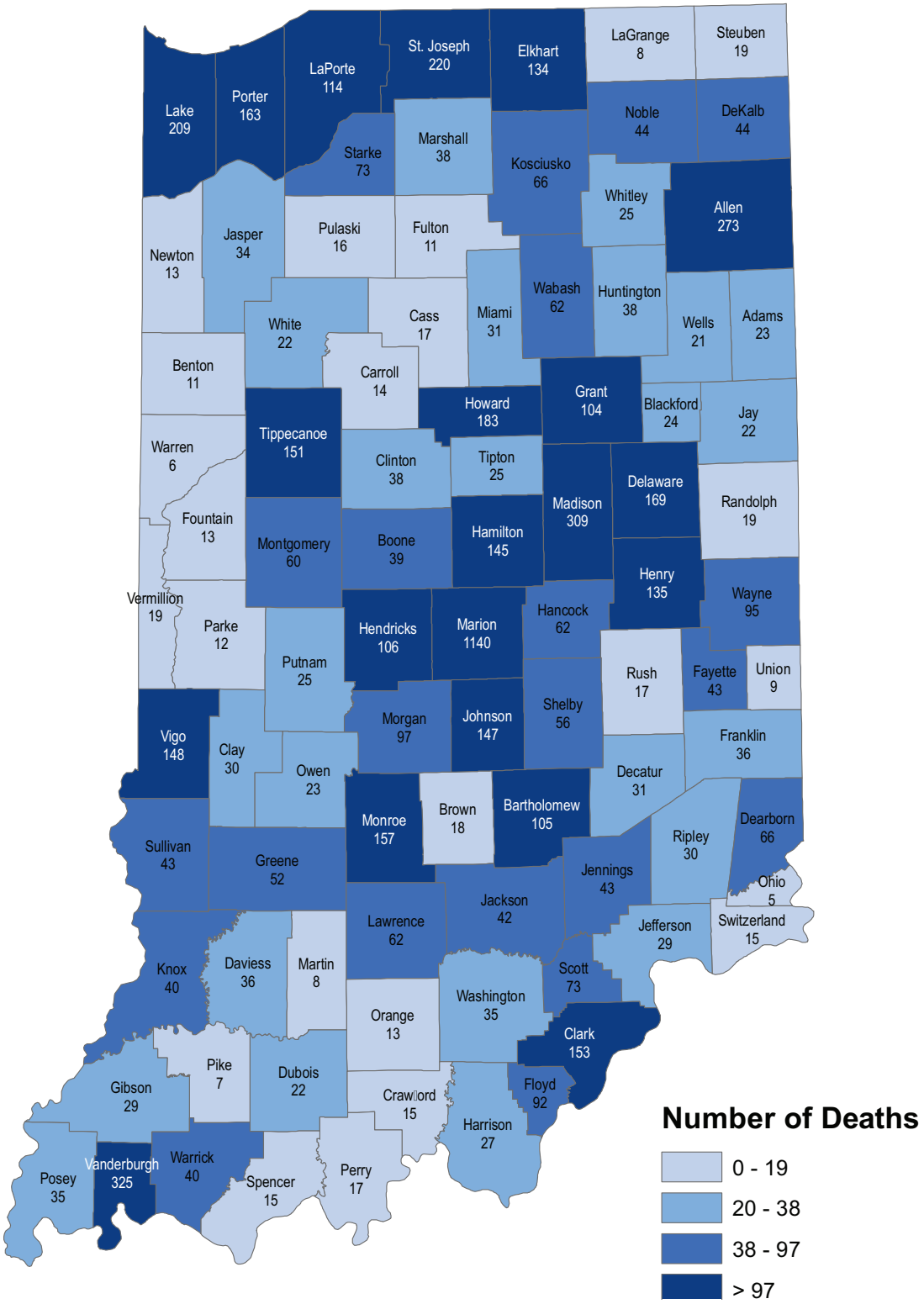
Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 166-167) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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, 2011)



Note: Rates based on arrest numbers lower than 20 are unreliable. Please refer to Appendix 9D (pages 166-167) for additional information.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

Map 9.3 Number of Prescription Drug Overdose Deaths in Indiana, by County (Indiana Mortality Data, 2002-2011)



Note: Includes ICD-10 causes of death: X40, X41, X42, X43, X44, X60, X61, X62, X63, X64, Y10, Y11, Y12, Y13, and Y14.
Source: Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team, 2013

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10 Polysubstance Abuse

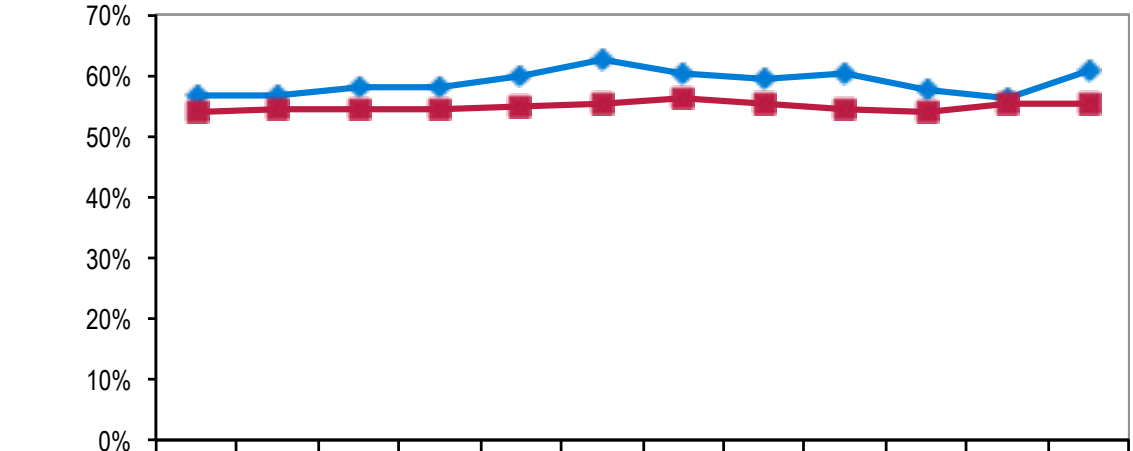
Polysubstance Abuse

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 Data Archive, 2011). 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 2011 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 significantly higher in Indiana. Also, use of two or more substances increased significantly from 2000 to 2009 in Indiana, peaking at 62.5% in 2005 (see Figure 10.1). The percentage of individuals in Indiana reporting polysubstance abuse decreased slightly from 2008 through 2010 but returned to 2008 levels in 2011. Nationally, rates rose slightly from 2009 to 2010 and were stable in 2011. County-level treatment data on individuals using two or more substances is available in Appendix 10A, pages 183-184.

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, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

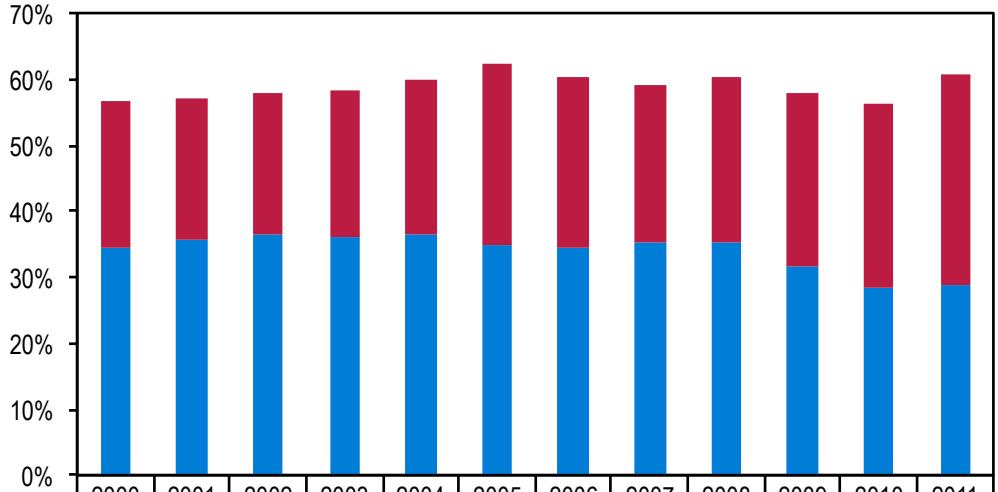
Among Indiana treatment episodes alone, 29% reported use of only two substances and 32% reported use of three substances (see Figure 10.2).

Demographic Characteristics of Polysubstance Users

Gender—From 2000 through 2011, the percentage of both males and females reporting use of two or more substances at treatment admission fluctuated between just over 56% to 63% (see Figure 10.3).

In 2011, the percentage of men and women using two drugs was nearly similar; however, a statistically larger percentage of women than men reported use of three drugs (see Figure 10.4).

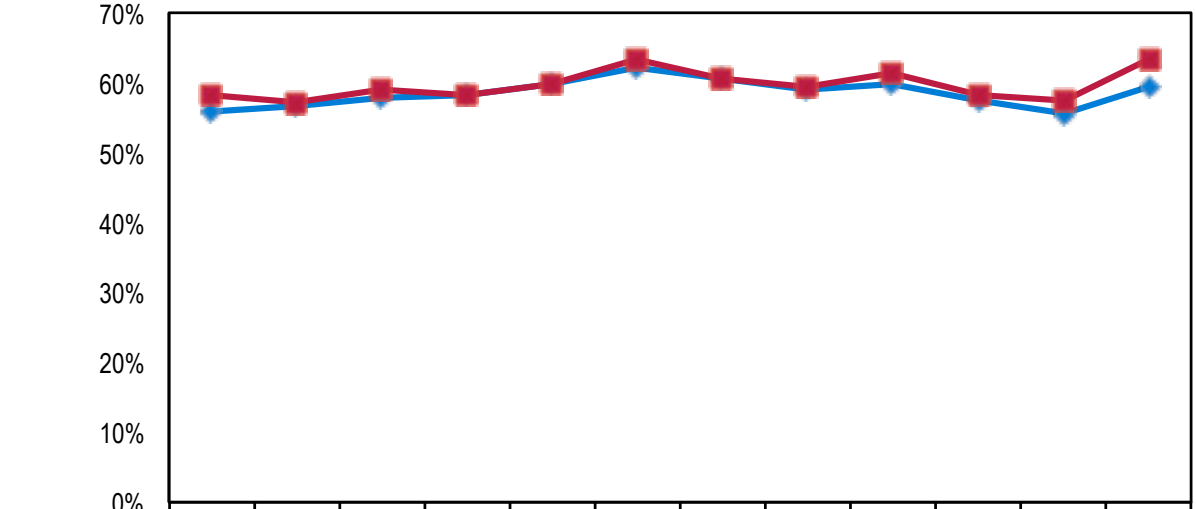
Figure 10.2 Percentage of Indiana Treatment Episodes with Use of Two and Three Substances Reported at Treatment Admission (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

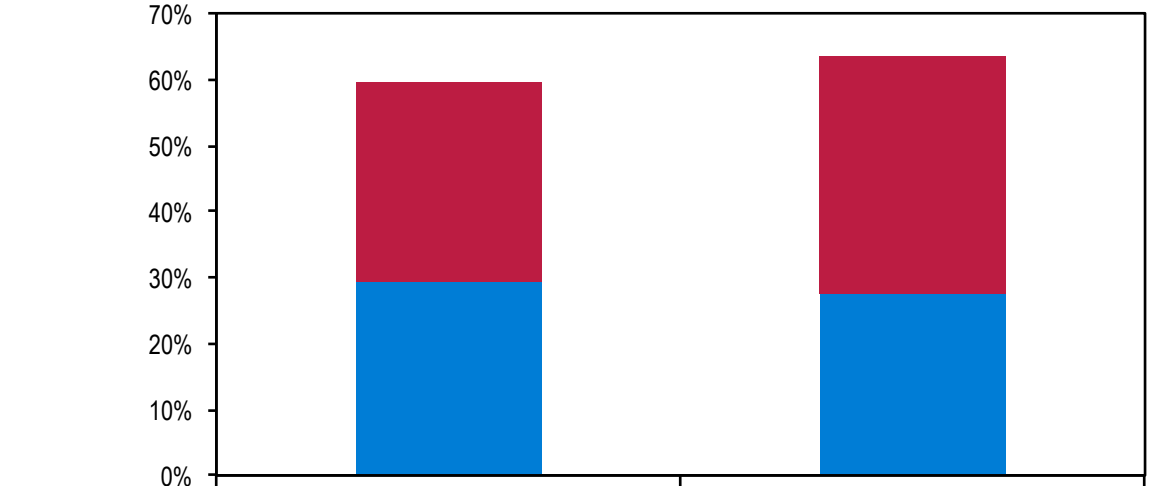
Figure 10.3 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Gender (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%

Source: Substance Abuse and Mental Health Data Archive, 2011

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, 2011)



	Males	Females
3 Drugs Reported	30.2%	35.8%
2 Drugs Reported	29.4%	27.6%

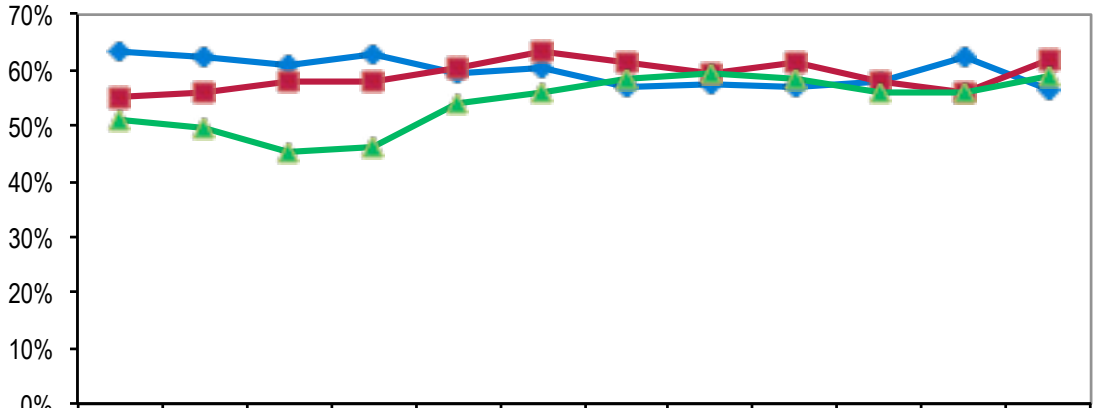
Source: Substance Abuse and Mental Health Data Archive, 2011

Race—The percentage of treatment episodes with polysubstance abuse reported at admission decreased for blacks from 63.4% in 2000 to 56.5% in 2011; however, it increased for whites (from 55.2% to 61.7%) and other races (from 51.0% to 58.9%) (see Figure 10.5).

In 2011, reported use of two substances was highest among the black treatment population (33.5%), while use of three substances was greatest among whites (33.8%) (see Figure 10.6).

Age—Adults ages 25 to 34 had the highest percentage of polysubstance abuse reported at treatment admission at 64.7%, closely followed by 18- to 24-year-olds at 63.4%. Over 50% of young people under 18 reported using at least two substances in 2011, an increase of more than 10% from 2010. The percentage of adults ages 55 and over using at least two substances has increased steadily from 23.1% in 2000 to a high of 45.6% in 2011 (see Figure 10.7). Meanwhile 25- to 34-year-olds had the greatest percentage of using three drugs at 37.2% (see Figure 10.8).

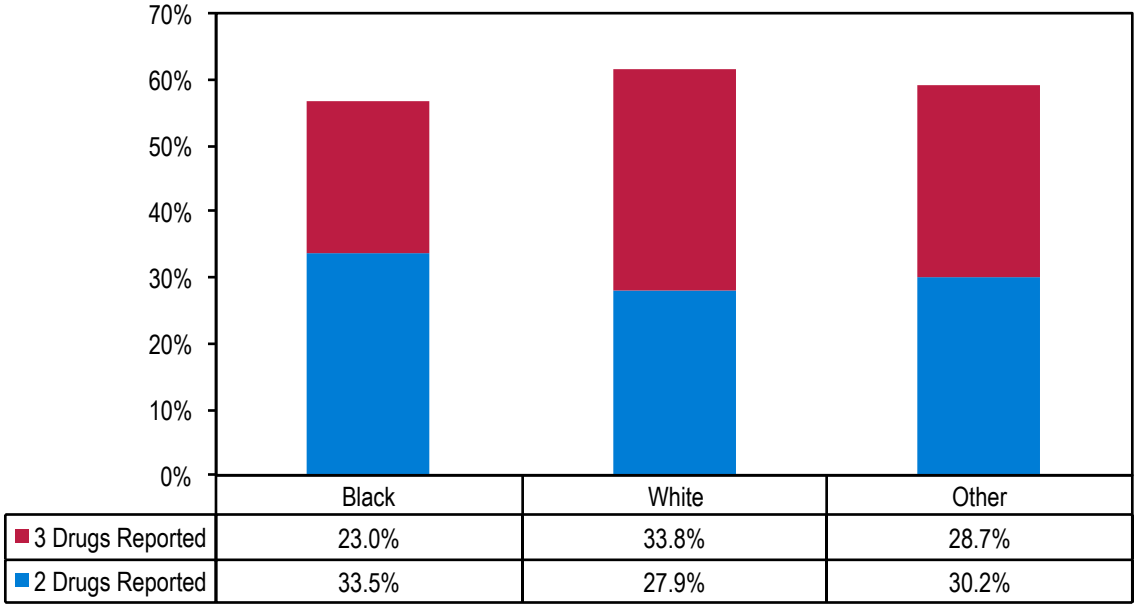
Figure 10.5 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Race (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%

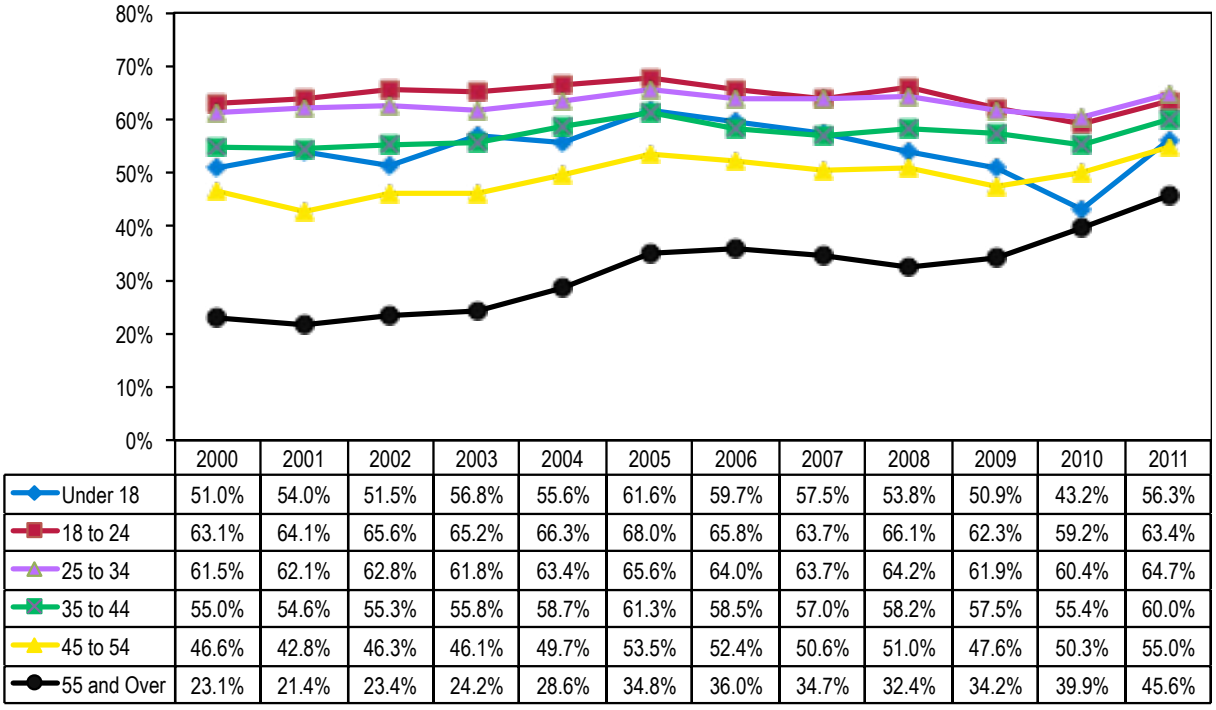
Source: Substance Abuse and Mental Health Data Archive, 2011

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, 2011)



Source: Substance Abuse and Mental Health Data Archive, 2011

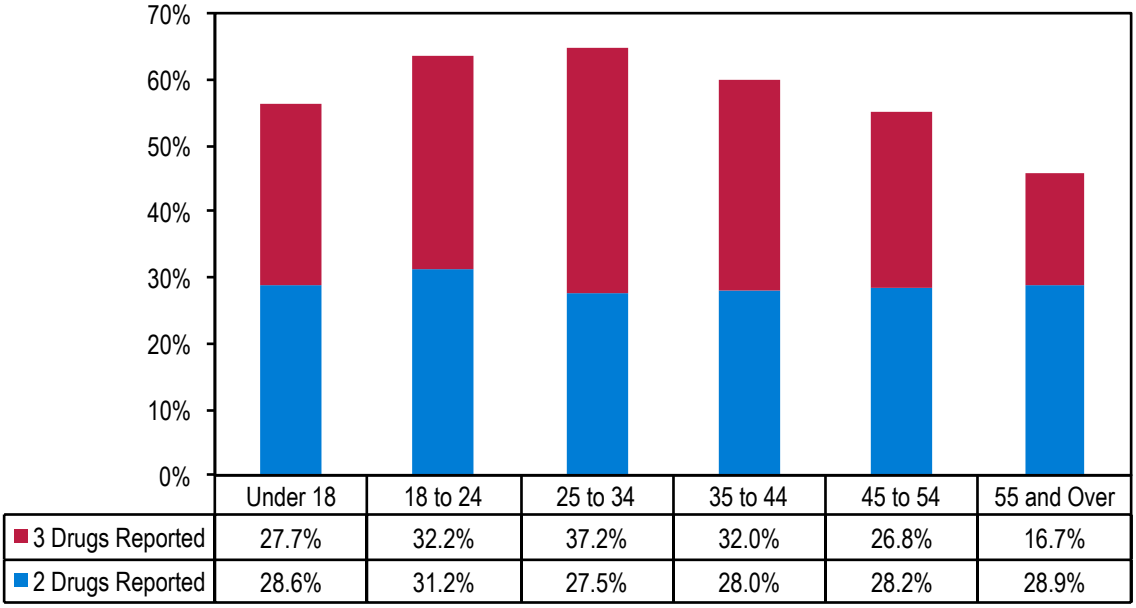
Figure 10.7 Percentage of Indiana Treatment Episodes with Polysubstance Abuse (Use of at Least Two Substances) Reported at Treatment Admission, by Age (Treatment Episode Data Set, 2000–2011)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
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%
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%
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%
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%
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 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%

Source: Substance Abuse and Mental Health Data Archive, 2011

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, 2011)



Source: Substance Abuse and Mental Health Data Archive, 2011

Polysubstance Abuse Clusters in Indiana

Statewide Analysis—We conducted a cluster analysis of 2011 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 an 8-cluster solution best fit the available data.

Tables 10.1 and 10.2, pages 180-181, show the image and identity matrices for the 8-cluster solution.

The image matrix represents the percentage of individuals within a cluster who used each specific drug. Using cluster 3 as an example, 57% of the individuals in this cluster used alcohol, 8% used cocaine, 75% used marijuana, 3% 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. An examination of the image matrix shows that all clusters except for cluster 8 have at least two specific substances represented. One hundred percent of individuals in cluster 8 report heroin use; however, their choice of a second substance was much more diverse, resulting in less than 50% of individuals in this cluster reporting use of any of the other substances. This result indicates that polysubstance users in Indiana who use heroin are using a variety of other drugs, but no clear pattern exists.

The identity matrix presents the makeup of each cluster using a series of ones and zeros. For each specific drug within a cluster, a "1" indicates that at least 50% of the people within that cluster report using the drug; hence that drug is considered to be part of the cluster. A "0" indicates that less than 50% of the people within the cluster report using the drug, thus the drug is not considered to be part of the cluster.

The most frequently occurring drug clusters in Indiana were clusters 4, 1, and 2. These clusters

more than half of polysubstance users in the analysis (52.5%). Individuals in cluster 4 reported using a combination of alcohol and marijuana. Polysubstance users in cluster 1 reported using a combination of alcohol and a drug in the "other drug" category. The individuals making up cluster 2 reported using alcohol, cocaine, and marijuana. The remaining five clusters each accounted for 7.5% to 12.3% of polysubstance users.

Alcohol and marijuana were the most commonly reported drugs, with both appearing in five of the eight clusters. The second most frequently reported drug categories were opiates-synthetic drugs and drugs in the "other drug" category, each appearing in two of the eight clusters. Cocaine, heroin, methamphetamine, and benzodiazepines were each represented in one cluster. For detailed information on all eight clusters, see Table 10.3 (page 181).

Table 10.4 (page 182) breaks down the clusters by demographic characteristics. In terms of gender, men accounted for 50% or more of the individuals within six of the eight clusters. Women comprised just over 50% of the individuals in clusters 6 (alcohol/opiates-synthetics/benzodiazepines) and 7 (marijuana/other drug). Clusters 1, 4, and 5 were the most male-oriented clusters.

Racially, whites composed the largest percentage of polysubstance abusers across every cluster. Blacks, however, were more strongly represented in cluster 2, the only cluster that contained cocaine. Whites represented more than 90% of the population in clusters 3, 5, 6, and 8. These four clusters included opiates-synthetics, methamphetamine, or heroin.

Over 50% of polysubstance abusers within the eight clusters were between the ages of 21 and 39. The youngest polysubstance users, those between the ages of 12 and 20, were more likely to be found in clusters 4 (alcohol/marijuana) and 5 (marijuana/opiates-synthetics). Older polysubstance users, those 40 years of age and above, were most strongly represented in clusters 1 (alcohol/other drug) and 2 (alcohol/cocaine/marijuana).

County-Level Analyses—We completed cluster analyses for each county within Indiana using the 2013 county-level TEDS data set. Appendix 10B (pages 185-190) lists the results of the cluster analysis for each county. Similar to the statewide findings, the most common polysubstance cluster was composed of both alcohol and marijuana, the top-ranked cluster in 51 of 92 counties.

Table 10.1 Image Matrix for Polysubstance Abuse Clusters (Treatment Episode Data Set, 2011)

Image Matrix	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8
Drug								
alcohol	1.00	0.83	0.57	0.98	0.47	0.50	0.00	0.15
cocaine	0.00	1.00	0.08	0.00	0.08	0.09	0.16	0.38
marijuana	0.48	0.58	0.75	1.00	1.00	0.09	0.66	0.26
heroin	0.01	0.00	0.03	0.04	0.00	0.01	0.04	1.00
methadone	0.00	0.00	0.00	0.01	0.01	0.07	0.02	0.02
opiates/synthetics	0.05	0.05	0.21	0.00	1.00	0.74	0.32	0.34
pcp	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
hallucinogens	0.00	0.00	0.01	0.02	0.01	0.01	0.01	0.01
methamphetamine	0.03	0.04	1.00	0.00	0.00	0.08	0.22	0.05
amphetamines	0.00	0.03	0.00	0.02	0.01	0.07	0.02	0.08
stimulants	0.00	0.01	0.00	0.01	0.01	0.02	0.01	0.03
benzodiazepines	0.02	0.02	0.06	0.09	0.19	0.60	0.04	0.11
tranquilizers	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
barbiturates	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
sedatives/hypnotics	0.00	0.00	0.00	0.02	0.01	0.05	0.01	0.02
inhalants	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
over-the-counter	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00
other drug	1.00	0.07	0.00	0.00	0.00	0.03	1.00	0.12

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, 100% used alcohol, 0% used cocaine, 48% used marijuana, 1% used heroin and so on.
Source: Substance Abuse and Mental Health Data Archive, 2011

Table 10.2 Identity Matrix for Polysubstance Abuse Clusters (Treatment Episode Data Set, 2011)

Image Matrix	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8*
Drug								
alcohol	1	1	1	1	0	1	0	0
cocaine	0	1	0	0	0	0	0	0
marijuana	0	1	1	1	1	0	1	0
heroin	0	0	0	0	0	0	0	1
methadone	0	0	0	0	0	0	0	0
opiates/synthetics	0	0	0	0	1	1	0	0
pcp	0	0	0	0	0	0	0	0
hallucinogens	0	0	0	0	0	0	0	0
methamphetamine	0	0	1	0	0	0	0	0
amphetamines	0	0	0	0	0	0	0	0
stimulants	0	0	0	0	0	0	0	0
benzodiazepines	0	0	0	0	0	1	0	0
tranquilizers	0	0	0	0	0	0	0	0
barbiturates	0	0	0	0	0	0	0	0
sedatives/hypnotics	0	0	0	0	0	0	0	0
Inhalants	0	0	0	0	0	0	0	0
over-the-counter	0	0	0	0	0	0	0	0
other drug	1	0	0	0	0	0	1	0

Note: The identity matrix simplifies the information from the image matrix by using the percentages to assign a “1” or “0” to each drug. A “1” indicates that at least 50% of people in a cluster used the drug, and a “0” indicates that less than 50% of people in a cluster used the drug. The binary use of “1” and “0” provides a clearer picture of the drugs most commonly used within each cluster.
*Due to the nature of the data this cluster was composed of only one drug where at least 50% of individuals reported using the drug. No other substances were used by 50% or more of individuals in this cluster.
Source: Substance Abuse and Mental Health Data Archive, 2011

Table 10.3 Number and Percentage of Treatment Episodes within Each Cluster in Indiana (Treatment Episode Data Set, 2011)

Cluster	Number of Treatment Episodes Within Cluster	Percentage)
4 – Alcohol/Marijuana	3415	23.3
1 – Alcohol/Other Drug	2195	14.9
2 – Alcohol/Cocaine/Marijuana	2096	14.3
3 – Alcohol/Marijuana/Methamphetamine	1805	12.3
8 – Heroin/Various Other Drugs	1477	10.0
5 – Marijuana/Opiates-Synthetics	1390	9.5
6 – Alcohol/Opiates-Synthetics/Benzodiazepines	1197	8.2
7 – Marijuana/Other Drug	1105	7.5
Total	**14,680**	**100.0**

Source: Substance Abuse and Mental Health Data Archive, 2011

Table 10.4 Demographic Characteristics of Polysubstance Abusers within Clusters (Treatment Episode Data Set, 2011)

	Cluster 1		Cluster 2		Cluster 3		Cluster 4	
	N	%	N	%	N	%	N	%
Gender								
Male	1519	69.2	1254	59.8	1006	55.7	2528	74.0
Female	676	30.8	842	40.2	799	44.3	887	26.0
Race								
White	1737	84.8	1206	60.8	1672	96.6	2532	78.0
Black	261	12.7	715	36.1	32	1.8	619	19.1
Other	51	2.5	61	3.1	27	1.6	97	2.9
Ethnicity								
Non-Hispanic	2007	95.1	1875	92.5	1714	98.0	3088	94.1
Hispanic	103	4.9	151	7.5	35	2.0	194	5.9
Age								
12-20	253	11.5	72	3.4	151	8.4	699	20.5
21-29	630	28.7	436	20.8	671	37.2	1343	39.3
30-39	554	25.2	615	29.3	601	33.3	733	21.5
40-49	471	21.5	641	30.6	304	16.8	417	12.2
50 and Older	287	13.1	332	15.8	78	4.3	223	6.5
Education								
Less than H.S.	698	31.8	667	31.8	716	39.7	1182	34.6
H.S. Diploma	985	44.9	919	43.8	802	44.4	1506	44.1
Above H.S.	489	22.3	474	22.6	260	14.4	670	19.6
Unknown	23	1.0	36	1.7	27	1.5	57	1.7

	Cluster 5		Cluster 6		Cluster 7		Cluster 8	
	N	%	N	%	N	%	N	%
Gender								
Male	864	62.2	579	48.4	541	49.0	852	57.7
Female	526	37.8	618	51.6	564	51.0	625	42.3
Race								
White	1229	94.2	1083	95.5	886	86.1	1229	90.1
Black	57	4.4	38	3.4	124	12.1	113	8.3
Other	18	1.4	13	1.1	19	1.8	22	1.6
Ethnicity								
Non-Hispanic	1251	97.0	1092	97.7	1028	97.6	1275	93.8
Hispanic	39	3.0	26	2.3	25	2.4	85	6.2
Age								
12-20	235	16.9	71	5.9	129	11.7	165	11.2
21-29	636	45.8	459	38.3	423	38.3	698	47.3
30-39	363	26.1	367	30.7	325	29.4	384	26.0
40-49	107	7.7	180	15.0	159	14.4	139	9.4
50 and Older	49	3.5	120	10.0	69	6.2	91	6.2
Education								
Less than H.S.	470	33.8	332	27.7	441	39.9	460	31.1
H.S. Diploma	659	47.4	534	44.6	444	40.2	661	44.8
Above H.S.	242	17.4	307	25.6	206	18.6	318	21.5
Unknown	19	1.4	24	2.0	14	1.3	38	2.6

Source: Substance Abuse and Mental Health Data Archive, 2011

APPENDIX 10A

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, 2013)

	Treatment Episodes	Use of 2 Substances		Use of 3 Substances		Polysubstance Abuse	
County	Total	Number	Percentage	Number	Percentage	Number	Percentage
Adams	136	48	35.3%	45	33.1%	93	68.4%
Allen	1856	697	37.6%	674	36.3%	1371	73.9%
Bartholomew	653	175	26.8%	225	34.5%	400	61.3%
Benton	45	6	13.3%	27	60.0%	33	73.3%
Blackford	43	15	34.9%	10	23.3%	25	58.1%
Boone	181	53	29.3%	27	14.9%	80	44.2%
Brown	98	35	35.7%	20	20.4%	55	56.1%
Carroll	99	23	23.2%	52	52.5%	75	75.8%
Cass	248	46	18.6%	161	64.9%	207	83.5%
Clark	392	27	6.9%	82	20.9%	109	27.8%
Clay	196	66	33.7%	80	40.8%	146	74.5%
Clinton	122	27	22.1%	43	35.3%	70	57.4%
Crawford	71	20	28.2%	23	32.4%	43	60.6%
Daviess	177	41	23.2%	64	36.2%	105	59.3%
Dearborn	508	135	26.6%	229	45.1%	364	71.7%
Decatur	192	59	30.7%	39	20.3%	98	51.0%
DeKalb	202	55	27.2%	59	29.2%	114	56.4%
Delaware	990	274	27.7%	191	19.3%	465	48.0%
DuBois	298	70	23.5%	115	38.6%	185	62.1%
Elkhart	810	234	28.9%	148	18.3%	382	47.2%
Fayette	207	50	24.2%	78	37.7%	128	61.8%
Floyd	186	11	5.9%	29	15.6%	40	21.5%
Fountain	59	18	30.5%	30	50.9%	48	81.4%
Franklin	168	44	26.2%	64	38.1%	108	64.3%
Fulton	215	62	28.8%	130	60.5%	192	89.3%
Gibson	216	74	34.3%	72	33.3%	146	67.6%
Grant	495	140	28.3%	263	53.1%	403	81.4%
Greene	207	49	23.7%	67	32.4%	116	56.0%
Hamilton	813	325	40.0%	181	22.3%	506	62.2%
Hancock	164	59	36.0%	57	34.8%	116	70.7%
Harrison	54	5	9.3%	6	11.1%	11	20.4%
Hendricks	358	78	21.8%	66	18.4%	144	40.2%
Henry	259	79	30.5%	73	28.2%	152	58.7%
Howard	649	194	30.0%	326	50.2%	520	80.1%
Huntington	86	29	33.7%	34	39.5%	63	73.3%
Jackson	292	73	25.0%	94	32.2%	167	57.2%
Jasper	109	28	25.7%	42	38.5%	70	64.2%
Jay	84	29	34.5%	16	19.1%	45	53.6%
Jefferson	340	76	22.4%	97	28.5%	173	50.9%
Jennings	247	59	23.9%	78	31.6%	137	55.5%
Johnson	234	85	36.3%	74	31.6%	159	68.0%
Knox	374	107	28.6%	125	33.4%	232	62.0%
Kosciusko	343	106	30.9%	158	46.1%	264	77.0%
LaGrange	95	34	35.8%	43	45.3%	77	81.1%
Lake	2886	772	26.8%	468	16.2%	1240	43.0%
LaPorte	623	151	24.2%	147	23.6%	298	47.8%

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	Treatment Episodes	Use of 2 Substances		Use of 3 Substances		Polysubstance Abuse	
County	**Total**	**Number**	**Percentage**	**Number**	**Percentage**	**Number**	**Percentage**
Lawrence	481	101	21.0%	68	14.1%	169	35.1%
Madison	708	187	26.4%	319	45.1%	506	71.5%
Marion	4177	1282	30.7%	1352	32.4%	2634	63.1%
Marshall	249	92	37.0%	65	26.1%	157	63.1%
Martin	51	10	19.6%	20	39.2%	30	58.8%
Miami	265	83	31.3%	136	51.3%	219	82.6%
Monroe	1412	428	30.3%	362	25.6%	790	56.0%
Montgomery	330	107	32.4%	119	36.1%	226	68.5%
Morgan	479	119	24.8%	123	25.7%	242	50.5%
Newton	29	7	24.1%	11	37.9%	18	62.1%
Noble	331	120	36.3%	119	36.0%	239	72.2%
Ohio	44	11	25.0%	19	43.2%	30	68.2%
Orange	113	31	27.4%	47	41.6%	78	69.0%
Owen	245	52	21.2%	40	16.3%	92	37.6%
Parke	103	28	27.2%	41	39.8%	69	67.0%
Perry	126	32	25.4%	57	45.2%	89	70.6%
Pike	56	14	25.0%	21	37.5%	35	62.5%
Porter	664	196	29.5%	266	40.1%	462	69.6%
Posey	108	25	23.2%	60	55.6%	85	78.7%
Pulaski	111	37	33.3%	58	52.3%	95	85.6%
Putnam	207	89	43.0%	48	23.2%	137	66.2%
Randolph	193	48	24.9%	74	38.3%	122	63.2%
Ripley	236	55	23.3%	63	26.7%	118	50.0%
Rush	168	64	38.1%	41	24.4%	105	62.5%
Saint Joseph	1462	532	36.4%	447	30.6%	979	67.0%
Scott	154	14	9.1%	23	14.9%	37	24.0%
Shelby	139	43	30.9%	44	31.7%	87	62.6%
Spencer	194	45	23.2%	89	45.9%	134	69.1%
Starke	218	53	24.3%	116	53.2%	169	77.5%
Steuben	191	68	35.6%	75	39.3%	143	74.9%
Sullivan	72	13	18.1%	38	52.8%	51	70.8%
Switzerland	64	22	34.4%	19	29.7%	41	64.1%
Tippecanoe	406	95	23.4%	198	48.8%	293	72.2%
Tipton	68	20	29.4%	29	42.7%	49	72.1%
Union	43	9	20.9%	25	58.1%	34	79.1%
Vanderburgh	1191	296	24.9%	561	47.1%	857	72.0%
Vermillion	114	33	28.9%	50	43.9%	83	72.8%
Vigo	755	218	28.9%	369	48.9%	587	77.8%
Wabash	222	53	23.9%	124	55.9%	177	79.7%
Warren	16	5	31.3%	7	43.8%	12	75.0%
Warrick	320	65	20.3%	164	51.3%	229	71.6%
Washington	58	< 5	N/A	11	19.0%	15	25.9%
Wayne	475	124	26.1%	188	39.6%	312	65.7%
Wells	111	36	32.4%	46	41.4%	82	73.9%
White	151	31	20.5%	82	54.3%	113	74.8%
Whitley	131	22	16.8%	93	71.0%	115	87.8%
Indiana	**34,521**	**9,862**	**28.6%**	**11,459**	**33.2%**	**21,321**	**61.8%**

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, 2014

APPENDIX 10B

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, 2013)

County	Cluster #	Cluster Composition	N	%
Adams				
	2	alcohol/marijuana	35	37.6
	4	alcohol/cocaine/marijuana	21	22.6
	1	alcohol/marijuana/other drug	19	20.4
	3	marijuana/opiates-synthetics	18	19.4
		Total	93	
Allen				
	3	alcohol/marijuana	485	35.4
	2	alcohol/cocaine/marijuana	217	15.8
	1	alcohol/marijuana/other drug	197	14.4
	6	cocaine/heroin	99	7.2
	5	alcohol/other drug	89	6.5
	4	alcohol/cocaine	78	5.7
	8	marijuana/opiates-synthetics	74	5.4
	7	alcohol/marijuana/ methamphetamine	66	4.8
	9	alcohol/marijuana/ opiates-synthetics	66	4.8
		Total	1,371	
Bartholomew				
	5	alcohol/marijuana	79	19.8
	2	marijuana/ opiates-synthetics/ methamphetamine	70	17.5
	3	alcohol/marijuana/ methamphetamine	63	15.8
	1	marijuana/ methamphetamine	60	15.0
	4	alcohol/marijuana/ opiates-synthetics	39	9.8
	6	alcohol/cocaine	36	9.0
	8	alcohol/marijuana/other drug	27	6.8
	7	opiates-synthetics/ benzodiazepines	26	6.5
		Total	400	
Benton				
	2	alcohol/marijuana/ benzodiazepines	18	54.5
	1	alcohol/marijuana	15	45.5
		Total	33	
Blackford				
	1	marijuana/opiates-synthetics	13	52.0
	2	opiates-synthetics/ benzodiazepines	7	28.0
	3	alcohol/marijuana	5	20.0
		Total	25	
Boone				
	2	alcohol/marijuana	47	58.8
	1	heroin/opiates-synthetics	33	41.3
		Total	80	
Brown				
	1	alcohol/marijuana	35	63.6
	3	marijuana/ opiates-synthetics/ methamphetamine	11	20.0
	2	alcohol/ methamphetamine	9	16.4
		Total	55	

County	Cluster #	Cluster Composition	N	%
Carroll				
	4	alcohol/marijuana	19	25.3
	2	alcohol/marijuana/other drug	14	18.7
	1	alcohol/other drug	11	14.7
	5	opiates-synthetics/ benzodiazepines	10	13.3
	7	marijuana/opiates-synthetics	9	12.0
	3	cocaine/marijuana/ methamphetamine	7	9.3
	6	alcohol/cocaine/opiates-synthetics	5	6.7
		Total	75	
Cass				
	1	alcohol/marijuana/other drug	58	28.0
	5	alcohol/marijuana	38	18.4
	4	alcohol/other drug	35	16.9
	2	alcohol/marijuana/ opiates-synthetics	30	14.5
	6	marijuana/other drug	26	12.6
	3	alcohol/marijuana/ methamphetamine	20	9.7
		Total	207	
Clark				
	2	alcohol/marijuana	45	41.3
	3	marijuana/opiates-synthetics	36	33.0
	1	alcohol/cocaine/marijuana	28	25.7
		Total	109	
Clay				
	2	alcohol/other drug	63	43.2
	3	marijuana/ methamphetamine/other drug	47	32.2
	1	alcohol/marijuana/ methamphetamine	36	24.7
		Total	146	
Clinton				
	2	alcohol/marijuana/other drug	32	45.7
	1	alcohol/marijuana/ opiates-synthetics	14	20.0
	3	alcohol/marijuana	14	20.0
	4	heroin/benzodiazepines	10	14.3
		Total	70	
Crawford				
	1	alcohol/marijuana	23	53.5
	2	opiates-synthetics/ methamphetamine	20	46.5
		Total	43	
Daviess				
	1	alcohol/opiates-synthetics	30	28.6
	3	alcohol/marijuana	23	21.9
	4	marijuana/ methamphetamine	20	19.0
	2	alcohol/marijuana/ methamphetamine	18	17.1
	5	alcohol/other drug	14	13.3
		Total	105	
DeKalb				
	1	alcohol/marijuana	35	30.7
	2	alcohol/marijuana/ methamphetamine	21	18.4

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APPENDIX 10B *(continued from previous page)*

County	Cluster #	Cluster Composition	N	%
DeKalb (cont.)	5	marijuana/ methamphetamine	16	14.0
	4	alcohol/marijuana/other drug	15	13.2
	3	alcohol/cocaine/marijuana	14	12.3
	6	marijuana/opiates-synthetics	13	11.4
		Total	114	
Dearborn				
	1	alcohol/marijuana/other drug	69	24.4
	4	alcohol/marijuana	60	21.2
	2	alcohol/marijuana/ opiates-synthetics	57	20.1
	3	heroin/opiates-synthetics	57	20.1
	5	marijuana/heroin	51	18.0
	7	marijuana/opiates-synthetics	43	15.2
	6	alcohol/cocaine	27	9.5
		Total	283	
Decatur				
	1	alcohol/marijuana	44	44.9
	2	alcohol/ methamphetamine	22	22.4
	4	marijuana/opiates-synthetics	18	18.4
	3	alcohol/marijuana/ methamphetamine	14	14.3
		Total	98	
Delaware				
	5	alcohol/marijuana	114	24.5
	2	alcohol/cocaine	66	14.2
	3	alcohol/marijuana/ opiates-synthetics	63	13.5
	4	opiates-synthetics/ benzodiazepines	63	13.5
	1	marijuana/opiates-synthetics	52	11.2
	6	heroin/opiates-synthetics	48	10.3
	7	opiates-synthetics/ methamphetamine	31	6.7
	8	marijuana/ methamphetamine	28	6.0
		Total	465	
Dubois				
	2	alcohol/marijuana	51	27.6
	6	opiates-synthetics/ benzodiazepines	33	17.8
	4	alcohol/marijuana/other drug	31	16.8
	3	alcohol/marijuana/ opiates-synthetics	25	13.5
	1	alcohol/marijuana/ methamphetamine	23	12.4
	5	marijuana/ methamphetamine	22	11.9
		Total	185	
Elkhart				
	1	alcohol/marijuana	160	41.9
	2	alcohol/marijuana/ methamphetamine	54	14.1
	3	alcohol/cocaine/marijuana	44	11.5
	6	alcohol/marijuana/ opiates-synthetics	42	11.0
	4	alcohol/other drug	30	7.9
	5	alcohol/cocaine	27	7.1

County	Cluster #	Cluster Composition	N	%
Elkhart (cont.)	7	marijuana/other drug	25	6.5
		Total	382	
Fayette				
	2	heroin/opiates-synthetics	39	30.5
	4	alcohol/marijuana	38	29.7
	3	alcohol/other drug	26	20.3
	1	alcohol/opiates-synthetics	25	19.5
		Total	128	
Floyd				
	1	alcohol/cocaine/marijuana	30	75.0
	2	opiates-synthetics/ benzodiazepines	10	25.0
		Total	40	
Fountain				
	2	alcohol/marijuana	19	39.6
	1	marijuana/opiates-synthetics	18	37.5
	3	cocaine/marijuana/ methamphetamine	11	22.9
		Total	48	
Franklin				
	1	alcohol/marijuana	31	28.7
	2	alcohol/marijuana/ opiates-synthetics	28	25.9
	3	alcohol/marijuana/other drug	25	23.1
	4	heroin/opiates-synthetics	24	22.2
		Total	108	
Fulton				
	2	alcohol/marijuana/other drug	76	39.6
	3	alcohol/marijuana	72	37.5
	1	marijuana/ opiates-synthetics/ methamphetamine	44	22.9
		Total	192	
Gibson				
	3	alcohol/marijuana	32	21.9
	5	alcohol/marijuana/other drug	32	21.9
	2	alcohol/marijuana/ methamphetamine	30	20.5
	1	alcohol/other drug	23	15.8
	4	alcohol/marijuana/ opiates-synthetics/ methamphetamine	16	11.0
	6	opiates-synthetics/ benzodiazepines	13	8.9
		Total	146	
Grant				
	1	alcohol/marijuana/other drug	99	24.6
	2	alcohol/marijuana/ opiates-synthetics	67	16.6
	4	alcohol/marijuana	61	15.1
	3	opiates-synthetics/ benzodiazepines	51	12.7
	6	alcohol/other drug	47	11.7
	5	alcohol/cocaine/marijuana	41	10.2
	7	marijuana/other drug	37	9.2
		Total	403	
Greene				
	4	alcohol/marijuana	36	31.0
	5	opiates-synthetics/ methamphetamine	23	19.8

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APPENDIX 10B *(continued from previous page)*

County	Cluster #	Cluster Composition	N	%
Greene (cont.)	1	alcohol/marijuana/ methamphetamine	20	17.2
	2	alcohol/other drug	20	17.2
	3	marijuana/ benzodiazepines	17	14.7
		Total	116	
Hamilton				
	1	alcohol/marijuana	218	43.1
	4	alcohol/opiates-synthetics	68	13.4
	2	alcohol/marijuana/ opiates-synthetics	53	10.5
	5	cocaine/marijuana	52	10.3
	6	marijuana/heroin	48	9.5
	3	alcohol/marijuana/ benzodiazepines	43	8.5
	7	alcohol/marijuana/other drug	24	4.7
		Total	506	
Hancock				
	2	alcohol/marijuana	56	48.3
	1	alcohol/marijuana/ opiates-synthetics	22	19.0
	3	alcohol/opiates-synthetics/ benzodiazepines	20	17.2
	4	marijuana/heroin	18	15.5
		Total	116	
Harrison		Insufficient cases for analysis		
Hendricks				
	1	alcohol/marijuana	40	27.8
	3	alcohol/marijuana/other drug	34	23.6
	2	marijuana/opiates-synthetics	26	18.1
	4	heroin/other drug	24	16.7
	5	opiates-synthetics/other drug	20	13.9
		Total	144	
Henry				
	4	alcohol/marijuana	35	23.0
	1	marijuana/opiates-synthetics	34	22.4
	3	alcohol/other drug	24	15.8
	2	marijuana/opiates-synthetics	23	15.1
	5	opiates-synthetics/other drug	23	15.1
	6	alcohol/cocaine/opiates-synthetics	13	8.6
		Total	152	
Howard				
	4	alcohol/marijuana	114	21.9
	3	alcohol/other drug	80	15.4
	1	alcohol/marijuana/other drug	64	12.3
	5	marijuana/opiates-synthetics	64	12.3
	7	opiates-synthetics/ methamphetamine	57	11.0
	2	alcohol/opiates-synthetics	55	10.6
	6	opiates-synthetics/ benzodiazepines	48	9.2
	8	heroin/opiates-synthetics	38	7.3
		Total	520	

County	Cluster #	Cluster Composition	N	%
Jackson				
	1	marijuana/opiates-synthetics	66	39.5
	2	alcohol/marijuana/ methamphetamine	66	39.5
	3	marijuana/ methamphetamine	35	21.0
		Total	167	
Jasper				
	2	alcohol/marijuana	29	20.7
	3	heroin/opiates-synthetics	23	16.4
	1	alcohol/marijuana/other drug	18	12.9
		Total	140	
Jay		Insufficient cases for analysis		
Jefferson				
	4	marijuana/opiates-synthetics	51	29.5
	2	alcohol/marijuana	50	28.9
	1	marijuana/ methamphetamine	44	25.4
	3	heroin/opiates-synthetics	28	16.2
		Total	173	
Jennings				
	1	marijuana/opiates-synthetics	43	31.4
	4	alcohol/marijuana	39	28.5
	2	marijuana/ methamphetamine	30	21.9
	3	alcohol/cocaine/ methamphetamine	25	18.2
		Total	137	
Johnson				
	1	alcohol/marijuana	60	37.7
	3	marijuana/opiates-synthetics	37	23.3
	2	opiates-synthetics/other drug	23	14.5
	5	alcohol/cocaine/marijuana	22	13.8
	4	opiates-synthetics/ benzodiazepines	17	10.7
		Total	159	
Knox				
	2	alcohol/marijuana	81	34.9
	1	alcohol/marijuana/ methamphetamine	74	31.9
	3	marijuana/ methamphetamine	48	20.7
	4	opiates-synthetics/ benzodiazepines	29	12.5
		Total	232	
Kosciusko				
	4	alcohol/other drug	61	23.1
	2	alcohol/marijuana/other drug	46	17.4
	3	cocaine/heroin	39	14.8
	1	alcohol/marijuana	35	13.3
	5	alcohol/marijuana/ methamphetamine/other drug	33	12.5
	8	marijuana/other drug	20	7.6
	6	cocaine/amphetamine/ other drug	16	6.1

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APPENDIX 10B *(continued from previous page)*

County	Cluster #	Cluster Composition	N	%
Kosciusko (cont.)	7	heroin/amphetamine/ stimulants	14	5.3
		Total	264	
LaGrange				
	1	alcohol/marijuana	29	37.7
	2	alcohol/marijuana/ methamphetamine	18	23.4
	3	alcohol/marijuana/other drug	16	20.8
	4	marijuana/ methamphetamine	14	18.2
		Total	77	
Lake				
	2	alcohol/marijuana	412	33.2
	6	alcohol/cocaine	211	17.0
	5	alcohol/other drug	202	16.3
	1	alcohol/heroin/opiates-synthetics	126	10.2
	3	cocaine/marijuana/heroin	125	10.1
	4	alcohol/cocaine/heroin	98	7.9
	7	marijuana/ benzodiazepines	66	5.3
		Total	1,240	
LaPorte				
	4	alcohol/marijuana	77	25.8
	7	cocaine/heroin	43	14.4
	1	alcohol/marijuana/ opiates-synthetics	39	13.1
	6	alcohol/other drug	31	10.4
	3	alcohol/cocaine/marijuana	31	10.4
	2	heroin/opiates-synthetics	31	10.4
	5	marijuana/heroin	28	9.4
	8	alcohol/marijuana/heroin	18	6.0
		Total	298	
Lawrence				
	2	alcohol/marijuana	94	55.6
	1	marijuana/opiates-synthetics	75	44.4
		Total	169	
Madison				
	2	alcohol/marijuana	131	25.9
	4	alcohol/opiates-synthetics	78	15.4
	7	marijuana/opiates-synthetics	62	12.3
	1	alcohol/cocaine/marijuana	58	11.5
	5	alcohol/marijuana/ opiates-synthetics	48	9.5
	3	alcohol/marijuana/ benzodiazepines	45	8.9
	6	marijuana/ opiates-synthetics/ benzodiazepines	43	8.5
	8	alcohol/marijuana/other drug	41	8.1
		Total	506	
Marion				
	2	alcohol/marijuana	643	24.4
	3	alcohol/cocaine/marijuana	549	20.8
	5	marijuana/opiates-synthetics	454	17.2
	1	opiates-synthetics/other drug	450	17.1
	6	alcohol/other drug	269	10.2
	4	cocaine/heroin	269	10.2
		Total	2,634	

County	Cluster #	Cluster Composition	N	%
Marshall				
	1	alcohol/marijuana	60	28.2
	3	alcohol/other drug	58	36.9
	2	cocaine/heroin	39	24.8
		Total	157	
Martin				
	1	alcohol/marijuana/ methamphetamine	16	53.3
	2	marijuana/opiates-synthetics/	14	46.7
		Total	30	
Miami				
	2	alcohol/marijuana	95	43.4
	1	alcohol/other drug	64	29.2
	3	marijuana/opiates-synthetics/other drug	60	27.4
		Total	219	
Monroe				
	1	alcohol/marijuana	290	36.7
	8	heroin/opiates-synthetics	88	11.1
	4	marijuana/ methamphetamine	82	10.4
	2	alcohol/marijuana/ opiates-synthetics	73	9.2
	10	alcohol/cocaine	52	6.6
	7	opiates-synthetics/ benzodiazepines	49	6.2
	3	alcohol/cocaine/marijuana	42	5.3
	5	marijuana/opiates-synthetics	40	5.1
	9	alcohol/marijuana/other drug	39	4.9
	6	alcohol/marijuana/ benzodiazepines	35	4.4
		Total	790	
Montgomery				
	1	alcohol/marijuana/other drug	73	32.3
	2	alcohol/marijuana	69	30.5
	3	marijuana/ opiates-synthetics/ methamphetamine	57	25.2
	4	opiates-synthetics/other drug	27	11.9
		Total	226	
Morgan				
	2	alcohol/marijuana	56	23.1
	1	alcohol/marijuana/ methamphetamine	43	17.8
	5	marijuana/opiates-synthetics	34	14.1
	7	heroin/opiates-synthetics	33	13.6
	3	alcohol/opiates-synthetics	29	11.9
	6	heroin/methamphetamine	24	9.9
	4	marijuana/ opiates-synthetics/ methamphetamine	23	9.5
		Total	242	
Newton				
	1	alcohol/marijuana/other drug	9	50.0
	3	alcohol/marijuana	5	27.8
	2	cocaine/marijuana/heroin	4	22.2
		Total	18	

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APPENDIX 10B *(continued from previous page)*

County	Cluster #	Cluster Composition	N	%
Noble				
	4	marijuana/ methamphetamine	62	25.9
	2	alcohol/marijuana	55	23.0
	3	cocaine/heroin	48	20.1
	1	alcohol/marijuana/ methamphetamine	40	16.7
	5	alcohol/marijuana/other drug	34	14.2
		Total	239	
Ohio				
	2	alcohol/marijuana	19	63.3
	1	marijuana/heroin/opiates-synthetics	11	36.7
		Total	30	
Orange				
	2	alcohol/marijuana	40	51.3
	1	marijuana/opiates-synthetics	38	48.7
		Total	78	
Owen				
	1*	alcohol/marijuana/other drug	51	55.4
	2*	marijuana/ opiates-synthetics/ methamphetamine	41	44.6
		Total	92	
Parke				
	2	alcohol/marijuana	37	53.6
	1	alcohol/marijuana/other drug	32	46.4
		Total	69	
Perry				
	3	alcohol/marijuana	31	34.8
	1	alcohol/marijuana/ methamphetamine	30	33.7
	2	alcohol/opiates-synthetics/ benzodiazepines	28	31.5
		Total	89	
Pike		Insufficient cases for analysis		
Porter				
	3	alcohol/marijuana/other drug	110	23.8
	1	alcohol/cocaine	84	18.2
	6	marijuana/other drug	72	15.6
	4	alcohol/opiates-synthetics	68	14.7
	2	alcohol/marijuana	67	14.5
	5	heroin/opiates-synthetics	61	13.2
		Total	462	
Posey				
	3	alcohol/marijuana	32	37.6
	2	alcohol/marijuana/ methamphetamine	20	23.5
	1	alcohol/marijuana/other drug	18	21.2
	4	opiates-synthetics/ methamphetamine	15	17.6
		Total	85	
Pulaski				
	1	alcohol/other drug	45	47.4
	2	alcohol/marijuana	30	31.6
	3	opiates-synthetics/other drug	20	21.1

County	Cluster #	Cluster Composition	N	%
Pulaski (cont.)		Total	95	
Putnam				
	1	marijuana/other drug	37	27.0
	2	alcohol/other drug	36	26.3
	4	methamphetamine/other drug	33	24.1
	3	alcohol/marijuana	31	22.6
		Total	137	
Randolph				
	1	alcohol/marijuana	36	29.5
	4	marijuana/opiates-synthetics	27	22.1
	3	marijuana/heroin/opiates-synthetics	18	14.8
	2	alcohol/heroin	17	13.9
	5	alcohol/marijuana	13	10.7
	6	alcohol/other drug	11	9.0
		Total	122	
Ripley				
	1	alcohol/marijuana	70	59.3
	2	alcohol/opiates-synthetics	48	40.7
		Total	118	
Rush				
	1	alcohol/marijuana	56	53.3
	3	marijuana/opiates-synthetics	25	23.8
	2	alcohol/marijuana/other drug	24	22.9
		Total	105	
Saint Joseph				
	2	alcohol/marijuana	240	24.5
	1	alcohol/cocaine/marijuana	181	18.5
	3	alcohol/cocaine	172	17.6
	5*	marijuana/heroin	136	13.9
	4*	alcohol/other drug	131	13.4
	6*	alcohol/marijuana/ opiates-synthetics	119	12.2
		Total	979	
Scott		Insufficient cases for analysis		
Shelby				
	2	alcohol/marijuana	46	52.9
	1	alcohol/opiates-synthetics	41	47.1
		Total	87	
Spencer				
	1	alcohol/marijuana	57	42.5
	2	alcohol/marijuana/ methamphetamine	44	32.8
	3	marijuana/ methamphetamine	33	24.6
		Total	134	
Starke				
	3*	alcohol/marijuana	63	37.3
	2	opiates-synthetics/ methamphetamine	60	35.5
	1	alcohol/other drug	46	27.2
		Total	169	
Steuben				
	2	alcohol/other drug	55	38.5
	3	alcohol/marijuana	47	32.9
	1	alcohol/marijuana/ methamphetamine	41	28.8
		Total	143	
Sullivan				
	1	alcohol/marijuana/ opiates-synthetics	30	58.8

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APPENDIX 10B *(continued from previous page)*

County	Cluster #	Cluster Composition	N	%
Sullivan (cont.)	2	marijuana/ methamphetamine	21	41.2
		Total	51	
Switzerland				
	1	alcohol/marijuana/other drug	24	58.5
	2*	marijuana/heroin/opiates-synthetics	17	41.5
		Total	41	
Tippecanoe				
	2	alcohol/marijuana	89	30.4
	3	alcohol/marijuana/other drug	48	16.4
	6	marijuana/heroin	37	12.6
	7	alcohol/other drug	35	11.9
	5	alcohol/marijuana/ methamphetamine	29	9.9
	1	alcohol/marijuana/ opiates-synthetics	28	9.6
	4	marijuana/ opiates-synthetics/ benzodiazepines	27	9.2
		Total	293	
Tipton				
	2	marijuana/opiates-synthetics	26	53.1
	1	alcohol/marijuana	23	46.9
		Total	49	
Union		Insufficient cases for analysis		
Vanderburgh				
	4	alcohol/marijuana	218	25.4
	3	alcohol/marijuana/other drug	186	21.7
	1	marijuana/opiates-synthetics	184	21.5
	2	alcohol/marijuana/ methamphetamine	156	18.2
	5	alcohol/ methamphetamine	113	13.2
		Total	857	
Vermillion				
	1	alcohol/other drug	35	42.2
	2	alcohol/marijuana	32	38.6
	3	marijuana/other drug	16	19.3
		Total	83	
Vigo				
	1	alcohol/marijuana	142	24.2
	2	alcohol/other drug	122	20.8
	6	alcohol/marijuana/ opiates-synthetics	74	12.6
	4	marijuana/ methamphetamine/other drug	71	12.1
	7	alcohol/ methamphetamine/other drug	68	11.6

County	Cluster #	Cluster Composition	N	%
Vigo (cont.)	5	marijuana/ methamphetamine	62	10.6
	3	alcohol/marijuana/ benzodiazepines	48	8.2
		Total	587	
Wabash				
	1	alcohol/marijuana/other drug	60	33.9
	2	marijuana/other drug	34	19.2
	3	alcohol/marijuana	29	16.4
	4	cocaine/heroin/ amphetamine	27	15.3
	5	opiates-synthetics/other drug	27	15.3
		Total	177	
Warren		Insufficient cases for analysis		
Warrick				
	1	alcohol/marijuana/ methamphetamine	90	39.3
	3	marijuana/opiates-synthetics	72	31.4
	2	alcohol/marijuana/other drug	67	29.3
		Total	229	
Washington		Insufficient cases for analysis		
Wayne				
	1	heroin/opiates-synthetics	125	40.1
	2	alcohol/other drug	99	31.7
	3	alcohol/marijuana	88	28.2
		Total	312	
Wells				
	1	alcohol/marijuana	40	48.8
	2	alcohol/marijuana/ opiates-synthetics	25	30.5
	3	alcohol/marijuana/other drug	17	20.7
		Total	82	
White				
	1	alcohol/marijuana/other drug	33	29.2
	2	alcohol/marijuana	31	27.4
	5	alcohol/marijuana/ opiates-synthetics	20	17.7
	3	alcohol/other drug	18	15.9
	4	marijuana/ methamphetamine	11	9.7
		Total	113	
Whitley				
	1	alcohol/marijuana/ opiates-synthetics	45	39.1
	2	alcohol/marijuana/other drug	40	34.8
	3	cocaine/heroin	30	26.1
		Total	115	

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 the drug and at least one other drug where at least 40% of individuals reported using the drug.
Source: Indiana Family and Social Services Administration, 2014

REFERENCES, CHAPTER 10

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11 Mental Health in Indiana

According to the U.S. Centers for Disease Control and Prevention (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 and substance abuse, and higher rates of suicide. It has also been demonstrated to be a significant barrier to 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, 2002). 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, 2004).

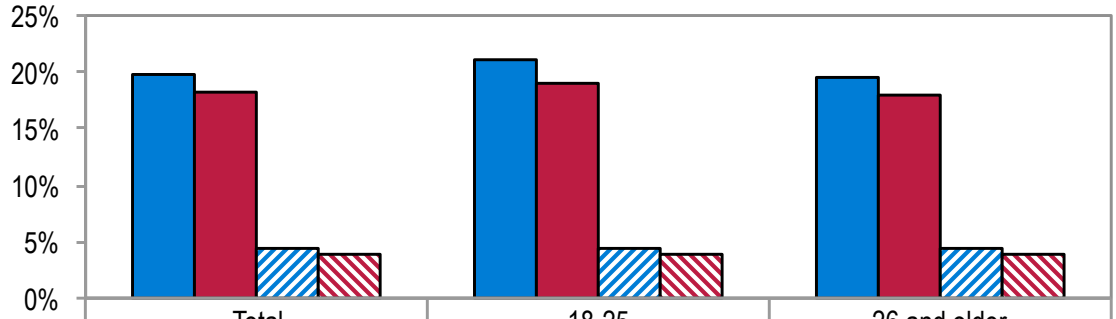
For this chapter, we compiled available state-level data on indicators related to mental health. Definitions of specific terms can be found in Appendix 11A, pages 200-201.

PREVALENCE OF PSYCHOLOGICAL DISTRESS IN INDIANA

General Prevalence

In 2012, a total of 19.9% Indiana adults reported having any mental illness (AMI) in the past year (95% CI [Confidence Interval]: 17.6-22.4), which was statistically similar to the U.S. percentage of 18.2% (95% CI: 17.8-18.6). The percentage of adults in Indiana with serious mental illness (SMI) in the past year was also similar to the nation's (IN: 4.5%, 95% CI: 3.6-5.7; U.S.:4.0%, 95% CI: 3.8-4.2). There were no differences in AMI or SMI by age group (see Figure 11.1) (Substance Abuse and Mental Health Services Administration, 2013b).

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, 2012)



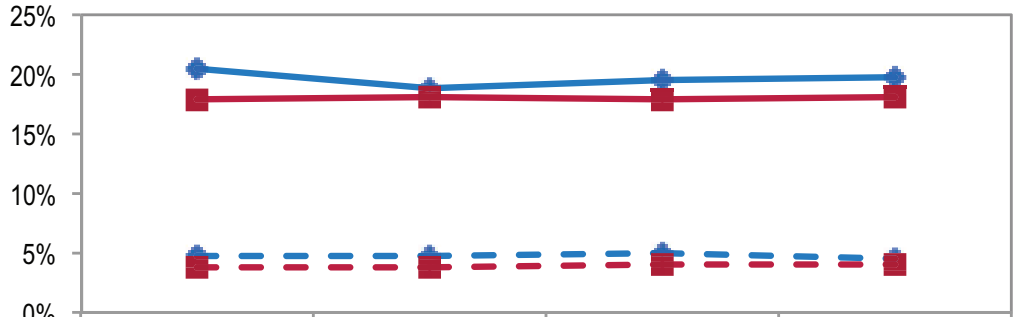
	Total	18-25	26 and older
Indiana AMI	19.9%	21.1%	19.7%
U.S. AMI	18.2%	19.1%	18.0%
Indiana SMI	4.5%	4.4%	4.5%
U.S. SMI	4.0%	4.0%	4.0%

Source: Substance Abuse and Mental Health Services Administration, 2013b

For adults ages 18 and older, past-year prevalence of AMI or SMI did not differ significantly from 2009 to 2012 in Indiana or the nation. Also, Indiana and U.S. rates were comparable (see Figure 11.2) (Substance Abuse and Mental Health Services Administration, 2013b).

In 2012, 6.8% of Indiana adults (95% CI: 5.5-8.4) reported having had at least one major depressive episode (MDE) in the past year, which was similar to the United States (6.7%, 95% CI: 6.5-7.0). Indiana rates did not differ by age group (see Figure 11.3) (Substance Abuse and Mental Health Services Administration, 2013b).

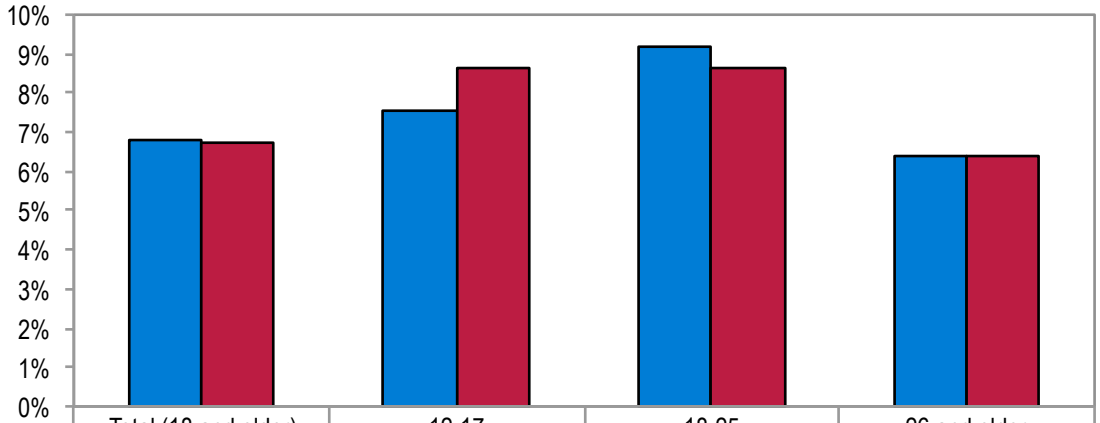
Figure 11.2 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting Any Mental Illness (AMI) or Serious Mental Illness (SMI) in the Past Year (National Survey on Drug Use and Health, 2009-2012)



	2009	2010	2011	2012
Indiana AMI	20.4%	18.8%	19.5%	19.9%
U.S. AMI	17.9%	18.1%	17.9%	18.2%
Indiana SMI	4.7%	4.8%	4.9%	4.5%
U.S. SMI	3.7%	3.9%	4.0%	4.0%

Source: Substance Abuse and Mental Health Services Administration, 2013b

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, 2012)



	Total (18 and older)	12-17	18-25	26 and older
Indiana	6.8%	7.6%	9.2%	6.4%
U.S.	6.7%	8.7%	8.6%	6.4%

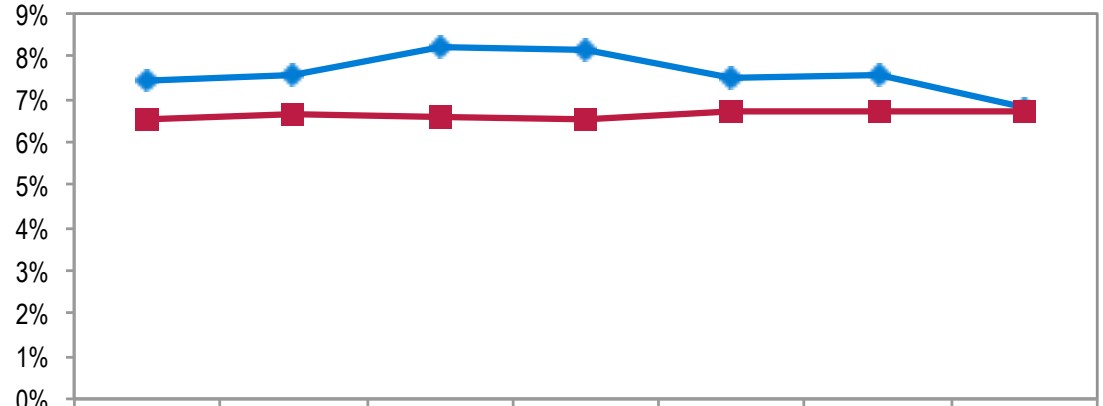
Note: There are minor wording differences in the questions in the adult and adolescent MDE modules. Therefore, data from youths aged 12 to 17 were not combined with data from persons aged 18 or older to produce the total MDE estimate.

Source: Substance Abuse and Mental Health Services Administration, 2013b

In Indiana and the United States the percentage of adults with a major depressive episode did not change from 2006 to 2010, and there are no differences between Indiana and the United States for any of these years (see Figure 11.4) (Substance Abuse and Mental Health Services Administration, 2013b).

According to the 2012 Behavioral Risk Factor Surveillance System (BRFSS), 19.5% of adults in Indiana reported ever being told that they had depression, which was significantly higher than the United States. Within Indiana, history of depression was significantly greater among whites, females, and those ages 45 to 64 (see Table 11.1) (Centers for Disease Control and Prevention, 2012).

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, 2006-2012)



	2006	2007	2008	2009	2010	2011	2012
Indiana	7.4%	7.6%	8.2%	8.1%	7.5%	7.6%	6.8%
U.S.	6.5%	6.6%	6.6%	6.5%	6.7%	6.7%	6.7%

Source: Substance Abuse and Mental Health Services Administration, 2013b

Table 11.1 Percentage of Indiana and U.S. Population (18 Years and Older) Reporting a History of Depression (Behavioral Risk Factor Surveillance System, 2012)

		Indiana (95% CI)	U.S.
Gender	Male	14.0% (12.5-15.4)	13.8%
	Female	24.8% (23.2-26.4)	21.9%
Race/Ethnicity	White	20.3% (19.1-21.5)	19.0%
	Black	14.8% (11.3-18.4)	14.8%
	Hispanic	11.9% (7.6-16.2)	15.9%
Age Group	18-24	19.2% (15.0-23.4)	15.7%
	25-34	18.6% (15.7-21.4)	18.1%
	35-44	17.8% (15.3-20.4)	18.2%
	45-54	23.8% (21.2-26.3)	21.4%
	55-64	22.4% (20.1-24.7)	20.7%
	65+	15.4% (13.7-17.1)	13.9%
Total		**19.5% (18.4-20.6)**	**18.0%**

Source: Centers for Disease Control and Prevention, 2012

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 (Centers for Disease Control and Prevention, 1999-2011).

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: Centers for Disease Control and Prevention, 1999-2011

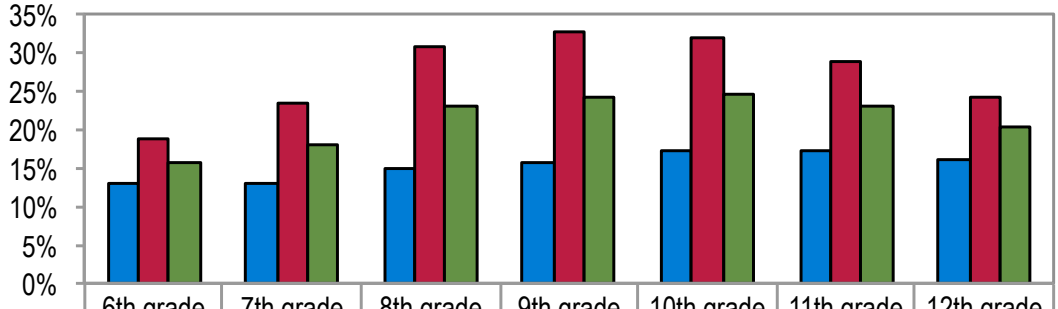
Results from the Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) survey (Gassman, Jun, Samuel, Agley, Lee, Crane, Boyken, Oi, et al., 2013) similarly suggest higher rates of sadness and hopelessness for female students in grades 6 through 12 (see Figure 11.5). However, 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 (Centers for Disease Control and Prevention, 2014). 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) (Centers for Disease Control and Prevention, 1999-2011).

Figure 11.5 Percentage of Indiana Students (Grades 6 through 12) Reporting Feeling Sad or Hopeless (Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey, 2013)



	6th grade	7th grade	8th grade	9th grade	10th grade	11th grade	12th grade
Males	12.9%	13.0%	15.1%	15.6%	17.1%	17.2%	16.2%
Females	18.7%	23.3%	30.9%	32.5%	31.8%	28.7%	24.2%
Total	15.8%	18.1%	23.2%	24.3%	24.6%	23.0%	20.2%

Source: Gassman, et al., 2013

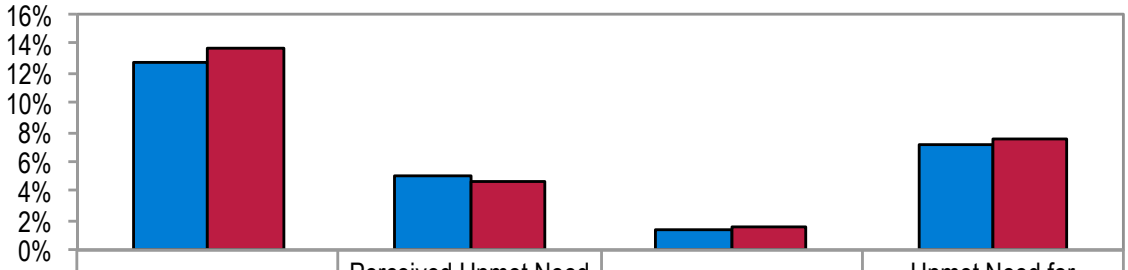
CONSEQUENCES

Treatment

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) (Substance Abuse and Mental Health Services Administration, 2013a).

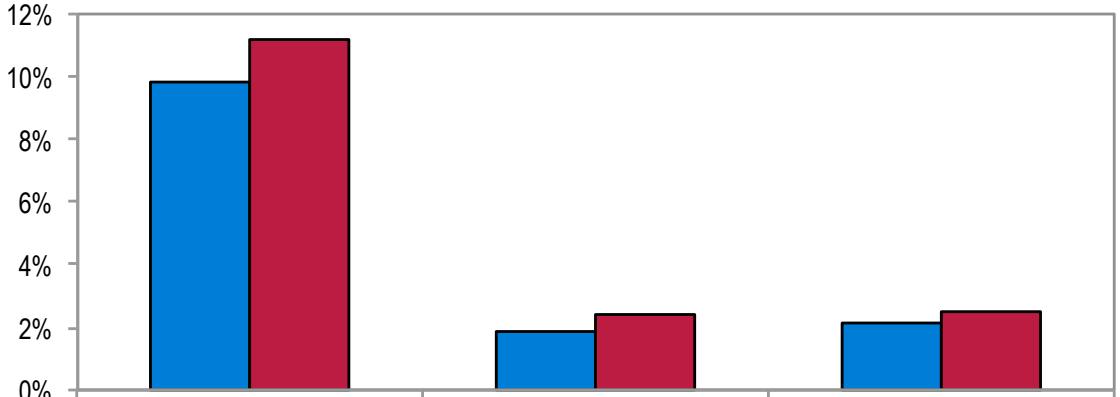
Figure 11.6 Percentage of Indiana and U.S. Adults Receiving Mental Health or Substance Abuse Treatment or Perceiving an Unmet Need for Such Treatment in the Past Year, 2011



	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: Substance Abuse and Mental Health Services Administration, 2013a

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: Substance Abuse and Mental Health Services Administration, 2013a

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 (59.5%) than Substance Use Disorder (SUD) (32.5%), which, in turn, was significantly higher than the percentage of those with Co-Occurring Disorder (COD) (15.3%). 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 (50.2%) but a higher percentage of SUD (37.9%) compared to females (SMI: 69.1%, SUD: 27.0%); COD did not differ significantly by gender. 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 39.2% for those under 18 to 89.0% for those 65 and older. SUD was lowest for those under 18 (6.8%) and highest for those 18-24 (52.0%) and 25-34 (54.3%) years of age, but then decreased significantly with age. COD was lowest for those under 18 (2.3%) and gradually increased with each age group, peaking at age 45-54 at 25.1%, and subsequently declining with increasing age group (see Table 11.3) (Indiana Division of Mental Health and Addiction, 2014).

Suicide Ideation and Attempted Suicides

Suicide is a public health issue that is often associated with mental illness and substance abuse (Centers for Disease Control and Prevention, 2013b). 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 11.4) (Centers for Disease Control and Prevention, 1999-2011).

Table 11.3 Demographic Characteristics of Clients by Serious Mental Illness (SMI), Substance Use Disorder (SUD), and Co-occurring Disorder (COD) Diagnosis (DARMHA, 2013)

		SMI	SUD	COD
Gender	Male	50.2% (49.8-50.5)	37.9% (37.5-38.2)	15.5% (15.2-15.7)
	Female	69.1% (68.7-69.4)	27.0% (26.7-27.3)	15.2% (14.9-15.4)
Race/Ethnicity	White	60.2% (59.9-60.5)	33.1% (32.8-33.3)	15.6% (15.4-15.8)
	Black	56.8% (56.1-57.4)	31.9% (31.3-32.5)	14.7% (14.2-15.1)
	Other	56.2% (55.1-57.4)	24.7% (23.7-25.7)	12.1% (11.3-12.9)
	Hispanic	51.0% (50.0-52.1)	26.4% (25.5-27.3)	9.8% (9.2-10.5)
Age Group	Under 18	39.2% (38.7-39.6)	6.8% (6.6-7.0)	2.3% (2.2-2.4)
	18-24	55.4% (54.6-56.1)	52.0% (51.3-52.8)	17.5% (16.9-18.1)
	25-34	61.3% (60.8-61.9)	54.3% (53.7-54.9)	23.1% (22.6-23.6)
	35-44	71.8% (71.3-72.4)	45.7% (45.1-46.4)	24.2% (23.6-24.8)
	45-54	79.3% (78.7-79.8)	41.0% (40.3-41.7)	25.1% (24.6-25.7)
	55-64	85.2% (84.5-85.9)	27.8% (26.9-28.6)	18.1% (17.4-18.9)
	65+	89.0% (87.8-90.0)	12.0% (10.8-13.1)	7.4% (6.6-8.4)
Total		**59.5% (59.3-59.8)**	**32.5% (32.3-32.7)**	**15.3% (15.1-15.5)**

Source: Indiana Division of Mental Health and Addiction, 2014

Table 11.4 Percentage of Indiana and U.S. High School Students (Grades 9 through 12) Reporting Attempting Suicide in the Past Year (Youth Risk Behavior Surveillance System, 2011)

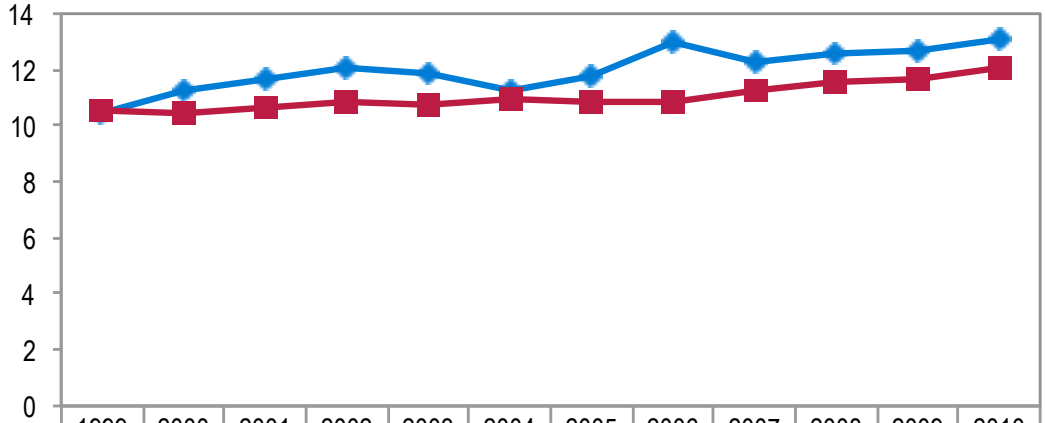
		Indiana (95% CI)	U.S. (95% CI)
Gender	Male	10.5% (7.6-14.3)	5.8% (5.0-6.7)
	Female	11.4% (8.5-15.1)	9.8% (8.9-10.7)
Race/Ethnicity	White	9.8% (7.5-12.7)	6.2% (5.6-6.9)
	Black	17.6% (11.5-25.9)	8.3% (6.8-10.0)
	Hispanic	11.6% (7.5-17.5)	10.2% (8.8-11.8)
Grade	9	13.0% (9.3-17.7)	9.3% (8.0-10.8)
	10	12.1% (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: Centers for Disease Control and Prevention, 1999-2011

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 2010 (see Figure 11.8) (Centers for Disease Control and Prevention, 2013a).

Figure 11.8 Age-adjusted Suicide Mortality Rate per 100,000 Population in Indiana and the United States (CDC WONDER, 1999-2010)



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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
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

Source: Centers for Disease Control and Prevention, 2013a

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)" (Substance Abuse and Mental Health Services Administration, 2013b). [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" (Substance Abuse and Mental Health Services Administration, 2013b). [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" (Substance Abuse and Mental Health Services Administration, 2013b). [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?" (Centers for Disease Control and Prevention, 2012). [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)" (Centers for Disease Control and Prevention, 1999-2011). [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., 2013). [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" (Substance Abuse and Mental Health Services Administration, 2013a).

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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [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" (Substance Abuse and Mental Health Services Administration, 2013a). [See Figure 11.7.]

Suicide Attempts: "Attempted suicide one or more times during the 12 months before the survey" (Centers for Disease Control and Prevention, 1999-2011). [See Table 11.4.]

Suicide Deaths: Suicide (intentional self-harm) deaths include ICD-10 codes X60-X84 (Centers for Disease Control and Prevention, 2013a). [See Figure 11.8.]

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12 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 community. 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

- 2013 Treatment Episode Data Set (TEDS) (Indiana Family and Social Services Administration, 2014),[2]
- 2011 Uniform Crime Reporting (UCR) Program (National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011),[3]
- 2012 Indiana Automated Reporting Information Exchange System (ARIES) (Indiana State Police, 2013),
- 2013 Methamphetamine Lab Statistics (Indiana State Police, 2014), and
- 2012 INSPECT data (Indiana Board of Pharmacy, 2013).

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

[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 at or below 200% of 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).

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 207-209.

Table 12.1 Counties with Alcohol Priority Scores in the Top 10 Percent

Top 10 Percent	Alcohol Priority Score
Lake	260
Monroe	240
LaPorte	230
Porter	210
Vanderburgh	210
Clark	190
Allen	190
Tippecanoe	190
Vigo	180
Marion	180
Cass	180
Bartholomew	180

Note: Alcohol priority scores ranged from 0 to 260, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana State Police, 2013

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 210-211.

Table 12.2 Counties with Marijuana Priority Scores in the Top 10 Percent

Top 10 Percent	Marijuana Priority Score
Vanderburgh	267
Marion	250
Lake	233
Monroe	217
Knox	200
Tippecanoe	200
Rush	183
Cass	183
Madison	183
Saint Joseph	183

Note: Marijuana priority scores ranged from 0 to 267, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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 212-213.

Table 12.3 Counties with Cocaine and Heroin Priority Scores in the Top 10 Percent

Top 10 Percent	Cocaine-Heroin Priority Score
Marion	288
Wayne	263
LaPorte	263
Lake	263
Howard	250
Allen	225
Monroe	213
Saint Joseph	213
Randolph	188

Note: Cocaine-heroin priority scores ranged from 0 to 288, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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 214-215.

Table 12.4 Counties with Methamphetamine Priority Scores in the Top 10 Percent

Top 10 Percent	Meth Priority Score
Vanderburgh	250
Knox	238
Bartholomew	213
Decatur	188
Noble	188
Gibson	188
Vigo	188
Starke	175
Jay	175
Jackson	175
Daviess	175
Warrick	175

Note: Methamphetamine priority scores ranged from 0 to 250, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana State Police, 2014

Prescription Drug (Rx) Indicators

Prescription drug abuse refers to the nonmedical use of any prescription-type pharmaceutical, which includes opioids (pain relievers), CNS depressants (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 controlled substances 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 216-217.

Table 12.5 Counties with Prescription Drug (Rx) Priority Scores in the Top 10 Percent

Top 10 Percent	Rx Priority Score
Vanderburgh	250
Howard	250
Madison	250
Knox	200
Porter	200
Monroe	200
Floyd	188
Lake	188
Morgan	175

Note: Prescription drug priority scores ranged from 0 to 250, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011

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 218.

Table 12.6 Counties with Total Priority Scores in the Top 10 Percent

Top 10 Percent	Total Priority Score
Vanderburgh	225
Marion	201
Monroe	199
Lake	199
Knox	182
Howard	163
Tippecanoe	163
Madison	163
Allen	159

Note: Overall substance abuse priority scores ranged from 11 to 225, with higher scores indicating a more severe problem.
Source: Indiana Family and Social Services Administration, 2014; National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana State Police, 2013, 2014; Indiana Board of Pharmacy, 2013

[4]Barbiturates (central nervous system depressants) and Benzedrine (amphetamine/stimulant) are types of prescription drugs that are frequently used nonmedically for recreational purposes.

APPENDIX 12A

Alcohol Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2011; Treatment Episode Data Set, 2013; and Automated Reporting Information Exchange System, 2012)

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	133	3.85	39	1.13	47	1.36	109	3.15	33	0.96	20	
Allen	1,491	4.17	868	2.43	217	0.61	1,368	3.83	580	1.61	190	Top 10
Bartholomew	346	4.50	207	2.70	236	3.07	343	4.47	85	1.07	180	Top 10
Benton	20	2.25	7	*0.79	10	*1.12	29	3.26	6	*0.68	0	
Blackford	70	5.52	34	2.68	16	*1.26	17	*1.34	9	*0.72	40	
Boone	161	2.83	91	1.60	125	2.20	109	1.91	60	1.02	50	
Brown	35	2.28	3	*0.20	12	*0.78	63	4.11	19	*1.26	20	
Carroll	109	5.38	13	*0.64	36	1.78	65	3.21	27	1.34	50	
Cass	170	4.34	170	4.34	124	3.17	207	5.29	45	1.17	180	Top 10
Clark	791	7.14	389	3.51	189	1.71	150	1.35	187	1.67	190	Top 10
Clay	87	3.22	90	3.33	58	2.15	134	4.96	33	1.23	70	
Clinton	140	4.19	48	1.44	64	1.92	71	2.13	59	1.79	90	Top 50
Crawford	52	4.83	24	2.23	13	*1.21	37	3.44	16	*1.50	50	
Daviess	115	3.62	74	2.33	53	1.67	110	3.46	30	0.94	40	
Dearborn	106	2.11	136	2.70	51	1.01	299	5.94	108	2.17	140	Top 25
Decatur	76	2.94	117	4.52	24	0.93	127	4.91	42	1.61	90	Top 50
DeKalb	144	3.39	98	2.31	73	1.72	135	3.18	65	1.54	90	Top 50
Delaware	514	4.35	220	1.86	113	0.96	495	4.19	178	1.52	140	Top 25
Dubois	123	2.92	58	1.38	97	2.30	220	5.23	54	1.28	90	Top 50
Elkhart	852	4.28	253	1.27	381	1.91	535	2.69	220	1.10	170	Top 25
Fayette	100	4.10	66	2.70	73	2.99	110	4.51	25	1.04	80	Top 50
Floyd	728	9.71	302	4.03	114	1.52	65	0.87	128	1.70	150	Top 25
Fountain	63	3.64	36	2.08	41	2.37	30	1.73	29	1.69	60	
Franklin	2	*0.09	0	*0.00	77	3.57	112	5.20	36	1.57	80	Top 50
Fulton	63	3.01	35	1.67	32	1.53	156	7.45	24	1.16	40	
Gibson	160	4.75	0	*0.00	137	4.07	139	4.13	48	1.43	120	Top 25
Grant	207	2.94	179	2.54	74	1.05	325	4.62	69	1.00	100	Top 50
Greene	143	4.29	74	2.22	55	1.65	114	3.42	41	1.24	60	
Hamilton	972	3.52	201	0.73	688	2.49	571	2.07	247	0.85	170	Top 25
Hancock	253	3.73	119	1.76	153	2.26	113	1.67	65	0.92	80	Top 50
Harrison	47	1.19	15	*0.38	19	*0.48	21	0.53	61	1.56	30	
Hendricks	528	3.61	195	1.33	258	1.76	161	1.10	143	0.95	110	Top 50
Henry	149	3.00	97	1.95	117	2.35	105	2.11	36	0.73	60	
Howard	210	2.52	207	2.49	109	1.31	342	4.11	74	0.89	90	Top 50
Huntington	135	3.62	21	0.56	64	1.72	40	1.07	43	1.16	40	
Jackson	140	3.29	130	3.05	107	2.51	136	3.19	77	1.79	130	Top 25
Jasper	108	3.21	30	0.89	46	1.37	51	1.52	69	2.06	40	
Jay	58	2.70	79	3.67	42	1.95	42	1.95	21	0.98	40	
Jefferson	120	3.68	71	2.18	80	2.45	168	5.15	49	1.51	120	Top 25
Jennings	46	1.60	54	1.88	60	2.09	114	3.98	35	1.24	30	

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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		
Johnson	497	3.53	126	0.89	414	2.94	137	0.97	136	0.95	120	Top 25
Knox	116	3.00	76	1.97	315	8.15	245	6.34	70	1.84	170	Top 25
Kosciusko	879	11.38	156	2.02	151	1.95	189	2.45	96	1.24	150	Top 25
LaGrange	107	2.87	29	0.78	115	3.08	70	1.88	36	0.96	30	
Lake	2,761	5.54	2,136	4.28	1,167	2.34	1,792	3.59	934	1.89	260	Top 10
LaPorte	652	5.82	466	4.16	364	3.25	325	2.90	208	1.87	230	Top 10
Lawrence	131	2.83	72	1.55	65	1.40	188	4.05	72	1.56	80	Top 50
Madison	418	3.16	370	2.80	198	1.50	436	3.30	157	1.20	130	Top 25
Marion	2,894	3.18	5,762	6.33	1,012	1.11	2,035	2.23	1,127	1.23	180	Top 10
Marshall	299	6.32	120	2.54	99	2.09	129	2.73	56	1.19	110	Top 50
Martin	28	2.70	20	1.93	15	*1.44	25	2.41	9	*0.88	10	
Miami	110	2.97	84	2.26	40	1.08	182	4.91	41	1.12	50	
Monroe	517	3.73	1,033	7.45	1,066	7.69	886	6.39	188	1.33	240	Top 10
Montgomery	154	4.02	125	3.26	72	1.88	156	4.07	47	1.23	100	Top 50
Morgan	212	3.06	103	1.49	212	3.06	203	2.93	82	1.18	100	Top 50
Newton	74	5.17	41	2.86	5	*0.35	13	*0.91	18	*1.28	50	
Noble	181	3.79	89	1.86	132	2.76	175	3.66	63	1.32	110	Top 50
Ohio	19	*3.08	5	*0.81	8	*1.30	26	4.22	12	*1.97	40	
Orange	56	2.81	22	1.10	27	1.35	56	2.81	26	1.32	10	
Owen	67	3.09	16	*0.74	30	1.38	132	6.09	24	1.12	40	
Parke	96	5.51	42	2.41	13	*0.75	74	4.25	38	2.23	80	Top 50
Perry	81	4.17	71	3.65	43	2.21	102	5.25	30	1.54	80	Top 50
Pike	42	3.25	21	1.63	25	1.94	35	2.71	11	*0.86	10	
Porter	828	5.01	346	2.09	539	3.26	332	2.01	270	1.63	210	Top 10
Posey	70	2.69	39	1.50	34	1.31	85	3.26	32	1.25	0	
Pulaski	32	2.38	10	*0.74	6	*0.45	82	6.09	13	*0.99	30	
Putnam	162	4.25	82	2.15	55	1.44	96	2.52	29	0.77	50	
Randolph	32	1.22	49	1.86	62	2.36	109	4.14	21	0.81	30	
Ripley	82	2.68	30	0.98	40	1.31	158	5.16	38	1.33	40	
Rush	24	1.37	2	*0.11	108	6.18	121	6.92	23	1.35	90	Top 50
Saint Joseph	692	2.58	126	0.47	339	1.26	939	3.50	323	1.21	120	Top 25
Scott	62	2.55	112	4.61	26	1.07	52	2.14	30	1.26	50	
Shelby	83	1.86	26	0.58	47	1.05	73	1.64	46	1.03	10	
Spencer	11	*0.52	0	*0.00	35	1.66	143	6.79	34	1.63	60	
Starke	52	2.21	46	1.96	24	1.02	106	4.51	32	1.38	40	
Steuben	142	4.13	46	1.34	104	3.03	135	3.93	71	2.08	110	Top 50
Sullivan	42	1.95	31	1.44	43	1.99	44	2.04	38	1.79	40	
Switzerland	30	2.81	12	*1.12	15	*1.41	36	3.37	14	*1.34	10	
Tippecanoe	638	3.67	730	4.20	404	2.33	249	1.43	273	1.54	190	Top 10
Tipton	30	1.87	34	2.12	10	*0.62	43	2.69	15	*0.96	10	
Union	21	2.78	8	*1.06	10	*1.32	27	3.57	3	*0.41	10	
Vanderburgh	905	5.01	629	3.48	210	1.16	791	4.38	261	1.44	210	Top 10

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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	71	4.36	59	3.62	31	1.90	79	4.85	17	*1.06	70	
Vigo	398	3.67	156	1.44	602	5.55	448	4.13	171	1.58	180	Top 10
Wabash	133	4.02	85	2.57	94	2.84	122	3.69	27	0.83	90	Top 50
Warren	24	2.81	9	*1.05	12	*1.40	7	*0.82	13	*1.56	20	
Warrick	115	1.92	69	1.15	89	1.48	204	3.40	68	1.12	40	
Washington	101	3.56	42	1.48	57	2.01	26	0.92	47	1.68	50	
Wayne	190	2.74	266	3.84	55	0.79	275	3.97	101	1.48	110	Top 50
Wells	50	1.80	21	0.76	34	1.22	82	2.95	16	*0.58	0	
White	117	4.72	40	1.61	35	1.41	99	4.00	31	1.27	50	
Whitley	115	3.44	35	1.05	49	1.46	82	2.45	44	1.32	30	
Indiana	**25,410**	**3.90**	**18,975**	**2.91**	**13,042**	**2.00**	**20,274**	**3.11**	**8,761**	**1.34**		

* 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 260. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014; Indiana State Police, 2013

APPENDIX 12B

Marijuana Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2011; Treatment Episode Data Set, 2013)

County	Marijuana Possession Arrests		Marijuana Sale Arrests		Marijuana Use Reported At Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate		
Adams	42	1.22	3	*0.09	78	2.26	0	
Allen	662	1.85	35	0.10	1,161	3.25	167	Top 25
Bartholomew	187	2.43	7	*0.09	319	4.15	133	Top 25
Benton	8	*0.90	1	*0.11	26	2.92	17	
Blackford	29	2.29	1	*0.08	18	*1.42	33	
Boone	77	1.35	9	*0.16	66	1.16	33	
Brown	9	*0.59	0	*0.00	45	2.94	17	
Carroll	25	1.23	0	*0.00	48	2.37	0	
Cass	98	2.50	29	0.74	161	4.11	183	Top 10
Clark	196	1.77	14	*0.13	82	0.74	83	Top 50
Clay	39	1.44	7	*0.26	89	3.29	33	
Clinton	56	1.68	2	*0.06	50	1.50	33	
Crawford	12	*1.11	0	*0.00	26	2.41	0	
Daviess	53	1.67	10	*0.31	72	2.26	83	Top 50
Dearborn	60	1.19	9	*0.18	230	4.57	133	Top 25
Decatur	51	1.97	2	*0.08	85	3.29	33	
DeKalb	55	1.30	8	*0.19	107	2.52	67	
Delaware	115	0.97	0	*0.00	376	3.18	83	Top 50
Dubois	58	1.38	3	*0.07	159	3.78	67	
Elkhart	297	1.49	36	0.18	419	2.10	117	Top 50
Fayette	50	2.05	8	*0.33	84	3.44	83	Top 50
Floyd	309	4.12	36	0.48	36	0.48	150	Top 25
Fountain	30	1.73	4	*0.23	36	2.08	33	
Franklin	1	*0.05	23	1.07	90	4.17	117	Top 50
Fulton	21	1.00	3	*0.14	132	6.30	67	
Gibson	99	2.94	5	*0.15	110	3.27	100	Top 50
Grant	166	2.36	6	*0.09	325	4.62	150	Top 25
Greene	46	1.38	6	*0.18	87	2.61	17	
Hamilton	563	2.04	13	*0.05	442	1.60	133	Top 25
Hancock	109	1.61	17	*0.25	93	1.37	100	Top 50
Harrison	35	0.88	4	*0.10	7	*0.18	0	
Hendricks	310	2.12	43	0.29	137	0.94	133	Top 25
Henry	71	1.43	14	*0.28	100	2.01	83	Top 50
Howard	194	2.33	9	*0.11	328	3.94	150	Top 25
Huntington	36	0.96	0	*0.00	40	1.07	0	
Jackson	126	2.96	10	*0.23	153	3.59	150	Top 25
Jasper	32	0.95	14	*0.42	37	1.10	67	
Jay	60	2.79	3	*0.14	35	1.63	67	
Jefferson	58	1.78	8	*0.25	139	4.26	133	Top 25
Jennings	2	*0.07	35	1.22	109	3.80	133	Top 25
Johnson	390	2.77	17	*0.12	115	0.82	133	Top 25
Knox	53	1.37	67	1.73	182	4.71	200	Top 10
Kosciusko	180	2.33	8	*0.10	129	1.67	100	Top 50
LaGrange	36	0.96	2	*0.05	66	1.77	0	
Lake	1,085	2.18	421	0.84	1,130	2.27	233	Top 10
LaPorte	218	1.95	68	0.61	237	2.12	167	Top 25
Lawrence	71	1.53	12	*0.26	170	3.67	100	Top 50
Madison	236	1.78	41	0.31	438	3.31	183	Top 10
Marion	2,950	3.24	594	0.65	1,862	2.04	250	Top 10
Marshall	95	2.01	3	*0.06	91	1.92	50	
Martin	9	*0.87	3	*0.29	24	2.31	17	
Miami	32	0.86	12	*0.32	144	3.88	100	Top 50
Monroe	405	2.92	13	*0.09	686	4.95	217	Top 10
Montgomery	98	2.56	8	*0.21	179	4.67	167	Top 25

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APPENDIX 12B *(Continued from previous page)*

County	Marijuana Possession Arrests		Marijuana Sale Arrests		Marijuana Use Reported At Treatment Admission		Priority Score	Rank
	Number	Rate	Number	Rate	Number	Rate		
Morgan	102	1.47	77	1.11	214	3.09	167	Top 25
Newton	47	3.28	2	*0.14	14	*0.98	50	
Noble	92	1.93	10	*0.21	160	3.35	100	Top 50
Ohio	7	*1.14	1	*0.16	25	4.06	33	
Orange	25	1.25	3	*0.15	57	2.86	17	
Owen	24	1.11	4	*0.18	89	4.10	50	
Parke	40	2.30	3	*0.17	48	2.75	50	
Perry	38	1.96	4	*0.21	70	3.60	67	
Pike	20	1.55	3	*0.23	23	1.78	33	
Porter	348	2.11	16	*0.10	271	1.64	117	Top 50
Posey	34	1.31	3	*0.12	57	2.19	0	
Pulaski	15	*1.11	0	*0.00	45	3.34	17	
Putnam	47	1.23	9	*0.24	81	2.12	33	
Randolph	65	2.47	2	*0.08	109	4.14	100	Top 50
Ripley	33	1.08	3	*0.10	95	3.10	33	
Rush	29	1.66	49	2.80	91	5.21	183	Top 10
Saint Joseph	445	1.66	56	0.21	692	2.58	183	Top 10
Scott	32	1.32	2	*0.08	20	0.82	0	
Shelby	35	0.79	4	*0.09	67	1.50	0	
Spencer	1	*0.05	0	*0.00	109	5.18	67	
Starke	67	2.85	5	*0.21	86	3.66	117	Top 50
Steuben	85	2.47	5	*0.15	112	3.26	83	Top 50
Sullivan	19	*0.88	3	*0.14	38	1.76	0	
Switzerland	13	*1.22	2	*0.19	26	2.44	17	
Tippecanoe	456	2.63	60	0.35	217	1.25	200	Top 10
Tipton	25	1.56	7	*0.44	38	2.37	50	
Union	9	*1.19	1	*0.13	22	2.91	17	
Vanderburgh	636	3.52	82	0.45	651	3.60	267	Top 10
Vermillion	22	1.35	12	*0.74	44	2.70	67	
Vigo	199	1.84	13	*0.12	432	3.99	150	Top 25
Wabash	66	2.00	10	*0.30	98	2.96	117	Top 50
Warren	11	*1.29	1	*0.12	8	*0.94	0	
Warrick	61	1.02	32	0.53	185	3.08	133	Top 25
Washington	42	1.48	7	*0.25	6	*0.21	17	
Wayne	99	1.43	19	*0.27	198	2.86	117	Top 50
Wells	12	*0.43	13	*0.47	70	2.52	50	
White	51	2.06	8	*0.32	84	3.39	83	Top 50
Whitley	45	1.34	4	*0.12	74	2.21	0	
Indiana	**13,702**	**2.10**	**2,241**	**0.34**	**16,373**	**2.51**		

* 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 267. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014

APPENDIX 12C

Cocaine and Heroin Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2011; Treatment Episode Data Set, 2013)

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	4	*0.12	6	*0.17	22	0.64	6	*0.17	38	
Allen	66	0.18	84	0.24	459	1.29	156	0.44	225	Top 10
Bartholomew	3	*0.04	4	*0.05	54	0.70	18	*0.23	63	Top 50
Benton	1	*0.11	1	*0.11	<5	N/A	<5	N/A	13	
Blackford	1	*0.08	0	*0.00	<5	N/A	<5	N/A	0	
Boone	6	*0.11	8	*0.14	10	*0.18	30	0.53	50	
Brown	2	*0.13	0	*0.00	<5	N/A	<5	N/A	0	
Carroll	1	*0.05	0	*0.00	14	*0.69	<5	N/A	25	
Cass	0	*0.00	26	0.66	31	0.79	<5	N/A	100	Top 50
Clark	29	0.26	40	0.36	51	0.46	58	0.52	175	Top 25
Clay	2	*0.07	4	*0.15	<5	N/A	<5	N/A	0	
Clinton	8	*0.24	4	*0.12	5	*0.15	16	*0.48	63	Top 50
Crawford	1	*0.09	0	*0.00	<5	N/A	5	*0.46	13	
Daviess	1	*0.03	8	*0.25	7	*0.22	<5	N/A	25	
Dearborn	2	*0.04	2	*0.04	53	1.05	132	2.62	138	Top 25
Decatur	5	*0.19	4	*0.15	8	*0.31	<5	N/A	25	
DeKalb	6	*0.14	9	*0.21	18	*0.42	8	*0.19	63	Top 50
Delaware	20	0.17	16	*0.14	100	0.85	70	0.59	150	Top 25
Dubois	4	*0.10	6	*0.14	9	*0.21	<5	N/A	13	
Elkhart	48	0.24	49	0.25	104	0.52	26	0.13	163	Top 25
Fayette	6	*0.25	9	*0.37	12	*0.49	34	1.39	138	Top 25
Floyd	3	*0.04	75	1.00	22	0.29	28	0.37	113	Top 50
Fountain	4	*0.23	6	*0.35	7	*0.40	8	*0.46	75	Top 50
Franklin	0	*0.00	4	*0.19	9	*0.42	26	1.21	50	
Fulton	2	*0.10	3	*0.14	21	1.00	7	*0.33	50	
Gibson	2	*0.06	1	*0.03	<5	N/A	<5	N/A	0	
Grant	10	*0.14	19	*0.27	57	0.81	8	*0.11	100	Top 50
Greene	2	*0.06	4	*0.12	5	*0.15	8	*0.24	0	
Hamilton	18	*0.07	62	0.22	56	0.20	96	0.35	138	Top 25
Hancock	11	*0.16	19	*0.28	16	*0.24	16	*0.24	88	Top 50
Harrison	1	*0.03	2	*0.05	7	*0.18	<5	N/A	0	
Hendricks	28	0.19	28	0.19	17	*0.12	57	0.39	113	Top 50
Henry	5	*0.10	8	*0.16	27	0.54	13	*0.26	63	Top 50
Howard	95	1.14	80	0.96	62	0.75	75	0.90	250	Top 10
Huntington	1	*0.03	1	*0.03	15	*0.40	13	*0.35	50	
Jackson	12	*0.28	17	*0.40	14	*0.33	18	*0.42	113	Top 50
Jasper	5	*0.15	7	*0.21	11	*0.33	23	0.68	75	Top 50
Jay	4	*0.19	4	*0.19	7	*0.33	7	*0.33	13	
Jefferson	7	*0.21	11	*0.34	24	0.74	41	1.26	163	Top 25
Jennings	0	*0.00	1	*0.03	20	0.70	19	*0.66	63	Top 50
Johnson	19	*0.13	12	*0.09	30	0.21	35	0.25	63	Top 50
Knox	19	*0.49	14	*0.36	6	*0.16	7	*0.18	100	Top 50
Kosciusko	13	*0.17	17	*0.22	85	1.10	54	0.70	150	Top 25
LaGrange	6	*0.16	54	1.45	10	*0.27	<5	N/A	100	Top 50
Lake	158	0.32	267	0.54	456	0.91	437	0.88	263	Top 10
LaPorte	50	0.45	269	2.40	90	0.80	162	1.45	263	Top 10
Lawrence	3	*0.06	2	*0.04	12	*0.26	24	0.52	25	
Madison	25	0.19	43	0.32	91	0.69	32	0.24	138	Top 25
Marion	819	0.90	598	0.66	891	0.98	665	0.73	288	Top 10
Marshall	8	*0.17	10	*0.21	44	0.93	37	0.78	150	Top 25

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APPENDIX 12C *(Continued from previous page)*

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		
Martin	1	*0.10	1	*0.10	<5	N/A	<5	N/A	13	
Miami	15	*0.40	33	0.89	26	0.70	7	*0.19	138	Top 25
Monroe	33	0.24	29	0.21	122	0.88	141	1.02	213	Top 10
Montgomery	18	*0.47	19	*0.50	20	0.52	37	0.97	175	Top 25
Morgan	19	*0.27	17	*0.25	19	*0.27	73	1.05	138	Top 25
Newton	7	*0.49	0	*0.00	5	*0.35	5	*0.35	63	Top 50
Noble	9	*0.19	14	*0.29	62	1.30	41	0.86	163	Top 25
Ohio	1	*0.16	1	*0.16	<5	N/A	11	*1.79	63	Top 50
Orange	4	*0.20	6	*0.30	6	*0.30	7	*0.35	63	Top 50
Owen	2	*0.09	5	*0.23	7	*0.32	10	*0.46	25	
Parke	10	*0.57	0	*0.00	6	*0.34	<5	N/A	50	
Perry	2	*0.10	5	*0.26	<5	N/A	<5	N/A	13	
Pike	3	*0.23	4	*0.31	<5	N/A	<5	N/A	38	
Porter	32	0.19	18	*0.11	93	0.56	186	1.13	175	Top 25
Posey	2	*0.08	4	*0.15	5	*0.19	<5	N/A	0	
Pulaski	1	*0.07	2	*0.15	9	*0.67	6	*0.45	25	
Putnam	3	*0.08	7	*0.18	7	*0.18	13	*0.34	25	
Randolph	11	*0.42	13	*0.49	28	1.06	37	1.41	188	Top 10
Ripley	4	*0.13	7	*0.23	12	*0.39	38	1.24	88	Top 50
Rush	9	*0.51	0	*0.00	6	*0.34	<5	N/A	50	
Saint Joseph	67	0.25	20	0.07	464	1.73	179	0.67	213	Top 10
Scott	2	*0.08	4	*0.16	<5	N/A	10	*0.41	13	
Shelby	3	*0.07	3	*0.07	22	0.49	17	*0.38	50	
Spencer	0	*0.00	0	*0.00	8	*0.38	5	*0.24	0	
Starke	30	1.28	0	*0.00	14	*0.60	35	1.49	138	Top 25
Steuben	21	0.61	18	*0.52	17	*0.49	7	*0.20	150	Top 25
Sullivan	1	*0.05	3	*0.14	<5	N/A	<5	N/A	0	
Switzerland	2	*0.19	3	*0.28	<5	N/A	8	*0.75	50	
Tippecanoe	37	0.21	76	0.44	54	0.31	52	0.30	163	Top 25
Tipton	1	*0.06	1	*0.06	5	*0.31	7	*0.44	13	
Union	1	*0.13	2	*0.26	<5	N/A	11	*1.46	50	
Vanderburgh	29	0.16	52	0.29	127	0.70	15	*0.08	150	Top 25
Vermillion	1	*0.06	0	*0.00	5	*0.31	<5	N/A	0	
Vigo	16	*0.15	5	*0.05	43	0.40	8	*0.07	63	Top 50
Wabash	8	*0.24	12	*0.36	25	0.76	32	0.97	150	Top 25
Warren	2	*0.23	2	*0.23	<5	N/A	<5	N/A	25	
Warrick	0	*0.00	3	*0.05	16	*0.27	9	*0.15	13	
Washington	4	*0.14	7	*0.25	<5	N/A	12	*0.42	50	
Wayne	39	0.56	35	0.51	84	1.21	137	1.98	263	Top 10
Wells	0	*0.00	8	*0.29	13	*0.47	<5	N/A	38	
White	5	*0.20	6	*0.24	8	*0.32	<5	N/A	50	
Whitley	3	*0.09	5	*0.15	30	0.90	25	0.75	75	Top 50
Indiana	**2,004**	**0.31**	**2,368**	**0.36**	**4,504**	**0.69**	**3,718**	**0.57**		

* 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 288. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014

APPENDIX 12D

Methamphetamine (Meth) Abuse Indicators and Priority Scores by County, With Rank, All Rates per 1,000 Population (Uniform Crime Reporting Program, 2011; Treatment Episode Data Set, 2013; Methamphetamine Lab Statistics, 2013)

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	5	*0.14	8	*0.23	14	*0.41	50	
Allen	0	*0.00	0	*0.00	82	0.23	64	0.18	63	
Bartholomew	122	1.59	11	*0.14	244	3.18	43	0.56	213	Top 10
Benton	1	*0.11	1	*0.11	<5	N/A	1	*0.11	0	
Blackford	14	*1.10	6	*0.47	<5	N/A	12	*0.95	125	Top 25
Boone	8	*0.14	3	*0.05	8	*0.14	7	*0.12	0	
Brown	3	*0.20	6	*0.39	18	*1.17	9	*0.59	63	
Carroll	10	*0.49	0	*0.00	15	*0.74	1	*0.05	25	
Cass	9	*0.23	17	*0.43	48	1.23	26	0.66	100	Top 50
Clark	133	1.20	26	0.23	27	0.24	31	0.28	163	Top 25
Clay	10	*0.37	2	*0.07	57	2.11	9	*0.33	63	
Clinton	0	*0.00	4	*0.12	<5	N/A	15	*0.45	25	
Crawford	4	*0.37	0	*0.00	19	*1.76	3	*0.28	38	
Daviess	29	0.91	28	0.88	61	1.92	9	*0.28	175	Top 10
Dearborn	1	*0.02	1	*0.02	22	0.44	3	*0.06	0	
Decatur	16	*0.62	20	0.77	35	1.35	41	1.58	188	Top 10
DeKalb	13	*0.31	10	*0.24	43	1.01	35	0.82	113	Top 50
Delaware	52	0.44	1	*0.01	58	0.49	109	0.92	138	Top 25
Dubois	24	0.57	10	*0.24	56	1.33	3	*0.07	88	Top 50
Elkhart	21	0.11	11	*0.06	91	0.46	63	0.32	88	Top 50
Fayette	11	*0.45	4	*0.16	10	*0.41	9	*0.37	50	
Floyd	71	0.95	1	*0.01	9	*0.12	30	0.40	113	Top 50
Fountain	8	*0.46	4	*0.23	14	*0.81	15	*0.87	75	Top 50
Franklin	0	*0.00	0	*0.00	6	*0.28	4	*0.19	0	
Fulton	5	*0.24	1	*0.05	60	2.87	32	1.53	125	Top 25
Gibson	22	0.65	29	0.86	60	1.78	14	*0.42	188	Top 10
Grant	71	1.01	13	*0.18	13	*0.18	13	*0.18	125	Top 25
Greene	17	*0.51	16	*0.48	41	1.23	19	*0.57	125	Top 25
Hamilton	70	0.25	13	*0.05	18	*0.07	2	*0.01	63	
Hancock	17	*0.25	8	*0.12	7	*0.10	2	*0.03	25	
Harrison	6	*0.15	3	*0.08	6	*0.15	35	0.88	50	
Hendricks	41	0.28	20	0.14	24	0.16	3	*0.02	50	
Henry	8	*0.16	2	*0.04	10	*0.20	31	0.62	38	
Howard	1	*0.01	7	*0.08	102	1.23	23	0.28	75	Top 50
Huntington	1	*0.03	1	*0.03	<5	N/A	5	*0.13	0	
Jackson	18	*0.42	14	*0.33	110	2.58	17	*0.40	175	Top 10
Jasper	5	*0.15	12	*0.36	9	*0.27	5	*0.15	50	
Jay	38	1.77	34	1.58	10	*0.46	17	*0.79	175	Top 10
Jefferson	14	*0.43	7	*0.21	59	1.81	12	*0.37	113	Top 50
Jennings	0	*0.00	0	*0.00	72	2.51	23	0.80	100	Top 50
Johnson	7	*0.05	1	*0.01	19	*0.13	16	*0.11	13	
Knox	34	0.88	26	0.67	146	3.78	27	0.70	238	Top 10
Kosciusko	27	0.35	14	*0.18	36	0.47	33	0.43	125	Top 25
LaGrange	8	*0.21	0	*0.00	35	0.94	14	*0.38	50	
Lake	43	0.09	11	*0.02	35	0.07	1	*0.00	50	
LaPorte	8	*0.07	4	*0.04	19	*0.17	6	*0.05	0	
Lawrence	34	0.73	3	*0.06	66	1.42	29	0.63	138	Top 25
Madison	33	0.25	17	*0.13	55	0.42	61	0.46	113	Top 50

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APPENDIX 12D *(Continued from previous page)*

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		
Marion	531	0.58	110	0.12	156	0.17	13	*0.01	138	Top 25
Marshall	32	0.68	3	*0.06	34	0.72	33	0.70	125	Top 25
Martin	3	*0.29	0	*0.00	14	*1.35	12	*1.16	50	
Miami	12	*0.32	20	0.54	49	1.32	49	1.32	163	Top 25
Monroe	17	*0.12	7	*0.05	163	1.18	62	0.45	125	Top 25
Montgomery	10	*0.26	5	*0.13	50	1.30	28	0.73	75	Top 50
Morgan	9	*0.13	6	*0.09	97	1.40	2	*0.03	50	
Newton	5	*0.35	1	*0.07	<5	N/A	2	*0.14	13	
Noble	26	0.54	9	*0.19	91	1.90	66	1.38	188	Top 10
Ohio	1	*0.16	1	*0.16	<5	N/A	1	*0.16	13	
Orange	9	*0.45	5	*0.25	22	1.10	13	*0.65	63	
Owen	4	*0.18	3	*0.14	39	1.80	3	*0.14	38	
Parke	21	1.20	26	1.49	20	1.15	5	*0.29	138	Top 25
Perry	21	1.08	3	*0.15	38	1.96	13	*0.67	138	Top 25
Pike	6	*0.46	3	*0.23	19	*1.47	4	*0.31	50	
Porter	14	*0.08	2	*0.01	12	*0.07	0	*0.00	13	
Posey	11	*0.42	10	*0.38	38	1.46	9	*0.35	100	Top 50
Pulaski	19	*1.41	9	*0.67	15	*1.11	6	*0.45	125	Top 25
Putnam	24	0.63	13	*0.34	42	1.10	5	*0.13	125	Top 25
Randolph	1	*0.04	0	*0.00	10	*0.38	3	*0.11	0	
Ripley	11	*0.36	6	*0.20	11	*0.36	13	*0.42	75	Top 50
Rush	0	*0.00	3	*0.17	12	*0.69	7	*0.40	25	
Saint Joseph	70	0.26	1	*0.00	147	0.55	13	*0.05	88	Top 50
Scott	22	0.91	4	*0.16	25	1.03	10	*0.41	88	Top 50
Shelby	7	*0.16	7	*0.16	11	*0.25	13	*0.29	38	
Spencer	0	*0.00	0	*0.00	70	3.32	15	*0.71	100	Top 50
Starke	17	*0.72	10	*0.43	69	2.94	21	0.89	175	Top 10
Steuben	2	*0.06	7	*0.20	54	1.57	28	0.81	113	Top 50
Sullivan	2	*0.09	2	*0.09	27	1.25	17	*0.79	63	
Switzerland	5	*0.47	3	*0.28	<5	N/A	3	*0.28	38	
Tippecanoe	126	0.73	31	0.18	40	0.23	33	0.19	150	Top 25
Tipton	13	*0.81	9	*0.56	5	*0.31	5	*0.31	75	Top 50
Union	3	*0.40	2	*0.26	<5	N/A	2	*0.26	38	
Vanderburgh	106	0.59	143	0.79	325	1.80	83	0.46	250	Top 10
Vermillion	6	*0.37	11	*0.68	26	1.60	15	*0.92	150	Top 25
Vigo	88	0.81	23	0.21	286	2.64	21	0.19	188	Top 10
Wabash	15	*0.45	6	*0.18	18	*0.54	18	*0.54	75	Top 50
Warren	4	*0.47	2	*0.23	<5	N/A	8	*0.94	63	
Warrick	49	0.82	54	0.90	101	1.68	9	*0.15	175	Top 10
Washington	7	*0.25	3	*0.11	5	*0.18	29	1.02	63	
Wayne	12	*0.17	10	*0.14	16	*0.23	10	*0.14	25	
Wells	0	*0.00	0	*0.00	13	*0.47	7	*0.25	0	
White	9	*0.36	5	*0.20	25	1.01	8	*0.32	50	
Whitley	6	*0.18	3	*0.09	15	*0.45	8	*0.24	0	
Indiana	**2,458**	**0.38**	**1,008**	**0.15**	**4,188**	**0.64**	**1,721**	**0.26**		

* 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 250. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014; Indiana State Police, 2014

APPENDIX 12E

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, 2011; Treatment Episode Data Set, 2013; INSPECT Data, 2012)

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	12	*0.35	2	*0.06	24	0.69	30,861	0.89	0	
Allen	83	0.23	48	0.13	272	0.76	429,804	1.20	150	Top 25
Bartholomew	22	0.29	0	*0.00	204	2.66	132,690	1.73	100	Top 50
Benton	3	*0.34	1	*0.11	15	*1.69	15,811	1.78	25	
Blackford	0	*0.00	0	*0.00	27	2.13	33,494	2.64	50	
Boone	16	*0.28	3	*0.05	44	0.77	100,893	1.77	38	
Brown	0	*0.00	0	*0.00	29	1.89	33,086	2.16	38	
Carroll	5	*0.25	0	*0.00	27	1.33	30,113	1.49	0	
Cass	52	1.33	54	1.38	59	1.51	59,569	1.52	163	Top 25
Clark	29	0.26	3	*0.03	163	1.47	184,543	1.67	75	Top 50
Clay	19	*0.70	4	*0.15	38	1.41	41,761	1.55	63	
Clinton	13	*0.39	16	*0.48	38	1.14	76,383	2.29	113	Top 50
Crawford	2	*0.19	3	*0.28	27	2.51	18,112	1.68	50	
Daviess	14	*0.44	3	*0.09	58	1.82	54,016	1.70	50	
Dearborn	3	*0.06	15	*0.30	219	4.35	64,387	1.28	125	Top 25
Decatur	18	*0.70	10	*0.39	48	1.86	34,476	1.33	100	Top 50
DeKalb	18	*0.42	6	*0.14	31	0.73	44,163	1.04	50	
Delaware	4	*0.03	3	*0.03	405	3.42	257,947	2.18	125	Top 25
Dubois	14	*0.33	2	*0.05	86	2.04	71,900	1.71	63	
Elkhart	43	0.22	11	*0.06	89	0.45	263,631	1.32	100	Top 50
Fayette	15	*0.61	4	*0.16	104	4.26	49,801	2.04	113	Top 50
Floyd	175	2.33	163	2.17	73	0.97	124,129	1.66	188	Top 10
Fountain	10	*0.58	2	*0.12	25	1.44	39,740	2.29	50	
Franklin	5	*0.23	5	*0.23	56	2.60	45,952	2.13	88	Top 50
Fulton	13	*0.62	4	*0.19	54	2.58	31,971	1.53	75	Top 50
Gibson	48	1.43	1	*0.03	47	1.40	70,538	2.09	100	Top 50
Grant	3	*0.04	3	*0.04	175	2.49	167,575	2.38	88	Top 50
Greene	10	*0.30	7	*0.21	88	2.64	62,323	1.87	100	Top 50
Hamilton	22	0.08	9	*0.03	231	0.84	390,574	1.42	88	Top 50
Hancock	33	0.49	13	*0.19	61	0.90	131,267	1.94	113	Top 50
Harrison	0	*0.00	0	*0.00	14	*0.35	58,555	1.48	13	
Hendricks	62	0.42	15	*0.10	89	0.61	182,285	1.25	100	Top 50
Henry	13	*0.26	4	*0.08	141	2.84	122,804	2.47	125	Top 25
Howard	111	1.33	13	*0.16	310	3.73	199,277	2.40	250	Top 10
Huntington	10	*0.27	0	*0.00	35	0.94	52,968	1.42	0	
Jackson	49	1.15	11	*0.26	95	2.23	82,847	1.95	150	Top 25
Jasper	11	*0.33	10	*0.30	39	1.16	66,256	1.97	63	
Jay	3	*0.14	1	*0.05	29	1.35	47,487	2.21	25	
Jefferson	20	0.61	4	*0.12	137	4.20	72,011	2.21	150	Top 25
Jennings	3	*0.10	8	*0.28	86	3.00	47,715	1.66	88	Top 50
Johnson	77	0.55	41	0.29	83	0.59	244,669	1.74	150	Top 25
Knox	35	0.91	13	*0.34	104	2.69	104,439	2.70	200	Top 10
Kosciusko	34	0.44	5	*0.06	95	1.23	100,450	1.30	63	
LaGrange	5	*0.13	1	*0.03	14	*0.38	30,471	0.82	0	
Lake	420	0.84	76	0.15	377	0.76	727,100	1.46	188	Top 10
LaPorte	12	*0.11	1	*0.01	162	1.45	207,018	1.85	63	
Lawrence	17	*0.37	5	*0.11	186	4.01	107,002	2.31	125	Top 25
Madison	112	0.85	46	0.35	318	2.40	316,474	2.39	250	Top 10

(continued on next page)

APPENDIX 12E *(Continued from previous page)*

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)		
Marion	78	0.09	115	0.13	1,247	1.37	1,368,975	1.50	150	Top 25
Marshall	55	1.16	10	*0.21	65	1.37	69,611	1.47	113	Top 50
Martin	2	*0.19	1	*0.10	21	2.02	29,918	2.88	50	
Miami	28	0.75	2	*0.05	89	2.40	54,667	1.47	63	
Monroe	172	1.24	26	0.19	410	2.96	153,737	1.11	200	Top 10
Montgomery	61	1.59	2	*0.05	98	2.56	61,070	1.59	113	Top 50
Morgan	80	1.16	17	*0.25	173	2.50	143,428	2.07	175	Top 10
Newton	1	*0.07	0	*0.00	8	*0.56	19,016	1.33	0	
Noble	30	0.63	5	*0.10	69	1.44	65,450	1.37	75	Top 50
Ohio	2	*0.32	1	*0.16	19	*3.08	9,148	1.49	50	
Orange	11	*0.55	2	*0.10	58	2.91	49,082	2.46	75	Top 50
Owen	8	*0.37	4	*0.18	56	2.58	42,093	1.94	63	
Parke	11	*0.63	0	*0.00	26	1.49	22,714	1.30	25	
Perry	16	*0.82	3	*0.15	36	1.85	28,708	1.48	63	
Pike	8	*0.62	1	*0.08	18	*1.39	35,894	2.78	50	
Porter	121	0.73	41	0.25	235	1.42	290,422	1.76	200	Top 10
Posey	13	*0.50	4	*0.15	33	1.27	54,376	2.09	75	Top 50
Pulaski	8	*0.59	0	*0.00	38	2.82	29,172	2.17	63	
Putnam	7	*0.18	2	*0.05	49	1.28	43,894	1.15	0	
Randolph	10	*0.38	17	*0.65	59	2.24	37,896	1.44	88	Top 50
Ripley	13	*0.42	2	*0.07	76	2.48	39,918	1.30	50	
Rush	32	1.83	17	*0.97	40	2.29	26,711	1.53	125	Top 25
Saint Joseph	100	0.37	7	*0.03	237	0.88	394,197	1.47	125	Top 25
Scott	7	*0.29	1	*0.04	82	3.37	61,482	2.53	100	Top 50
Shelby	1	*0.02	0	*0.00	51	1.14	64,179	1.44	13	
Spencer	0	*0.00	0	*0.00	48	2.28	44,081	2.09	38	
Starke	14	*0.60	3	*0.13	95	4.05	56,255	2.40	138	Top 25
Steuben	129	3.75	9	*0.26	18	*0.52	38,725	1.13	113	Top 50
Sullivan	3	*0.14	1	*0.05	31	1.44	41,036	1.90	13	
Switzerland	6	*0.56	1	*0.09	27	2.53	15,871	1.49	25	
Tippecanoe	58	0.33	23	0.13	118	0.68	218,505	1.26	113	Top 50
Tipton	1	*0.06	3	*0.19	24	1.50	31,257	1.95	25	
Union	4	*0.53	1	*0.13	20	2.65	10,734	1.42	50	
Vanderburgh	238	1.32	29	0.16	352	1.95	462,509	2.56	250	Top 10
Vermillion	0	*0.00	1	*0.06	35	2.15	25,995	1.60	13	
Vigo	85	0.78	2	*0.02	180	1.66	189,632	1.75	113	Top 50
Wabash	21	0.64	5	*0.15	87	2.63	53,134	1.61	100	Top 50
Warren	5	*0.58	1	*0.12	7	*0.82	10,708	1.25	25	
Warrick	33	0.55	25	0.42	102	1.70	126,369	2.11	150	Top 25
Washington	13	*0.46	6	*0.21	19	*0.67	41,650	1.47	63	
Wayne	9	*0.13	5	*0.07	140	2.02	143,121	2.07	88	Top 50
Wells	12	*0.43	24	0.86	34	1.22	30,965	1.11	75	Top 50
White	11	*0.44	2	*0.08	32	1.29	34,506	1.39	13	
Whitley	12	*0.36	4	*0.12	48	1.43	43,926	1.31	25	
Indiana	**3,227**	**0.50**	**1,074**	**0.16**	**9,879**	**1.52**	**10,676,075**	**1.64**		

* 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 250. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014; Indiana Board of Pharmacy, 2013

APPENDIX 12F

Total Priority Scores by County, Ranked in Descending Order (Uniform Crime Reporting Program, 2011; Treatment Episode Data Set, 2013; Indiana Automated Reporting Information Exchange System, 2012; Methamphetamine Lab Statistics, 2013; INSPECT data, 2012)

County	Total Priority Score	Rank
Vanderburgh	225	Top 10
Marion	201	Top 10
Monroe	199	Top 10
Lake	199	Top 10
Knox	182	Top 10
Howard	163	Top 10
Tippecanoe	163	Top 10
Madison	163	Top 10
Allen	159	Top 10
Saint Joseph	146	Top 25
Cass	145	Top 25
LaPorte	144	Top 25
Jackson	144	Top 25
Porter	143	Top 25
Floyd	143	Top 25
Vigo	139	Top 25
Bartholomew	138	Top 25
Clark	137	Top 25
Jefferson	136	Top 25
Elkhart	127	Top 25
Delaware	127	Top 25
Noble	127	Top 25
Montgomery	126	Top 25
Morgan	126	Top 25
Starke	121	Top 50
Wayne	120	Top 50
Hamilton	118	Top 50
Kosciusko	118	Top 50
Steuben	114	Top 50
Grant	113	Top 50
Marshall	110	Top 50
Dearborn	107	Top 50
Wabash	106	Top 50
Miami	103	Top 50
Warrick	102	Top 50
Gibson	102	Top 50
Hendricks	101	Top 50
Johnson	96	Top 50
Rush	95	Top 50
Lawrence	94	Top 50
Fayette	93	Top 50
Decatur	87	Top 50
Jennings	83	Top 50
Hancock	81	Top 50
Randolph	81	Top 50
DeKalb	76	Top 50

County	Total Priority Score	Rank
Daviess	75	Bottom 50
Henry	74	Bottom 50
Perry	72	Bottom 50
Fulton	71	Bottom 50
Parke	69	Bottom 50
Franklin	67	Bottom 50
Clinton	65	Bottom 50
Dubois	64	Bottom 50
Jay	64	Bottom 50
Greene	60	Bottom 50
Vermillion	60	Bottom 50
Jasper	59	Bottom 50
Fountain	59	Bottom 50
Ripley	57	Bottom 50
Spencer	53	Bottom 50
Pulaski	52	Bottom 50
Scott	50	Bottom 50
Blackford	50	Bottom 50
White	49	Bottom 50
Washington	48	Bottom 50
Putnam	47	Bottom 50
Clay	46	Bottom 50
Orange	45	Bottom 50
Owen	43	Bottom 50
Ohio	40	Bottom 50
Pike	36	Bottom 50
LaGrange	36	Bottom 50
Newton	35	Bottom 50
Posey	35	Bottom 50
Tipton	35	Bottom 50
Boone	34	Bottom 50
Union	33	Bottom 50
Wells	33	Bottom 50
Crawford	30	Bottom 50
Martin	28	Bottom 50
Switzerland	28	Bottom 50
Brown	27	Bottom 50
Warren	27	Bottom 50
Whitley	26	Bottom 50
Sullivan	23	Bottom 50
Shelby	22	Bottom 50
Adams	22	Bottom 50
Carroll	20	Bottom 50
Harrison	19	Bottom 50
Huntington	18	Bottom 50
Benton	11	Bottom 50

Note: Total priority scores ranged from 11 to 225. Higher priority scores indicate a more severe problem.
Source: National Archive of Criminal Justice Data, Inter-university Consortium for Political and Social Research, University of Michigan, 2011; Indiana Family and Social Services Administration, 2014; Indiana State Police, 2013, 2014; Indiana Board of Pharmacy, 2013

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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, Tobacco, and Other Drug Use by Indiana Children and Adolescents (ATOD) Survey	IPRC	Annual 1993-2013	http://www.drugs.indiana.edu/indiana-youth-survey/indianasurvey	Indiana and regions	6th – 12th grade students in Indiana
Alcohol-Related Disease Impact (ARDI) Database	CDC	Based on averages 2001-2005	http://apps.nccd.cdc.gov/ardi/Homepage.aspx	U.S. and states	General population
Automated Reporting Information Exchange System (ARIES)	ISP	Annual Most recent 2012	On request from ISP	Indiana and counties	Vehicle collisions in general population
Behavioral Risk Factor Surveillance System (BRFSS)	CDC	Annual 1995-2012	http://apps.nccd.cdc.gov/brfss/	U.S. and states	Adults 18 and older
Behavioral Risk Factor Surveillance System: Selected Metropolitan/ Micropolitan Area Risk Trends (BRFSS SMART)	CDC	Annual 2002-2011	http://apps.nccd.cdc.gov/brfss-smart/index.asp	Selected Metropolitan and Micropolitan Areas	Adults 18 and older
Fatality Analysis Reporting System (FARS)	NHTSA	Annual 1994-2011	http://www-fars.nhtsa.dot.gov/	U.S., states, and counties	General population
Hospital Discharge Database	ISDH	Annual 1999-2011	http://www.in.gov/isdh/20624.htm	Indiana and counties	General population
Indiana Adult Tobacco Survey (IATS)	ISDH/Tobacco Prevention and Cessation Commission	Bi-annual 2002-2012	On request from ISDH	Indiana	Adults
Indiana College Substance Use Survey	ICAN/IPRC	Annual 2009-2013	http://www.drugs.indiana.edu/indiana-college-survey/substance-use-survey	Indiana	College students
Indiana Clandestine Meth Lab Seizures	ISP	Annual 1995-2013	On request from ISP	Indiana and counties	General population
Indiana Youth Tobacco Survey (IYTS)	ISDH/Tobacco Prevention and Cessation Commission	Bi-annual 2000-2012	On request from ISDH	Indiana	6th – 12th grade students in Indiana
Monitoring the Future (MTF) Survey	NIDA	Annual 1999-2013	http://www.monitoringthefuture.org/data/data.html	U.S.	8th, 10th, and 12th grade students

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APPENDIX I *(continued)*

Data Set	Source	Years	How to Access	Coverage	Target
Mortality data (e.g., alcohol-, smoking-, and drug-related mortality)	ISDH	Annual Most recent 2011	On request from ISDH	Indiana and counties	General population
	CDC	Annual 1999-2010	http://wonder.cdc.gov/mortSQL.html	U.S., states, and counties	General population
National Survey on Drug Use and Health (NSDUH)	SAMHSA	Annual 1994-2012	http://www.samhsa.gov/data/NSDUH.aspx	U.S., states, and some sub-state estimates	Population 12 years and older
National Youth Tobacco Survey (NYTS)	CDC	Bi-annual 1999-2011	http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm	U.S.	6th – 12th grade students
Population Estimates	U.S. Census Bureau	Annual	http://www.census.gov/	U.S., states, and counties	General population
School-related variables (e.g., suspensions & expulsions, drop-outs, ISTEP scores, etc.)	Indiana DOE	Annual 1998-2008	http://dew4.doe.state.in.us/htbin/sas1.sh	Indiana and counties	K-12 students in Indiana
Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC)	CDC	Based on 2004 data	http://apps.nccd.cdc.gov/sammec/index.asp	U.S. and states	General population
Treatment Episode Data Set (TEDS)	SAMHSA	Annual 1992-2011	http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/00056	U.S. and states; for county-level data contact Indiana DMHA	Treatment population eligible for public services (200% FPL)
Uniform Crime Reporting Program (UCR)	FBI/NACJD	Annual 1994-2011	http://www.icpsr.umich.edu/NACJD/ucr.html	U.S., states, and counties	Arrests within general population
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; DOE = Department of Education; FBI = Federal Bureau of Investigation; ICAN = Indiana Collegiate Action Network; IPRC = Indiana Prevention Resource Center; ISDH = Indiana State Department of Health; NACJD = National Archive of Criminal Justice Data; SAMMEC = Smoking-Attributable Mortality, Morbidity, and Economic Costs; ISP = Indiana State Police; NHTSA = National Highway Traffic Safety Administration; NIDA = National Institute on Drug Abuse; SAMHSA = Substance Abuse and Mental Health Services Administration.

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
	Past-month alcohol use Past-month binge drinking	Grades 9-12	YRBSS
	Lifetime use Past-month use	Grades 6-12	ATOD
	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 Four-level smoking status (smoked every day)	Adults ages 18+	BRFSS
	Past-month use of Tobacco Cigarettes Smokeless tobacco	Middle and high school students	IYTS
	Lifetime and past-month use of cigarettes Past-month use of Any tobacco Cigars Smokeless tobacco	Grades 9-12	YRBSS
	Lifetime use Past-month use	Grades 6-12	ATOD

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APPENDIX II *(continued)*

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET
Tobacco (cont.)	Percentage of smoke-free homes and work places	General population	IATS
	Smoking-attributable mortality rate	Adults ages 35+	SAMMEC
Marijuana	Past-year use Past-month use	General population ages 12+	NSDUH
	Past-month use Tried marijuana before age 13	Grades 9-12	YRBSS
	Lifetime use Past-month use	Grades 6-12	ATOD
	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	General population ages 12+	NSDUH
	Lifetime use Past-month use	Grades 9-12	YRBSS
	Lifetime and past-month use of Cocaine Crack	Grades 6-12	ATOD
	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, past-year, and past-month use (aggregated data 2002-2004)	General population ages 12+	NSDUH
	Lifetime use of heroin Used a needle to inject any illegal drug at least once during their lifetime	Grades 9-12	YRBSS
	Lifetime use Past-month use	Grades 6-12	ATOD
	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
Methamphetamine	Lifetime, past-year, and past-month use (aggregated data 2002-2004)	General population ages 12+	NSDUH
	Lifetime use	Grades 9-12	YRBSS

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APPENDIX II *(continued)*

SUBSTANCE	PATTERN OR CONSEQUENCE	TARGET POPULATION	DATASET
Methamphetamine (cont.)	Lifetime use Past-month use	Grades 6-12	ATOD
	Use reported at treatment admission Primary use (dependence) reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs FPL, in state-sponsored programs	TEDS
	Arrests for Possession of synthetic drugs Sale of synthetic drugs	General population	UCR
	Clandestine meth lab seizures Children identified/rescued in lab homes Arrests made during lab seizures	General population	ISP Meth Lab Seizures
Prescription Drugs	Past-year nonmedical use of pain relievers	General population ages 12+	NSDUH
	Lifetime and past-month use of Prescription painkillers Prescription drugs Tranquilizers	Grades 6-12	ATOD
	Past-year dispensation of Opioids CNS depressants Stimulants	General population	INSPECT
	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 'other drugs' Sale of 'other drugs'	General population	UCR
Polysubstance Abuse	Use of 2+ substances reported at treatment admission	Treatment population at or below 200% FPL, in state-sponsored programs	TEDS
Miscellaneous	Suspensions and expulsions due to drugs, weapons, or alcohol	K-12	IDOE School Data

Abbreviations used: ARDI = Alcohol-Related Disease Impact database; ARIES = Automated Reporting Information Exchange System; ATOD = Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents; BRFSS = Behavioral Risk Factor Surveillance System; IATS = Indiana Adult Tobacco Survey; IDOE = Indiana Department of Education; 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; SAMMEC = Smoking-Attributable Mortality, Morbidity, and Economic Costs; 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.

The Consumption and Consequences of Alcohol, Tobacco, and Drugs in Indiana: A State Epidemiological Profile 2013

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 Governor's Strategic Prevention Framework (SPF) Advisory Council 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
IUPUI

CHP CENTER FOR HEALTH POLICY

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."

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